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FOCUS ON THE FARM ECONOMY

HEARINGS

BEFORE THE

SUBCOMMITTEE ON GENERAL FARM COMMODITIES AND RISK MANAGEMENT

AND THE

SUBCOMMITTEE ON COMMODITY EXCHANGES, ENERGY, AND CREDIT

AND THE

SUBCOMMITTEE ON BIOTECHNOLOGY, HORTICULTURE, AND RESEARCH

AND THE

SUBCOMMITTEE ON NUTRITION

AND THE

SUBCOMMITTEE ON CONSERVATION AND FORESTRY

AND THE

SUBCOMMITTEE ON LIVESTOCK AND FOREIGN AGRICULTURE

OF THE

COMMITTEE ON AGRICULTURE
HOUSE OF REPRESENTATIVES
ONE HUNDRED FOURTEENTH CONGRESS
SECOND SESSION

APRIL 14, 19, 27, 28, 2016; AND
MAY 17, 24, 2016

Serial No. 114–49



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FOCUS ON THE FARM ECONOMY
(GROWING FARM FINANCIAL PRESSURE)

THURSDAY, APRIL 14, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON GENERAL FARM COMMODITIES AND RISK MANAGEMENT,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 1300 of the Longworth House Office Building, Hon. Eric A. "Rick" Crawford [Chairman of the Subcommittee] presiding.

Members present: Representatives Crawford, Neugebauer, Austin Scott of Georgia, Denham, LaMalfa, Allen, Bost, Conaway (*ex officio*), Walz, Bustos, Graham, Ashford, David Scott of Georgia, Kirkpatrick, and Peterson (*ex officio*).

Staff present: Bart Fischer, Callie McAdams, Haley Graves, Matt Schertz, Mollie Wilken, Skylar Sowder, Stephanie Addison, John Konya, Anne Simmons, Liz Friedlander, Matthew MacKenzie, Mike Stranz, Nicole Scott, and Carly Reedholm.

OPENING STATEMENT OF HON. ERIC A. "RICK" CRAWFORD, A REPRESENTATIVE IN CONGRESS FROM ARKANSAS

The CHAIRMAN. This hearing of the Committee on Agriculture on *Focus on the Farm Economy: Growing Farm Financial Pressure,* will come to order.

As many of you know, this is the first hearing in a series focused on the farm economy. Every Subcommittee will play a role in highlighting current conditions on our farms and ranches and in rural America today. Today, the economic conditions in farm and ranch country are fundamentally different than the conditions we faced when we crafted the 2014 Farm Bill. In just 3 years, net farm income has fallen by 56 percent. You have to go back to the start of the Great Depression to find a comparable collapse in net farm income.

During the farm bill debate, we committed to the principle that farm policy should not be written to make the good times even better. Instead, the goal was to provide producers with risk management tools for the bad times that are always bound to happen in this boom or bust industry of farming and ranching.

While some safety net features of the farm bill may meet the current economic test, other features have yet to prove their mettle. Two important questions we must keep asking are: first, can the existing safety net meet the growing challenges of prolonged peri-

ods of depressed prices; and second, will these policies be effective when farmers and ranchers need them most. We know the answer already in the case of STAX for cotton. Crop insurance is not designed to withstand the pressures caused by the predatory trading practices of China and India. I want to thank the leadership of this Committee for pressing USDA for action to address the growing crisis in cotton country. I am hopeful Secretary Vilsack will announce soon that immediate and meaningful help is on the way. I am also hopeful that we will continue to work toward a more permanent solution to a serious problem for cotton farmers that is not going away anytime soon.

Next year, we will head into a new Congress, and we will write a new farm bill. As we head into that long and difficult process, I hope our colleagues who are less directly involved in agriculture or farm policy will reflect on just how critically important farm policy is in responding to a crisis that can happen overnight. While we were able to deliver a farm bill in 2014 that saved taxpayers some $23 billion, primarily through the elimination of the direct payment program, our colleagues must now appreciate that we will struggle mightily to write an effective farm bill in 2018 with the very limited amount of money we have left.

I believe it is time to look beyond the farm safety net for budget savings and deficit reduction, as our farmers have already been asked to shoulder their fair share of the burden. For my colleagues who will share the responsibility of writing a new farm bill, I hope that the lessons from the 2014 Farm Bill will not be lost on us: the best safety net is the kind that will be there not when times are good but when the bottom is falling out.

[The prepared statement of Mr. Crawford follows:]

PREPARED STATEMENT OF HON. ERIC A. "RICK" CRAWFORD, A REPRESENTATIVE IN CONGRESS FROM ARKANSAS

As many of you know, this is the first hearing in a series focused on the farm economy. Every Subcommittee will play a role in highlighting current conditions on our farms and ranches and in rural America today.

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For my colleagues who will share the responsibility of writing a new farm bill, I hope that the lessons from the 2014 Farm Bill will not be lost on us: the best safety net is the kind that will be there *not* when times are good but when the bottom is falling out.

With that, I recognize my Ranking Member and good friend for his opening statement.

The CHAIRMAN. And with that, I would like to recognize the Ranking Member and my good friend for his opening statement.

OPENING STATEMENT OF HON. TIMOTHY J. WALZ, A REPRESENTATIVE IN CONGRESS FROM MINNESOTA

Mr. WALZ. Well thank you, Chairman Crawford, and thank you for holding this, and Chairman of the full Committee, Chairman Conaway, for your continued vigilance on this. Each of you, thank you for bringing your expertise.

I associate myself with the remarks of Chairman Crawford. We know our folks are resilient, but the statistics he gave you are correct. Real farm incomes are at a 20+ year low. It doesn't look like a lot of relief is on the horizon, and the Chairman is right. We wrote that farm bill in a very good time for the bad times. I am proud of what we did, but all of us know, we are writing the next one and several months ago, we weathered a move to open up the farm bill and change crop insurance. And I want to thank the Chairman for his absolute stalwart defense of that to make sure that did not happen, because at this time, more than anything, risk management is critical.

So I am going to yield back my time. I look forward to listening to you and give us an on-the-ground assessment of what you think is happening now and what is coming.

And I yield back.

The CHAIRMAN. I thank the Ranking Member, and appreciate your leadership and friendship.

I would also like to recognize the full Committee Chairman for any statement he would like to make at this time.

OPENING STATEMENT OF HON. K. MICHAEL CONAWAY, A REPRESENTATIVE IN CONGRESS FROM TEXAS

Mr. CONAWAY. I would like to briefly thank our witnesses for being here today. I am looking forward to your testimony to get on the record a better reflection of how things really are in rural America and for agriculture. We had a good hearing yesterday on the impact the oil and gas industry has on rural America and the struggles that are going on there, so I am anxious to hear from our witnesses and I appreciate the comments of the Ranking Member. I yield back.

The CHAIRMAN. Thank you, Mr. Chairman, and the chair would request that other Members submit their opening statements for the record so the witnesses may begin their testimony, and to ensure that there is ample time for questions.

I would like to welcome our witnesses to the table. We have four today. Mr. Zippy Duvall, President of American Farm Bureau Federation in Washington, D.C.; Mr. Roger Johnson, President of the National Farmers Union here in Washington, D.C.; Dr. Rob Johansson, Chief Economist, U.S. Department of Agriculture here in Washington, thanks for being here; and finally, Dr. Joe Outlaw, Professor and Extension Economist, and Co-Director, Agricultural and Food Policy Center, Department of Ag Economics, Texas A&M University in College Station, Texas.

Thank you to each of you for being here, and you all are pretty familiar with the process. I am going to recognize each of you for 5 minutes, and you will notice that series of lights in front of you. Green means good to go. Yellow, it is just like when you are driving, step on the gas because the light is fixing to change. And when you see that red light, we will ask you to slam on the brakes so we can get to the questions as quickly as possible and hear more expanded testimony from you through the questioning process.

With that, I would like to recognize our first witness, Mr. Zippy Duvall. You are recognized for 5 minutes.

STATEMENT OF VINCENT "ZIPPY" DUVALL, PRESIDENT, AMERICAN FARM BUREAU FEDERATION, WASHINGTON, D.C.

Mr. DUVALL. Good morning, Chairman Crawford and Ranking Member Walz. I appreciate you and the Members of the Subcommittee giving us the opportunity to be here today.

Thank you for the opportunity to tell American Farm Bureau's story about the state of the economy in farm country. My name is Zippy Duvall, and I am a poultry, hay, beef producer in Georgia and spent 30 years dairying there. It is my privilege to be the President of the American Farm Bureau, the nation's largest general farm organization.

Talking to our economists at AFBF, we do not see a crisis today, but we do see one on the horizon. Here are some of the latest USDA projections that lead us to say that. USDA projects that net cash farm income will fall by 33 percent in 2016, compared to 2013, and net farm income has fallen more than 55 percent over the same period of time. These declines are starting to have an impact on the farmer debt-to-asset ratio, and a farmer's operating debt has grown from $124 billion in 2012 to more than $165 billion today. Meanwhile, farmers are drawing down on their financial assets, such as cash and equity.

So let me tell you some stories in my own community. Within a 10 mile radius of my house, there are two middle aged farmers. One left the banking industry and went back home to fulfill his love and life and to farm, and he farmed for 10 or 12 years. In the last 2 years, he went in the hole $100,000 a year, and he has sold all his equipment and his cows, said he will not put his family's farm real estate at risk, and he is calling it quits and looking for a job. He called me looking for a job.

Another one, just a few miles from him, he came home from college, and joined his dad in the dairy business, trying to make that generational transition, and at the end of that transition, he realized there is not going to be enough money there for him to maintain his family, his dad is going to sell that dairy and he is going

to move on to other jobs. Those are just two examples of what is happening all over our country, and once we start hearing these examples daily, we know that it is going to be too late to stop it. It will be upon us.

So let's talk about what we can do. We can continue to financially support the risk management tools in the farm bill, and thanks to these programs, we as the agriculture sector overall, will hold on. If I do not deliver any other message today, I want to deliver one, and that is the Farm Bureau members and the Farm Bureau appreciate your continued efforts to protect these important farm programs, especially now when they are so badly needed.

So let's talk about other costs and constraints that our farmers have facing them today. The *Waters of the U.S. rule,* if it goes into effect, will have a huge impact. So we can stop now and think about what our farmers are facing, stop some of the overreach of Federal Government through continued regulation, and let's just talk about some of them.

WOTUS, the increased restriction on Federal grazing land permits, Food Safety Modernization Act and its implementation, the expansion of the spill prevention and control requirements, the 6th Circuit decision on pesticide permits, the EPA's failure in fully implementing the Renewable Fuel Standard, the Interior Department proposing to rewrite the Federal plans to protect the sage-grouse, and now, the possibility of a state-by-state GMO labeling mandate that will threaten our farmers' ability to use this important agricultural technology.

Almost everywhere we look, there are new and expanding regulations that are adding cost, more cost to our production. The last thing our farmers and ranchers need today is to have to face more regulatory burdens.

Finally, we can help the farm economy by passing TPP. The Trans-Pacific Partnership is a great example of action that Congress could take to raise farm income without the need of boosting government spending. This agreement, when fully implemented, will have the potential of raising farm income $4.4 billion.

Mr. Chairman and Members of this Committee, I thank you for holding this important hearing. We thank you for standing up for the farmers that grow the crops and livestock that put the food on our table, that put the clothes on our back, and that makes our country more energy independent. And we look forward to working with you to find ways to help our farmers through this difficult time. Thank you.

[The prepared statement of Mr. Duvall follows:]

PREPARED STATEMENT OF VINCENT "ZIPPY" DUVALL, PRESIDENT, AMERICAN FARM BUREAU FEDERATION, WASHINGTON, D.C.

Chairman Crawford, Ranking Member Walz, and Members of the Subcommittee on General Farm Commodities and Risk Management, thank you for the opportunity to share the views of the American Farm Bureau Federation (AFBF) on the current state of the agricultural economy.

I am Zippy Duvall, a beef cattle and hay producer from Georgia, and I am privileged to serve as President of AFBF, the nation's largest farm organization with nearly 5.9 million member families, and work on behalf of our members in every state in the nation and Puerto Rico. Our farmer and rancher members grow virtually every crop produced and all sectors of the livestock, dairy and poultry industry on farms and ranches of every size, using the full range of production systems

from organic methods to the latest in high-tech and biotechnology tools. And we proudly include as members many of the men and women who are our neighbors across rural America.

Let me start with our view of the big picture, Mr. Chairman: We all are well aware of the downturn in commodity prices: row crop prices for almost everything—corn, peanuts, soybeans, wheat—are down sharply from where we were just a couple years ago. Livestock prices also have tumbled.

Just as you all are doing by holding this hearing, farmers and ranchers are asking how the outlook for the agricultural economy got here after so many years of good prices and higher than normal farm income figures.

In 2003 our nation consumed or exported just over 10 billion bushels of corn and about 2.5 billion bushels of soybeans. By the 2009 marketing year corn use was over 13 billion bushels, and demand for soybeans exceeded 3.5 billion bushels—and soybean demand has continued to grow and is now over 3.7 billion bushels. The strong growth in exports to China and the effects of the Renewable Fuel Standard have contributed to this demand growth. The drought in 2012 also cut supplies and helped boost some commodity prices to new records.

You have been well aware of the challenges being faced by the cotton sector at every level of that industry. Cotton farmers have seen prices tumble from near 80¢ a pound just a few years back to dipping into the 50¢ range as world supplies of cotton stocks pressure the market. Industry analysts indicate there is in excess of 100 million bales of cotton lint on hand worldwide, with China alone holding more than 60 million bales. The carryover stocks along with strong competition from man-made fibers have pushed market returns for cotton farmers down an estimated 23 percent in the last 2 years.

As a former dairy producer, I would also note the picture for dairy farmers is just as concerning. Just a couple of years ago, all-milk prices were in the range of $20 or more per hundredweight. Recently, we have seen all-milk prices decline by more than $5 per hundredweight, with projections for this year staying in the $15 to $16 range.

Other livestock sectors have also been through some challenging times. The high feed costs in 2012 forced adjustments. The drought of just a couple of years ago, particularly in Texas and Oklahoma and still lingering in California, cut the beef herd and stopped dairy production growth cold in some parts of the country. To be sure, this led to livestock prices that were setting or getting close to record levels—and as the old market maxim states, the cure for high prices is high prices.

Farmers and ranchers boosted production in response, bringing more land into production and expanding herds and flocks. As we all have witnessed, the outcry of just a few years ago regarding rising food costs is now pretty much just a memory.

As our economists have warned over the years, once demand stops growing and the inherent delay in those signals reaching farmers and ranchers is realized, agriculture experiences a period of effectively producing the profit out of the system.

That is about where we find ourselves today.

Several reports from United States Department of Agriculture's Economic Research Service and the Congressional Research Service have done excellent work in laying out the recent past and current condition of the farm economy. A capstone statement from USDA's latest projections of Farm Income lays this out pretty clearly:

- In 2013 net cash farm income was $135 billion; for 2016, USDA's projection is $91 billion.
- Net farm income, which includes other factors like depreciation, inventory change and other non-cash costs, moved from $123 billion to $55 billion over the same period.
- Longer-term projections by USDA leave net cash income averaging less than $80 billion for the coming decade and net farm income at less than $70 billion.

It is this long-term expectation of much lower farm income that is most concerning. For many of our major commodities, there is little domestic demand growth on the horizon. Add to this a strong dollar amplified by weaker economic growth in many countries and the production expansion by our major competitors, and one also has to be concerned over limited hopes for significant export demand growth.

The bottom line is that farmers and ranchers are being forced to tighten their belts and pay much closer attention to their financial situation, and they will be in greater need of safety net and risk management programs than has been the case for some time—for some, since they started farming.

One other signal, though still in the early stages, is that farmers and ranchers are only now beginning to take on additional debt. When one examines the financial ratios, such as debt to equity or debt to asset, they are at some of the lowest levels ever—but those levels, along with debt overall, are starting to climb.

Of particular concern is the rise in operating debt since 2012. Over those last few years, this category has risen from $124 billion to over $165 billion, a 33 percent increase. At the same time, as farmers and ranchers are adding debt, they have also been drawing down financial assets, such as cash or equity. Looking again at 2012—which was admittedly a record year—farmers held nearly $134 billion in financial assets. For 2016, USDA estimates that figure will drop to less than $80 billion. Boosting debt by ⅓ at the same time as one is chewing through ⅓ of one's savings is not a long-term survival strategy, and puts substantial pressure on both the short and intermediate terms for farmers and ranchers in managing their operations.

It is this very situation—this economic reality, if you will—that makes the safety net programs provided by the farm bill so important. Younger and newer farmers and livestock producers are about to go through a steep learning curve on the difference between "variable" and "total" costs of production.

Dr. Gary Schnitkey at the University of Illinois regularly publishes cost of production estimates for corn and soybean producers in his state. His estimate for the 2016 per bushel cash or variable cost—seed, fertilizer, pesticides, fuel, crop insurance, *etc.*—on a highly productive farm in Illinois comes in at $2.40 per bushel for corn and $4.79 per bushel for soybeans. USDA is projecting $3.60 per bushel for a 2016 corn price and $8.75 per bushel for soybeans.

But before anyone jumps to the conclusion that this farm is operating in the black, recognize that out of the difference in this particular projection, a farmer has to pay for equipment, land costs and other farm expenses, as well as provide income for his or her family to live on. According to Dr. Schnitkey's analysis, cash rents ran approximately $236 per acre, effectively leaving nothing to cover equipment replacement or for family living for those renting land. For those farmers who own their land and have no debt on equipment, they will have some return, albeit a small amount. I have included at the end of the testimony some graphics showing the returns over variable and total costs for several commodities. Should these prices and land rents hold, financial stress on those renting land will build. And when you add potential interest rate increases, the problem just gets worse.

The Kansas City Federal Reserve produces its *Agricultural Finance Databook* every quarter. In its latest report, its analysts indicate that for the third quarter of 2015 the share of non-performing production loans at commercial banks was near historic lows, as is the case for the share of total loans that are non-performing at agricultural banks. From their perspective, individual farmers and ranchers have their own individual financial circumstances they are dealing with, but for now the sector, overall, is holding on. But warning signs abound, from the crash in farm income to the draw-down in financial assets and the buildup of operational debt.

This again highlights the importance of the safety net and risk management tools this Committee has provided for agricultural producers. The last thing the sector would need at this point is some substantial reduction in the level of Federal commitment, and on behalf of Farm Bureau members across the nation, we appreciate your continued efforts to protect these important programs.

There have been and will likely continue to be efforts to cut the level of government support provided through the crop insurance program. Farm Bureau will strongly oppose attempts to renege on the deal we all worked on as the farm bill was developed. Opponents of crop insurance need to realize that the program adjusts directly to changes in market signals, that the program directly reflects market prices on an annual basis.

Let me touch on one other important feature of crop insurance, particularly for the major program crops. It allows farmers to better market their crops, knowing that funding to replace any crops contracted for early delivery will be there should they be hit by a drought. These are precisely the kind of marketing strategies suggested to farmers in low price periods. Price the crop before it is planted in order to have costs covered. Farmers can do that with insurance as a backup to that marketing approach.

One sector of the agricultural economy that is doing somewhat better from a market standpoint are our fruit and tree nut producers. While the list of products there is longer than I have time to cover here, prices for many citrus products are higher today than last year. Unfortunately this is driven in part by production loses coming from the citrus greening issues in Florida. If ever there was a need for research and technology, it is certainly there. As another example of higher fruit prices, apple prices are up in part due to lower supplies driven by poor growing conditions last season in Washington State.

It is not just market realities and farm program issues that our farmers and ranchers are facing today that are impacting their respective bottom lines.

Regulatory costs in agriculture are almost too numerous to quantify:

- If the new *Waters of the U.S.* rule goes into full effect, it is bound to put additional costs and uncertainties on farming operations.
- The new Food Safety Modernization Act implementation has implications for farm operations, particularly in the specialty crop sector.
- The expansion of Spill Prevention and Control requirements will add costs and clearly provide no new revenue to the bottom line (and is unlikely to result in any environmental benefit).
- Stalled legislative efforts to overturn the 6th Circuit decision on pesticide permits may leave farmers vulnerable to unjustified citizen lawsuits as they deal with disease and pest outbreaks on their land.
- EPA's failure to fully implement the Renewable Fuel Standard has sent a disturbing signal to the agriculture sector.

The Department of the Interior's proposal to rewrite Federal plans to protect the sage grouse will undoubtedly have implications for ranchers in western states. EPA's increasing resistance to registering new farm protection tools while also threatening the ones we already have, like chlorpyrifos, are very concerning. And we cannot overlook the impact of state-by-state GMO labeling mandates that threaten farmers' ability to use this important technology to not only boost production, but also for the environmental and economic benefits it provides. Everywhere we look, costs of complying with ever-expanding regulations continue to build. And the last thing farmers and ranchers need right now are more unfunded government mandates.

Tax policy can also play a major role in determining a farm or ranch's financial health. Converting the annual "extenders" into several permanent provisions has certainly been helpful in allowing farmers to plan, particularly in terms of equipment purchases or in estate planning with the adjustments in the "death tax." But there are other provisions that would have been very helpful had they already been on the books.

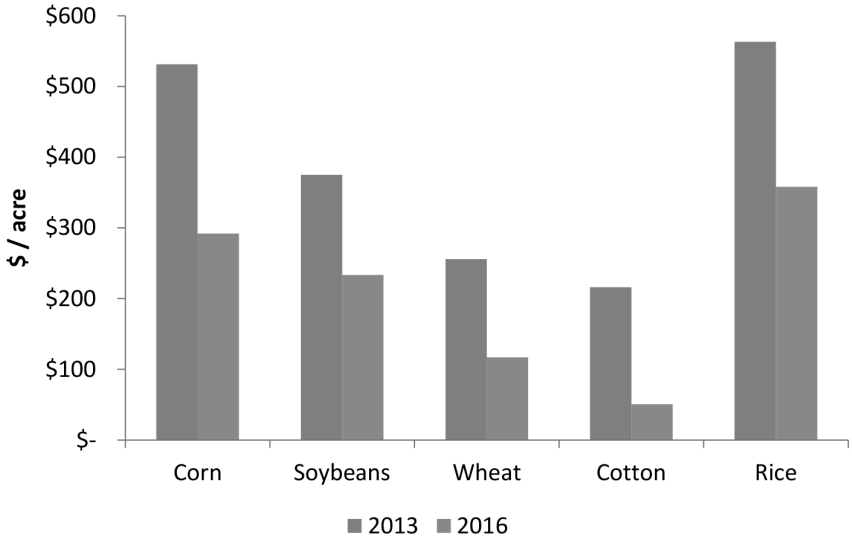
Finally, demand growth will be critical to helping the sector get out of this revenue downturn. The Trans-Pacific Partnership is a great example of action Congress could take that would help raise farm income without the need to boost government spending. This agreement, when fully implemented, will boost animal protein exports to Japan and other Asian countries, and has the potential to raise net farm income by $4.4 billion on an annual basis. Passage of that agreement is one of the American Farm Bureau Federation's highest priorities.

Mr. Chairman, I again thank you and your members for holding this important hearing to examine the state of the agricultural economy. I also thank you and your colleagues on the full Committee for standing up for the men and women who produce the crops and the livestock that provide food for our tables, make up the clothes we wear and contribute to our energy independence.

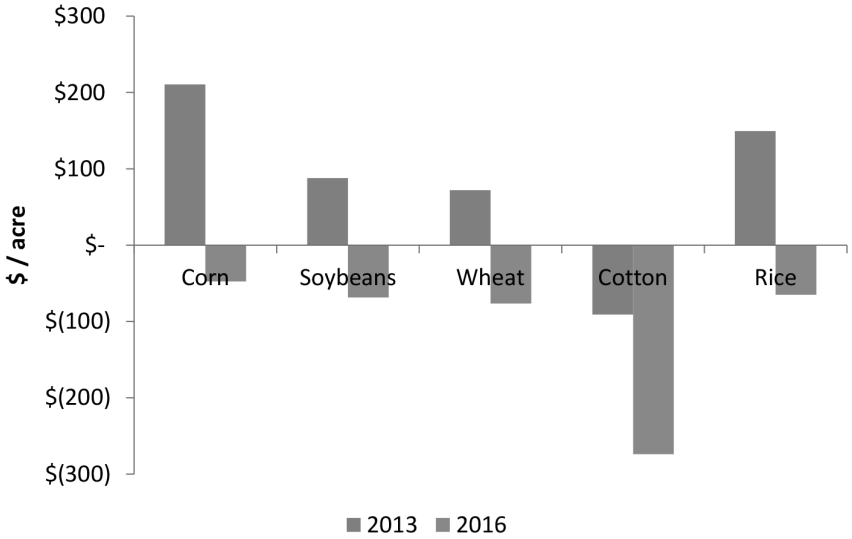
We appreciate your leadership and look forward to working with you as you seek ways to ensure America's farmers and ranchers are sustained through the economic challenges we face today.

[CHARTS]

Return Over Variable Costs



Return Over Total Costs



The CHAIRMAN. Thank you, Mr. Duvall, and I have been remiss in not congratulating you on your recent election as President of American Farm Bureau. We appreciate you being here.

Mr. DUVALL. Thank you, sir. It is my privilege and honor.

The CHAIRMAN. And now, Mr. Johnson, you are recognized for 5 minutes.

STATEMENT OF ROGER JOHNSON, PRESIDENT, NATIONAL FARMERS UNION, WASHINGTON, D.C.

Mr. JOHNSON. Thank you, Chairman Crawford, Ranking Member Walz, and Members of the Subcommittee for holding this important hearing. My name is Roger Johnson, President of the 200,000 member National Farmers Union.

There is growing pressure in the countryside as commodity prices continue to fall to levels ½ of what they were just 3 years ago. USDA now forecasts a prolonged period of depressed prices, with serious implications for producers accessing credit, negative farm budgets, depressed markets, tests to the safety net, and increased demand for mediation services regarding credit. While still early in the downturn, FSA's loan volume demand is up 21 percent over the past year. Requests for restructuring services packets are already up 30 percent. Mediation activity is up 75 percent, and they anticipate a 23 percent increase in actual restructuring this year.

Private creditors are also moving short-term debt to medium- and longer-terms. If commodity prices stay stubbornly low, next year the number of troubled portfolios for Farm Credit Services in my part of North Dakota could increase from ten to somewhere between 60 and 100 members in its lending area. My local lenders stress the importance of a strong safety net. ARC and PLC programs will be higher in the fall. Crop insurance does not help shield from low prices, given these low prices right now. Nonetheless, my local lender says without crop insurance, I would not have ten troubled accounts. I would have between 300 and 2,200 troubled accounts. That lender services 2,600 members in the center of North Dakota, 99 percent of whom carry crop insurance.

Projected 2016 crop budgets from north central North Dakota, the same area, paint a very grim picture. Corn alone per acre profitability is projected to be a negative $2.61 per acre; spring wheat, a negative $14 an acre; canola, a negative $30 an acre. Only soybeans show a profit of about $19 an acre. Since grain prices peaked in 2012, the prices for wheat and soybeans have declined 40 percent. The price of corn has been cut in half. At the same time, costs have declined very little and are clearly out of line with projected market returns. Actual farm management numbers put a finer point on this. In 2012, net farm income as an average across the state was $367,000. A year later in 2013, it was $133,000, in 2014, $76,000, last year, $28,000. We expect widespread losses this year.

Title I safety net programs are designed to assist with falling commodity prices. Nationwide, signup for ARC County and PLC were very high. Without these programs, producers would be in a much more difficult spot.

ARC is relatively complicated and has issues surrounding county yield data. We have seen cases in North Dakota, Texas, Colorado, Kansas, and South Dakota where the benchmark yields and current year yields are from differing sources and not providing representative revenue calculations. We are requesting administrative policy revisions and urge this Committee also to work with us and USDA to resolve some of these issues. In the next farm bill, your Committee should consider increasing PLC reference prices and look at ways of shoring up crop insurance for low price periods.

This Committee also made significant and important investments for livestock producers under the Livestock Indemnity Program, which seems to be working quite well. The Dairy Margin Protection Program, however, is not working so well. It needs better levels of protection and an incentives-based inventory management program. We would like to see the Committee hold regional hearings to discuss dairy pricing and regional feed costs. We are also concerned about STAX and its lack of responsiveness to cotton producers. We hope Congress can work with USDA to expand its authority to assist producers, as well as USDA working within its existing authority to provide relief.

While things are challenging in the countryside, there are also some bright spots. Organic and local food sectors continue to grow, and seem, for the most part, to be less subject to falling prices. With the help of this Committee, there are now 21,000, almost 22,000 certified organic producers in the U.S. They have increased by 12 percent last year, a 300 percent growth since 2002, and those investments have witnessed impressive returns.

Overall, the ag sector looks to be under increasing stress in the coming years. Thank you for the opportunity to testify.

[The prepared statement of Mr. Johnson follows:]

PREPARED STATEMENT OF ROGER JOHNSON, PRESIDENT, NATIONAL FARMERS UNION, WASHINGTON, D.C.

Chairman Crawford, Ranking Member Walz, Members of the Subcommittee,

Thank you for the invitation to testify today and the work this Committee is doing to understand the challenges that face agriculture. My name is Roger Johnson and I serve as President of the National Farmers Union (NFU). NFU represents roughly 200,000 family farmers, ranchers, fishermen and rural members. NFU works to improve the well-being and quality of life of family farmers, ranchers and rural communities by advocating for grassroots-driven policy adopted annually by our membership.

As the title of this hearing indicates there is growing pressure in the countryside as commodity prices continue to decline and farmers and ranchers struggle to adjust to lower prices. While still in the first few years of this downturn, forecasts by the USDA point to a prolonged period of depressed prices. Such a scenario has implications for producers accessing credit, negative farm budgets, depressed markets, tests to the safety net and increased demand for mediation services. In my testimony I will discuss all of these issues and also note some of the positive trends we see in agriculture.

Credit

We are beginning to witness an increase in challenges nationwide associated with accessing credit. While still early in the downturn, Farm Service Agency's (FSA) Farm Loan Program has seen an uptick in activity. Given the makeup of borrowers that utilize FSA's programs, we would expect to see challenges in their loan portfolio before problems hit other portions of the lending sector. At this time, the FSA's loan demand is up 21 percent over the same time last year with $3.4 billion of the $6.47 billion in lending authority for Fiscal Year (FY) 2016 being utilized.

There are a number of other activities associated with FSA loan servicing that can provide helpful insight. USDA's credit teams have numerous options to help their borrowers including servicing packets for restructuring debt, actual restructuring of loans, loan deferrals, debt write-down, debt reduction via conservation contract, state-sponsored mediations and as an absolute last resort, foreclosure. USDA reports that requests for servicing packets are up 30 percent over 2015; and mediation activity was up 75 percent in FY15. Assuming servicing activity continues at a similar rate, FSA anticipates a 23 percent increase for 2016. Last, FSA, at this time is not aware of any increases in foreclosure at this time.

Moving to private-sector lending, Farm Credit Services of North Dakota, which services northwest and north-central North Dakota, based out of Minot, is also dealing with some credit challenges in my part of the state. It has been a challenging

renewal season for them with low commodity prices. There was a fair amount of rebalancing to be done in order to move operating and equipment costs from short-term to medium- and long-term debt. While these actions are useful in the short-term, they can lead to larger problems if even lower prices persist. There are a handful of producers in this lending area who have already used excess capital from prosperous years and now find themselves with very little liquidity.

The good news is that most of the folks who were struggling to find enough operating capital have been assisted for this year. There were ten customers who really needed to restructure debt, with some using FSA loans to bridge till next year. If commodity prices stay stubbornly low next year the number of troubled portfolios could increase somewhere between 60 and 100 members in the lending area. Unfortunately, prices are not the sole driver of profitability. While there are currently no worries of drought, eastern North Dakota is very dry right now; and weather, as you know, can quickly impact yield. Local lenders are concerned that with high yields being necessary to protect from low prices, weather-induced yield losses will exacerbate an already difficult situation.

One thing that my local lenders wanted to drive home to members of this Committee is the importance of a strong safety net, which I will discuss at length below. It is expected that Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) payments will be higher in the fall for my area. Crop insurance, while not a break-even venture, does help shield from down prices. My local lender said "without crop insurance, I would not have ten troubled accounts, I would have between 300 and 2,200 troubled accounts." Farm Credit Services of North Dakota services 2,600 members, 99 percent of who carry crop insurance, underscoring the necessity for a strong safety net. It is also important to understand that today's crop insurance products provide even lower guarantees as prices decline.

Farm Budgets

North Dakota State University (NDSU) Extension Service produces annual projected crop budgets in an effort to assist producers with estimates of revenue and costs for selected crops. The projected 2016 crop budgets for North Central North Dakota paint a pretty grim picture. While these are averages and make a variety of assumptions, it nonetheless provides a window into the challenges that my neighbors face. By regionalizing the estimates we arrive at a more accurate estimate of profitability.[1]

I will use corn, spring wheat, soybeans and canola as examples. NDSU adds projected direct costs with indirect costs and compares them to projected market incomes. The resulting per acre profitability is shown below:

Crop	Projected Price	Market Income (Per Acre)	Sum of Listed Cost (Per Acre)	Profitability (Per Acre)
Spring Wheat	$5.26	$231.44	$245.51	−$14.07
Corn	$3.50	$360.50	$363.11	−$2.61
Soy	$3.50	$243.35	$224.41	$18.94
Canola	$.148	$248.64	$279.17	−$30.53

What is even more alarming is that while the crop budget projects $3.50 a bushel corn, the same price at closing on April 7, 2016 in Chicago, local cash prices in Minot for delivery to CHS was $2.62. So while the crop budget shows a loss of $2.61 an acre, losses will likely be much worse.

Prices of Commodities

As this Committee knows, prices of major commodities have fallen dramatically over the last several years and are continuing to decline. March National Agricultural Statistics Service's (NASS) Prospective Plantings and Grain Stocks reports, project corn planted acreage up six percent, soybean acres down less than one percent, wheat acres down 9 percent and cotton acreage up 11 percent from 2015.[2] At the same time corn stocks are up one percent, soybean stocks are up 15 percent, and all wheat stocks are up 20 percent from 2015.[3] The cumulative effect of these

[1] Swenson, A., & Ron, H. *Farm Management Planning Guide Projected 2016 Crop Budgets North Central North Dakota.* North Dakota State University. Retrieved April 12, 2016, from *https://www.ag.ndsu.edu/publications/landing-pages/farm-economics-management/2016-north-central-nd-ec-1654.*

[2] *Prospective Plantings.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Economic National Agriculture Statistics Service.

[3] *Grain Stocks.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Economic National Agriculture Statistics Service.

projections has been negative to prices. When the reports were released 2 weeks ago, May-delivered corn fell 13¢ to $3.54 a bushel on the Chicago Board of Trade, May soybeans dropped 4¢ to $9.05 and May wheat was down 1.25¢ to $4.6275.[4] Locally, in western Minnesota corn prices dropped 0.20¢ a bushel at local delivery points.

From a longer-term perspective, since grain prices peaked in 2012, the price for wheat and soybeans has declined by 40 percent and the price of corn has been cut in half.[5] At the same time, costs have declined very little. Farmers are struggling to balance input costs and declining prices. Variable costs or annual input costs, which include seed, fertilizer, pesticides, fuel, repairs, crop insurance, drying and operating interest, continue to stay high. Farmers are struggling to control these costs, which are clearly out of line with projected market returns.

Lower spending will not only impact the overall farm economy, but when done incorrectly, it could have further negative impacts on farm profitability. Negative net farm income will add additional stress to family farms.

Discussions with local seed dealers and coops have substantiated concerns over significant shifts in planting. My staff, while out in the same geographic area mentioned above, report substantial concern over significant shifts from biotech seeds to conventional seeds. Some co-ops expressed concern over an inability to meet demand for additional fertilizer and chemical treatments needed in order to match the yields of biotech traits, while using conventional seeds. In a number of locations, coop management is aggressively ordering additional chemicals, anticipating much higher mid-season demand.

The following numbers are courtesy of NDSU's Farm Business Management Education program. Net farm income for all participating operations (numbering 537–518) at its high in 2012 was $367,317; in 2013 it was $133,466; in 2014 it was $76,404; and in 2015 it was $28,399. Given the negative trends we have witnessed in 2016, and projected crop budgets highlighted above, this Committee should expect widespread losses this year.

Livestock

The USDA projects 2016 market prices for choice steers, feeder steers, cutter cows, and poultry to continue a downward trend from 2014 and 2015 annual prices.[6] USDA has reported livestock producers as showing an average loss when comparing total costs of production and total gross value of production in 2013 and 2014 for Cows and calves.[7] Research from the University of Tennessee supports this continued downward trend, estimating the total production cost of one cow in Tennessee at $1,029.19 and the total revenue for that cow at $821.54, that's a loss of $207.65.[8] A Kansas State University report validates the trend as well showing livestock producers at a loss when comparing gross returns per cow and total costs per cow.[9]

Despite the challenges within the livestock sector, this Committee made significant and much needed investments for livestock producers in the 2014 Farm Bill. Since its enactment, 14,840 payments have been made through the Livestock Indemnity Program, providing a total of $114,934,832 in benefits to livestock producers for livestock deaths due to adverse weather or animals reintroduced into the wild by the Federal Government.[10] This program, with its ability to make retroactive payments, provided much needed relief for producers, especially ones that had been impacted by winter storm Atlas. As an increase in the occurrence of ex-

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[4] Gregory, M. (2016, March 31). *U.S. Farmers to Plant Most Acres of Corn Since 2013.* Retrieved April 12, 2016, from *http://www.ft.com/fastft/2016/03/31/us-farmers-to-plant-most-acres-of-corn-since-13/*.

[5] Aakre, D. *Think Twice Before Cutting Input Costs.* North Dakota State University Agriculture Communication. Retrieved April 12, 2016.

[6] *Livestock, Dairy, & Poultry Outlook.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Economic Research Service.

[7] *Commodity Costs and Returns: Cow-Calf: 2013–14.* (2015). Washington, D.C.: U.S. Dept. of Agriculture, Economic Research Service.

[8] Griffith, A.P., & Bowling, B. (2016, January). *2016 Cow-Calf Budget* (Rep. No. AE 16–01). Retrieved April 04, 2016, from University of Tennessee website: *http://economics.ag.utk.edu/budgets/2016/Beef/CowCalf2016.pdf*.

[9] Tonsor, G.T., & Reid, R. (2016, March). *KSU Beef Cow-Calf Budget.* Retrieved April 04, 2016, from Kansas State University website: *http://agmanager.info/livestock/budgets/projected/default.asp*.

[10] *Livestock Indemnity Disaster Program (LIP) Payments as of January 28, 2016.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Farm Service Agency.

treme weather events is predicted for 2016, these numbers will most likely continue to rise.[11]

Mediation

USDA's Certified Agricultural Mediation Program (CAMP) helps farmers and ranchers, their lenders, and other persons directly affected by the actions of the USDA to resolve disputes. Through mediation, a trained, impartial mediator helps participants review conflicts, identify options, and agree on solutions. Mediation is a valuable tool for settling disputes in many different USDA program areas, but for our purposes it is particularly helpful in financial and farm loan areas.

The genesis of USDA's CAMP was the farm financial crisis of the 1980s. The program was designed to assist financially strapped farm families and their lenders explore and implement options to resolve serious debt problems and avoid bankruptcy through neutral third-party intervention. This third-party intervention helps producers complete loan servicing applications with accurate information and provides a neutral, confidential and facilitated setting for producers and their lenders to frankly discuss and consider all options available to both. I was personally involved in North Dakota's Certified Agricultural Mediation Program from its beginnings until my election as President of National Farmers Union. I served as a farm credit counselor, negotiator and mediator during the 1980s, administering the North Dakota Agriculture Mediation Program in the late eighties and into the nineties. Subsequently I served as North Dakota Agriculture Commissioner, overseeing the North Dakota Agriculture Mediation program from 1997 to 2009. We provided mediation services to thousands of farm families that averted many bankruptcies and foreclosures. Even in those cases where farm liquidation could not be avoided, mediation was invaluable in the assurance that farm families and their lenders had both been heard and treated as fairly as possible.

Over the years, the program's success and value led to an expansion of USDA agencies and issues that are eligible for assistance through the USDA's CAMP. NFU is fully supportive of the USDA's CAMP and has urged the Secretary of Agriculture and Congress to not only be prepared for an uptick in financial distress requests, but also provide the necessary funding for the program to be as effective as possible.

A Working Safety Net

Overall Title I programs are functioning as designed and assisting producers with falling commodity prices. USDA deserves serious praise when it comes to the rollout and education behind these relatively complicated new farm bill programs. But that does not mean that there is an absence of flaws both in design and execution of these programs.

Nationwide, 96 percent of soybean farms, 91 percent of corn farms, and 66 percent of wheat farms elected the Agricultural Risk Coverage County program (ARC–CO). Seventy-six percent of all base acres enrolled in ARC–CO. Over 90 percent of long grain rice, medium grain rice, and peanut farms elected the Price Loss Coverage program (PLC).[12] Totals for the 2014 crop year for both the ARC and PLC programs were roughly $5.18 billion. Of that total, $772 million went to PLC participants and $4.41 billion went to ARC participants.[13] Without these programs, producers would be in a much more difficult spot than they are right now. Especially when considering 2016 projections for net cash and net farm income, which is set to decline for the third consecutive year after reaching recent highs in 2013 for net farm income and 2012 for net cash income. Net cash farm income is expected to fall by 2.5 percent in 2016, while net farm income is forecast to decline by three percent. While those numbers do not appear alarming, when stacked on declines of 27 and 38 percent reductions in net cash income and net farm income that occurred in 2015 the picture worsens.[14]

The assistance that Title I programs are providing is also complemented by the role of crop insurance. Nothing makes up for strong prices, especially not crop insurance. It is not a breakeven program and, on average, farmers must incur losses of almost 30 percent before their insurance coverage starts to provide assistance. Farmers also spend approximately $4 billion per year out of pocket to purchase in-

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[11] National Climate Assessment. (n.d.). Retrieved April 12, 2016, from *http://nca2014.globalchange.gov/highlights/report-findings/future-climate*.

[12] *ARC/PLC Program.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Farm Service Agency.

[13] *ARC–CO/PLC Payments as of Feb 22, 2016.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Farm Service Agency.

[14] *2016 Farm Sector Income Forecast.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Economic Research Service.

surance from the private-sector.[15] All that being said, crop insurance, year over year, has provided a meaningful, timely and flexible program that fits individual producer demands.

Federal crop insurance is based on fundamental market principles, which means high risk areas and high value crops pay higher premiums for insurance. This emphasis on crop insurance and risk management has replaced constant demand for *ad hoc* disaster assistance, which is subject to congressional wrangling, and is paid for entirely by the taxpayer, while not being delivered in a timely manner. In addition to price and yield declines, the program helps farmers and ranchers facing market conditions greatly impacted by foreign subsidies, tariffs, and non-tariff trade barriers. This Committee must protect the integrity of crop insurance for the benefit of farmers and ranchers.

Challenges Within the Safety Net

There are a number of Title I programs that deserve additional attention by this Committee. There can be no doubt of the yeoman's work that USDA did in compiling data on all crops in all counties for use in the ARC program. But problems remain. One problem is the program itself.

ARC has had a number of problems including sign-up problems associated with administrative counties. For the benefit of producers and program integrity, FSA worked with grower groups to resolve the problem for the benefit of producers and administrators alike. At the same time, we are also dealing with issues that have not been solved, including ARC county yield data. We have seen cases in North Dakota, Texas, Colorado, Kansas and South Dakota where the benchmark yields and current year yields are from differing sources and are not providing representative revenue calculations.

NFU, along with other grower groups, are requesting administrative policy revisions. These revisions include: an allowance for current year county yields to be determined using comparable source yield data that was used for both the benchmark and current year yields, and changes to the "ARC–CO yield cascade policy." The change in cascade should be as follows: NASS county yield, NASS adjoining county yield, and determinations made by State Committees utilizing RMA yield data, unpublished NASS yield data, NASS district yield data and NASS state yield data.

The PLC Program is simple to administer and understand and has faced no substantial implementation issues. NFU supported this Committee's work as it pushed for the promotion of PLC in the 2014 Farm Bill. We had serious concerns over ARC. Price protection and weather protection should be separate, with ARC there is a mixture of the two that have caused problems from our perspective. NFU would have liked to see a single program in the form of PLC that contained higher reference prices with crop insurance serving as the backstop.

NFU has also heard from dairy producers with concerns over the Dairy Margin Protection Program (MPP). While this program was always intended to be a risk management tool in a sector that historically relied on direct payments, it has nonetheless fallen short of expectations. Dairy farmers are experiencing an extended period of very low milk prices and MPP has been unable to provide meaningful relief for farmers during this period of low prices and surplus production. We have serious concerns that if this problem goes uncorrected more dairy farms will go out of business. We hope this Committee can begin to examine a reasonable dairy price setting mechanism that takes into account production costs and an incentives-based inventory management program. NFU would like to see the Committee hold regional hearings to discuss dairy pricing and regional feed costs.

The last Title I program that our members have concern over is the Stacked Income Protection Plan (STAX). The current economic situation for cotton is anemic and is threatening to cause long-term and potentially irreversible damage to the industry and the associated infrastructure. Losses in cotton areas translate into pressure on associated businesses, infrastructure and rural economies. The infrastructure for the U.S. cotton industry (gins, warehouses, marketing coops and merchants, and cottonseed crushers and merchandizers) will continue to shrink unless there is a stabilizing policy for cotton to help sustain the industry in periods of low prices such as currently exists today.

Cotton futures prices are trading in the 55¢ to 60¢ range, the lowest levels since 2009. Concerns about world demand, burdensome global stocks, a stronger U.S. dollar and general price pressure in commodity markets are all factors in the current price environment. Lower prices for cotton lint and cottonseed contributed to a de-

[15] Crop Insurance Coalition—*Protect Crop Insurance.* (2016, March 16). Retrieved April 12, 2016, from *http://archive.constantcontact.com/fs158/1103508273436/archive/1124126672578.html*.

cline in U.S. average market revenue of $156 per harvested acre in 2014 compared to 2013 levels. For the 2015 crop, market revenue from cotton fiber and seed will fall short of USDA's full costs of production by more than $230 per acre.[16]

NFU believes that STAX is not sufficient to solve the current situation on its own. To start, STAX only covers roughly 29 percent of cotton acres.[17] NFU, along with other allies including the National Cotton Council are supportive of classifying cottonseed as an "other oilseed" for the purposes of ARC and PLC. We recognize there has been a debate over current USDA authority and would urge USDA and Congress to find a meaningful path forward. We also hope Congress can work with the USDA to expand its authority to assist producers as well as USDA working within its existing authority to provide relief.

Bright Spots

During these difficult times there will be many of conventional producers who will manage to get through the down farm economy and in some cases come out stronger in the end. There are also bright spots in the farm sector where there is additional growth. Organic and local foods sectors continue to grow and seem, for the most part, to be less subject to falling prices. This Committee, which made record investments through the 2014 Farm Bill, deserves credit for the current landscape in these sectors. These investments include $11.5 million annually for the National Organic Certification Cost-Share, $20 million annually for the Organic Agriculture Research and Extension Initiative, $5 million over the life of the farm bill for the Organic Production and Market Data Initiatives, $5 million for the National Organic Program technology upgrades and $30 million annually for the Farmers Market and Local Food Promotion Program.[18]

With the help of this Committee and the 2008 and 2014 Farm Bill investments, there are now 21,781 certified organic operations in the U.S. According to data released by the Agricultural Marketing Service's (AMS) National Organic Program (NOP) in the beginning of April, the number of domestic certified organic operations increased by almost 12 percent between 2014 and 2015. To further highlight the increase in demand, the organic sector has undergone nearly 300 percent growth since 2002. USDA, with the help of Congress has provided more than $1 billion in investments to over 40,000 local and regional food businesses and infrastructure projects since 2009. Sales estimates of local food have totaled $12 billion in 2014, up from $5 billion in 2008.[19]

Conclusion

There are many challenges facing agricultural today. This Committee has a challenging task ahead of it as it begins to grapple with these problems especially as it looks to crafting the next farm bill. The safety net needs to be protected from those entities that would like to see it torn apart. There must also be recognition on our part that these programs are not perfect and will need to be modified where necessary, for the benefit of producers. At the same time some areas of agriculture are doing well. Our collective challenge is to continue working to provide help when and where needed—and to encourage the continued growth and success of our most vital industry—agriculture.

Thank you.

The CHAIRMAN. Thank you, Mr. Johnson.

Dr. Johansson, you are recognized for 5 minutes.

STATEMENT OF ROBERT JOHANSSON, PH.D., CHIEF ECONOMIST, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Dr. JOHANSSON. Mr. Chairman, Ranking Member Walz, and Members of the Committee, I am pleased to have this opportunity today to discuss the state of agriculture and rural economy in the United States. Today I will direct my comments towards the mac-

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[16] National Cotton Council of America. (n.d.). Retrieved April 12, 2016, from *http://www.cotton.org/*.

[17] Shurley, D. (3 Dec., 2015). *STAX: A by-the-numbers look at its first year for cotton farmers.* SOUTHEAST FARM PRESS.

[18] *H.R. 2642.*

[19] *USDA Reports Record Growth In U.S. Organic Producers.* (2016). Washington, D.C.: U.S. Dept. of Agriculture, Office of Communication.

roeconomic forces and the impacts in the broader agricultural economy. I have submitted a more detailed statement for the record, so today, I will focus my initial remarks on three main points.

First, expected prices for the new crop have fallen from recent peaks, which will make it difficult for some producers to cover variable costs of production. Globally, production has exceeded use for corn, soybeans, and wheat for the past 3 years. As a result, global stocks have been growing. In addition, the value of the U.S. dollar has strengthened, resulting from slow and uncertain prospects for growth globally and relatively strong and stable growth expected for the United States. We anticipate the dollar will remain strong through 2017, relative to customer and competitor currencies. As a result, we project that export values in 2016 will be 10.5 percent lower compared to 2015. One-third of that decline is due to reduced trade value with China.

Second, producers will respond to the expectation of lower prices in several ways that we have already heard about. Facing lower expected prices for crops, we know that producers will adjust planting decisions, cut back on some inputs, rely on capital reserves, take on additional debt, renegotiate land rental arrangements, and participate in new farm bill programs. We have already seen significant changes in farmers' planting intentions with 5 million fewer acres of wheat and almost 4 million acres of corn, more than our expectation from February. Machinery sales have lagged behind the 5 year average for the past 2 years. Demand for farm loans has been growing since 2011 and is expected to continue to grow. For example, as of the end of February, FSA's use of funds compared to last year is up 16 percent for direct operating loans, 25 percent for guaranteed operating loans, and eight and 25 percent for the direct and guaranteed farm ownership programs, respectively.

We expect farm bill programs will help farmers adjust to lower farm income. Agricultural Risk Coverage Program payments last year totaled approximately $4.2 billion, and payments for ARC this year are forecast to be approximately $7.2 billion. PLC Program payments last year totaled approximately $700 million and are forecast to be nearly $2 billion this year. In addition, many producers who have the ability to choose crop insurance to manage risks have unforeseen losses for the 2016 crop. Overall, government payments are expected to rise from about $10.6 billion in calendar year 2015 to about $13.9 billion this year, and that includes conservation payments of approximately $3.5 billion.

Third, farm incomes will fall in 2016, but household incomes are expected to show some positive growth. Farm net cash income, as we have heard, is expected to fall by roughly three percent relative to last year. Of course, last year's net cash income, which includes commodity receipts, cash, farm-related income, and government payments less cash expenses, fell by 27 percent relative to 2014. So, that is a flattening of the drop in farm income. In the crop sector, our initial projections suggest that crop commodity receipts will be down this year by $1.6 billion, a decrease of about a percent. In the livestock and dairy sector, our producers will benefit from lower feed costs, but will also continue to be affected by tighter prospects for trade. Projections indicate a decrease in livestock receipts of $7.9 billion, or about four percent.

However, despite slightly lower aggregate, net cash income, we still project that the majority of farm households will see some increase in household income in 2016. Median farm household income is expected to exceed $81,000 in 2016. That is a record. Our initial projections show that median on-farm and off-farm incomes are expected to rise slightly in 2016, compared to 2015. In general, that means that the majority of farm households are in a relatively stable position going into the year, but it also means that there will be a group of farms that are likely to face significant financial stress in 2016.

To summarize, the overall farm economy in the U.S. does have growing financial pressures. Global production is up. Stock levels have been growing. The U.S. dollar is strong, and the trade environment is very competitive, all of which mean prices are down relative to recent years. Farmers will adjust to lower expected sales through a number of strategies to minimize unnecessary costs and optimize their production. To cover costs, they will utilize capital reserves such as financial reserves or new equipment, and may take out new operating loans. Currently, interest rates remain very low so new debt is not expected to result in significant increase in operating costs. We would expect land value and cash rent levels to realign to the lower price environment, but more slowly than other costs. Last, we expect farmers to utilize new farm bill payments to cushion that transition to new lower commodity prices.

However, I will point out that many of our expectations and projections for the new crop year and the impacts on the farm economy were developed prior to our Outlook Conference at the end of February. Since then, farmers have signaled they will plant more corn and less wheat than we initially expected. Similarly, the Chinese have recently indicated they will start to unwind their strong stock position in corn. All of that information, as well as spring weather, will ultimately determine the acres and management decisions chosen by producers this year.

Mr. Chairman, that concludes my opening statement. I am happy to answer any follow up questions that you may have now or later for the record. Thank you.

[The prepared statement of Dr. Johansson follows:]

PREPARED STATEMENT OF ROBERT JOHANSSON, PH.D., CHIEF ECONOMIST, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Mr. Chairman and Members of the Committee, I am pleased to have this opportunity to discuss the state of agriculture and the rural economy in the United States.

Last year the outlook for the agricultural sector was driven by factors, such as transportation issues, energy price declines, and drought in the West. This year, while energy prices and drought remain important components of the outlook, the overall picture for agriculture in the United States is being driven more by macroeconomic factors such as economic growth both here and abroad and resulting currency adjustments.

A strong dollar coupled with high-levels of global agricultural production leave U.S. producers facing commodity prices that continue to decline from record levels and a more difficult trading environment than last year. As a result there will be growing financial pressures on some producers this year, as expected revenue may not be sufficient to cover expected costs. Overall, USDA forecasts that net cash income will fall again in 2016.

Because in some cases expected revenues may not be sufficient to cover potential costs, some producers will likely rely on capital reserves (farm incomes were at

record highs between 2011 and 2014), increase demand for loans, lower their input use, and rely on farm programs. Overall, the outlook for 2016 is for flat to lower farm income in aggregate, but median farm household income is forecast to increase 4.5 percent to $81,666, reflecting expected increases in off-farm income.

Today, I will direct my comments toward macroeconomic forces and the impacts on the broader agricultural economy, as I am sure the other two speakers here will discuss farm-level impacts in greater detail.

Macroeconomic Outlook

[CY] 2015 marked a significant change in the global business cycle. Projections for global growth fell consistently throughout 2015. USDA's 10 year baseline used assumptions that showed world GDP growth rising slowly and to plateau at just over three percent. A key component of that global slowdown is slowing economic growth in China (see *Figure 1*). Baseline projections also assumed China's GDP growth would slow to 6.1 percent in 2016, 5.7 percent in 2017, and gradually edge down towards 5.0 percent. The latest IMF projections now show Chinese growth improving slightly with growth at 6.5 percent and 6.2 percent in 2016 and 2017, respectively.

While that growth is still relatively high, the slower growth means China's GDP is now forecast to be $700 billion lower in 2020 (about 5.7 percent lower than forecast at this time in 2015). The implication is that China will be importing raw materials at a slower pace as it embarks on a more consumer- and service-oriented economy compared to one fueled more by housing construction and a buildout of its manufacturing capacity. Countries that were heavily dependent on selling goods and services to China are now facing a reduction in economic growth themselves (Australia, Korea, and Brazil, for example). By comparison, the United States is expected to be the growth leader among developed countries over the next decade. U.S. economic growth is expected to be near 2.5 percent in 2016 and 2017 before gradually moving to a longer-term growth rate of 2.3 percent

Driven by the relative strength and safety of the U.S. economy and by relatively expansionary monetary policies in many other countries, the real value of the dollar increased substantially in 2015 relative to competitor and customer currencies, and that growth is expected to continue through 2017 (see *Figure 2*). Clearly, a stronger dollar means it is more difficult to sell products to countries with weaker currencies, such as Egypt and Nigeria (major wheat importers), and it is easier for countries, such as Canada, the EU, Brazil, and Argentina to sell their agricultural products abroad, making for an extremely competitive trade environment.

However, a strong economy also helps U.S. producers in several ways. First, it is easier for U.S. buyers to import goods, such as fertilizer, from countries with weakening currencies, such as Canada, Russia, and Ukraine. Second, a stronger U.S. economy provides improved off-farm income opportunities for a large majority of U.S. farm households. Third, 80 percent of agricultural products are sold domestically, so a stronger domestic economy likely means more opportunities to sell more U.S. products and provide additional value-added at home.

Outlook for Trade Is Down in the Near-Term

Turning to the outlook for trade, U.S. agricultural exports were most recently forecast at $125 billion for FY2016 (see *Figure 3*). That is down 10.5 percent from last year, with much of that stemming from lower values, not volume, and with ⅓ of the decline coming from reduced sales to China. Yet, while strong competition, reduced demand, and lower prices have contributed to falling U.S. export sales, the last 5 years, and this year if forecasts hold, mark the 6 top years for value of agricultural exports. On the import side, a stronger dollar means that U.S. consumers have a greater ability to buy foreign goods. This year, agricultural imports are forecast to rise to a record $118.5 billion. The next USDA trade forecast will be in May.

The FY 2016 forecast for grain and feed exports is down $4.4 billion from FY 2015 to $27.2 billion, due to lower volumes of corn and feeds and fodders, lower prices, and increased competition from other suppliers. Oilseed and product exports are forecast at $25.4 billion, down in both value and volume. Soybean exports are projected at 46 million metric tons in FY 2016, which would be the second highest level ever, if realized, after last year's 50.4 million metric tons. Cotton exports are forecast $900 million below last year, at $3.2 billion on reduced supplies and shrinking global demand. Rice exports are forecast at $1.8 billion, $300 million below last year, mostly on declines in volume. Livestock products are down $2 billion from last year, to $16 billion, due to lower prices, while dairy has dropped $700 million due to lower prices and strong competition from the EU. However, sales of horticultural products driven by tree nut exports and processed fruit and vegetables are up by almost $600 million.

Changing market conditions explain the export projections. For example, over the past 10 years, agricultural export volumes to China have increased by more than 125 percent. We expect China imports of corn to be limited and imports of sorghum and barley to slow in the near future, but to continue to grow over the next decade (see *Figure 4*). Conversely, for Brazil, we expect its producers to respond to relatively high prices for corn and soybeans (given Brazil's currency depreciation) and to increase production over the next 10 years. That will translate into increased Brazilian exports and greater competition for the United States (see *Figure 5*).

Overall, global trade of grains and oilseeds is expected to increase over the next decade to meet rising global demand. Global trade for wheat is projected to increase by 17 percent, for coarse grains by 15 percent (25 percent for corn), and for soybeans and products by 24 percent (25 percent for soybeans). Based on projected yield growth, the world will need to allocate about 50 million more acres to corn, wheat and soybeans, at U.S. productivity growth levels, to meet the increase in trade demand.

Prices Continue To Soften

U.S. prices have moderated with weaker demand for U.S. products and greater foreign competition. Stock levels have increased, and record global crops, largely a result of relatively high prices for much of the last decade, have expanded supplies. Since December, the dollar has continued to strengthen relative to the Brazilian *real* and Argentine *peso;* Argentina has taken actions to be more competitive in world commodity markets; oil prices and fertilizer prices have weakened; China's demand for sorghum has slowed; and the U.S. rice market has tightened.

In February, we released our expectations for the new crop. At that time, we expected further price reductions for the 2016/17 crop year for corn, soybeans, wheat, rice and cotton as compared to our long-run baseline forecast from December of last year. Wheat prices for 2016/17 were estimated at $4.20 per bushel, a decline of 16 percent from the current year. There are signs of weak exports, and we have already seen winter wheat area come in below trade expectations suggesting producers adjusted their plantings. Corn prices were projected to fall to $3.45 per bushel for 2016/17. Soybeans prices were forecast at $8.50 per bushel in 2016/17. The all-rice price was forecast at $12.90 per hundredweight for 2016/17. Cotton prices were projected at 58¢ per pound (see *Figure 6*).

Lower commodity prices are expected to idle some land that had been brought into production as commodity prices rose in the late 2000s. With the continued pressure on margins, based on farmers' intended plantings, the total area allocated to major crops in 2016 is expected to fall by 2 million acres compared to last year, even as area enrolled in the Conservation Reserve Program continues to decline, and would be down nearly 6.5 million acres from the recent peak in 2014 (see *Figure 7*).

USDA's *Prospective Plantings* report released on March 31 reported that farmers intend to plant 93.6 million acres of corn in 2016, a surprising 3.6 million acres higher than average trade expectations and the level we had projected back in February. At that level, under normal growing conditions and coupled with already high stock levels, domestic corn supplies would be a record and corn prices could fall to levels not seen in a decade. Markets quickly reacted to the *Prospective Plantings* report, pushing the Dec. 2016 corn futures to a life of contract low. In contrast to corn, planting intentions of 82.2 million acres of soybeans were toward the low end of trade expectations. Actual winter wheat planted area and spring wheat intended plantings were down a combined 5.1 million acres from last year. At 49.6 million acres, all wheat planted area would be the lowest total since 1970.

Along with weather, changes in anticipated harvest time prices and input costs between now and planting time will determine final acreage. Farmers will adjust their early planting intentions as new information becomes available as the planting season unfolds. For example, China recently announced that the temporary corn reserve purchase policy in northeastern provinces and Inner Mongolia would be replaced by a new mechanism of "market acquisition" and "subsidy," intended to reduce government-held stocks. How that policy will be implemented is unclear but it is controversial and contentious in China as it will likely affect farm income. The United States has not been exporting very much corn to China since 2014. China's main corn supplier has been Ukraine, following an agreement between the two countries signed in 2013. Nevertheless, this is likely to be another bearish factor on feed grain markets. The United States has exported a significant share of sorghum and distillers dried grains with solubles (DDGS) production to China in the last couple of years, although this trade has slowed and could be impacted by the policy change in China.

Turning to the livestock, dairy and poultry sectors, we project that total meat and poultry production will be at a record high of 97 billion pounds in 2016, as production of beef, pork, broilers (chicken bred for meat production), and turkeys all increase. Milk production is also projected to be at a record 212 billion pounds in 2016. U.S. meat exports are expected to increase in 2016 following declines in beef and broiler exports and relatively slow growth in pork exports in 2015 (see *Figure 8*). Exports in 2016 are expected to be up from the last year as larger supplies and lower prices increase the attractiveness of U.S. products to foreign consumers. Broilers were affected in 2015 by the closure of markets to U.S. poultry as a result of the discovery of Highly Pathogenic Avian Influenza (HPAI), although many of those markets have reopened. However, a relatively strong dollar paired with Russia's continued ban on imports of U.S. meat and relatively slow economic growth in a number of markets may also constrain export growth for meats. Until last year, dairy exports were growing fairly steadily; however, the confluence of a strong dollar, large competitor supplies, and lower imports in key markets resulted in lower exports in 2015. Many of those conditions have carried into 2016, and dairy product exports are expected to fall slightly.

In 2016, prices for cattle, hogs, broilers, and dairy products are projected to fall from last year's levels. Fed steer prices are forecast to decline to $137 per cwt, down seven percent as increased cattle supplies move through feedlots. Hog prices are expected to fall to $48 per hundredweight, down five percent from last year. Broiler prices are expected to average 86¢ per pound, down five percent from 2015. Although domestic demand for milk and milk products provides some support for product prices, supplies remain large and export demand for certain dairy products has weakened, pressuring prices. Milk prices are expected to average $15.25 per cwt in 2016, 10.7 percent lower than in 2015. Milk prices are expected to decline to an average of $14.55 per cwt this quarter, before rebounding in the second half of the year to average $15.90 per cwt in the fourth quarter.

Farm Income Is Expected Down

USDA's farm income forecast from February shows farm budgets tightening with lower prices. USDA–ERS projects that net cash income and net farm income are both expected to fall slightly compared to 2015, but by much less than last year. A crop budget calculator from University of Illinois has been updated to show expected prices for corn and soybeans in 2016 (see *Figure 9*). Revenue to cover such things as rent and salary after accounting for other costs is lower than the average cash rent value. This illustrates some places where producers could seek to tighten budgets: chemical inputs, seed purchases, crop insurance, machinery costs, *etc.*

Given the situation and outlook for commodity prices and farm income, USDA's Farm Service Agency (FSA) is experiencing strong demand in FY 2016 in both direct and guaranteed loan programs. FSA loan volumes were up more than 40 percent between 2013 and 2015 and as of the end of February, the use of FY 2016 funds compared to levels from a year ago were up by 16 percent for direct operating loans, 25 percent for guaranteed operating loans, and eight and 25 percent for the direct and guaranteed farm ownership programs respectively. That situation is indicative of the financial sector as a whole. According to the Kansas City Federal Reserve Bank, which collects information about farm banking and credit, debt has been increasing at agricultural banks since 2011. In late 2015, farm debt at commercial banks was running about eight percent higher than in late 2014. However, the Kansas City Federal Reserve Bank also notes that interest expenses have remained low as a percentage of operating costs.

We expect farm bill programs to help farmers adjust to lower farm income. The largest program, Agricultural Risk Coverage (ARC) payments in CY 2015 totaled approximately $4.2 billion. Payments for ARC in CY 2016 are forecast to be approximately $7.2 billion. Another new farm bill program, Price Loss Coverage (PLC), also provide payments of approximately $0.7 billion in CY 2015 and are forecast to provide nearly $2 billion in CY 2016. In addition, many producers have the ability to choose crop insurance to manage risk for their 2016 crop, to help offset any unforeseen losses. Overall government payments, which are more tied to economic conditions than before, are expected to rise from about $10.6 billion in CY 2015 to about $13.9 billion in CY 2016, which also includes conservation payments of approximately $3.6 billion in Cy 2015 and CY 2016

The new farm bill also provided producers with more options for Federal crop insurance, including new policies like peanut revenue insurance and the Stacked Income Protection Plan (STAX) for upland cotton. While STAX uptake has been higher in some states than others, reaching over 50 percent of planted cotton area in Alabama, generally it has been well below purchase of traditional crop insurance revenue protection policies. Revenue protection policies cover over 80 percent of total

cotton planted area in the United States, and reached 94 percent in Texas. Coverage levels average around 70 percent. In 2015 STAX covered about 29 percent of insured cotton acres.

Conclusions

Global crop production for grains and oilseeds have recently exceeded global demand and have contributed to stock building and price declines over the past year, and those trends are expected to level off in 2016. In addition, the U.S. dollar has remained relatively strong compared to our competitors and customers for agricultural products. As a result the U.S. faces a very competitive trading environment in 2016.

Lower prices for crops imply a slightly lower forecast for overall farm incomes. The new farm programs will benefit many producers, while falling energy prices will continue to lower input costs, and new crop insurance products will cover more products at higher coverage rates than in previous years. While farm cash rents remain high relative to expected returns, we are starting to see some declines in cropland values and cash rent levels. Domestically, lower commodity prices will likely lead to reduced planted acres overall.

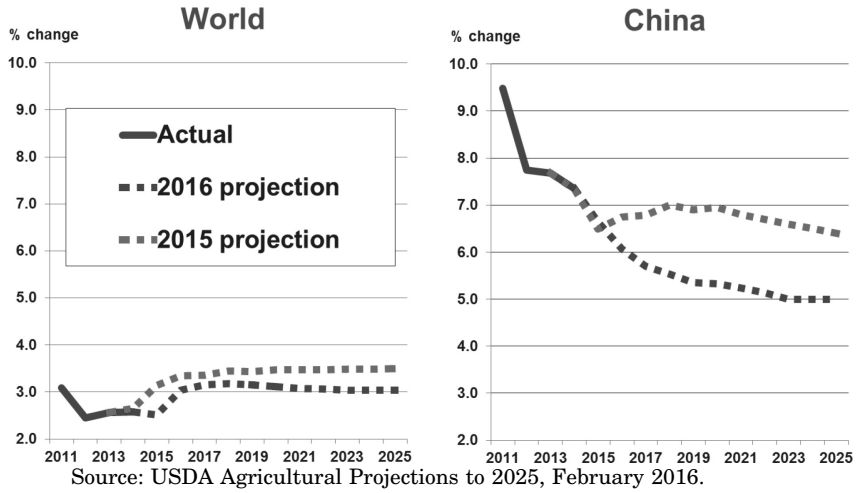
However, record high net farm income levels from several years ago helped U.S. producers to strengthen their financial base and that is still reflected in the financial outlook. Heading into spring planting this year, USDA projects that producers' debts relative to their assets will remain near historic lows. A slightly higher debt (mostly from operating loans) and lower assets (from some erosion in land values) will result in a slight increase in the debt-to-asset level in 2016. While borrowing is up, the level of bankruptcies and farm loan forfeitures remain at historically low levels.

In addition, despite slightly lower expected net farm income in 2016, we still project that a majority of farm households will see increases in household income in 2016, a sign of a strong economy, new farm bill programs, and falling expenses. Taking a look at the median household is often more informative than looking at the average household, since the average will be significantly skewed towards the much larger farms, even though they represent a minority of households. Median farm household income is expected to reach $81,666 in 2016, a record. Median U.S. household income and median farm household income were nearly the same in 2008. Since that time, farm household income has grown more rapidly. In 2014 median farm income was $80,600 and median U.S. household income was $53,657 (median U.S. household income is not yet available for 2015 or 2016).

Of course, it is difficult to know what the median farm household in the United States looks like. Roughly 60 percent of farm households are small, with sales of less than $350,000 and without a full-time farm operator. Another 31 percent of farm households are considered intermediate and have sales of less than $350,000, but do have a full-time farm operator in the family. Last, there are roughly nine percent of U.S. farm households that would be considered commercial-level operations with more than $350,000 in sales. Our initial projections show that both on-and-off-farm income for all three groups are expected to rise slightly in 2016 compared to 2015. In general, this means that the majority of farm households are in a relatively stable position going into the year.

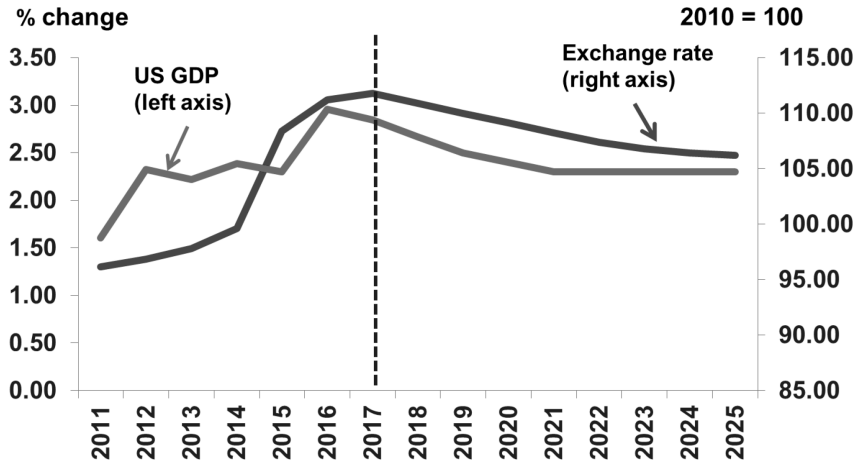
[CHARTS]

Figure 1. **World GDP Growth Slows, Most Notably in China**



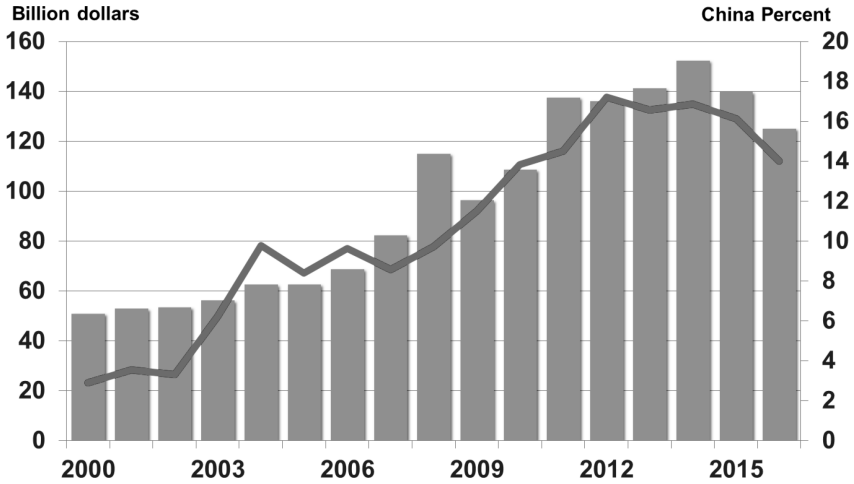
Source: USDA Agricultural Projections to 2025, February 2016.

Figure 2. **U.S. GDP Growth and Real Agriculture Trade-Weighted Exchange Rate**



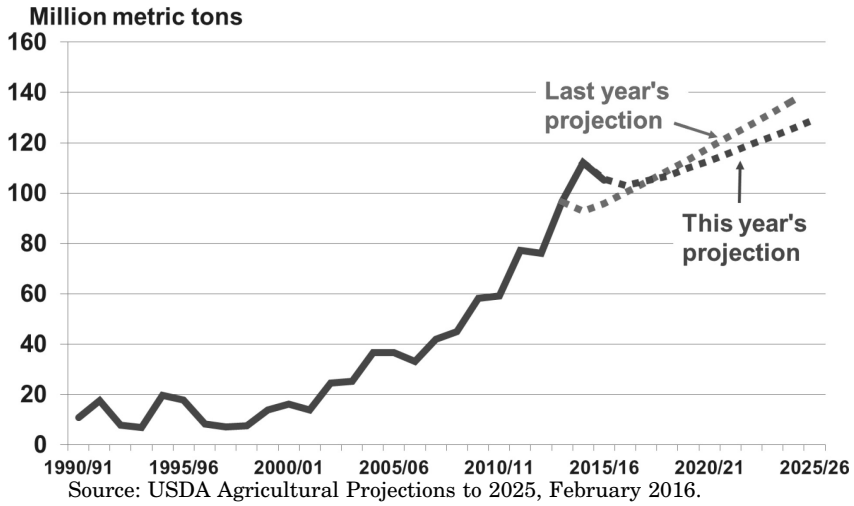
Source: USDA Agricultural Projections to 2025, February 2016.

Figure 3. **U.S. Agricultural Exports**



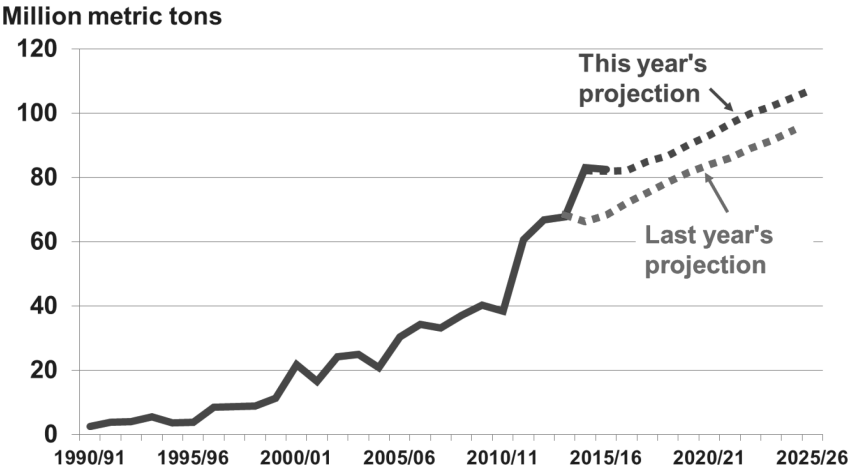
Source: *Outlook for U.S. Agricultural Trade,* February 2016, Data are fiscal year.

Figure 4. **Projections Up for China's Imports of Grains, Soybeans, and Cotton**



Source: USDA Agricultural Projections to 2025, February 2016.

Figure 5. **Projections Up for Brazil's Exports of Corn and Soybeans**



Source: USDA Agricultural Projections to 2025, February 2016.

Figure 6. **Corn, Wheat, and Soybean Prices Soften, But Still Above 2000–2003 Average**

Crop	Ave 2000-03	2011	2012	2013	2014	2015F	2016F
Wheat	3.09	7.24	7.77	6.87	5.99	4.95	4.20
Corn	2.14	6.22	6.89	4.46	3.70	3.55	3.45
Soybeans	5.45	12.50	14.40	13.00	10.10	8.75	8.50
Upland Cotton	46.47	88.3	72.5	77.9	61.3	58.5	58.0
All Rice	5.61	14.5	15.1	16.3	13.4	12.5	12.9

Red denotes record high.

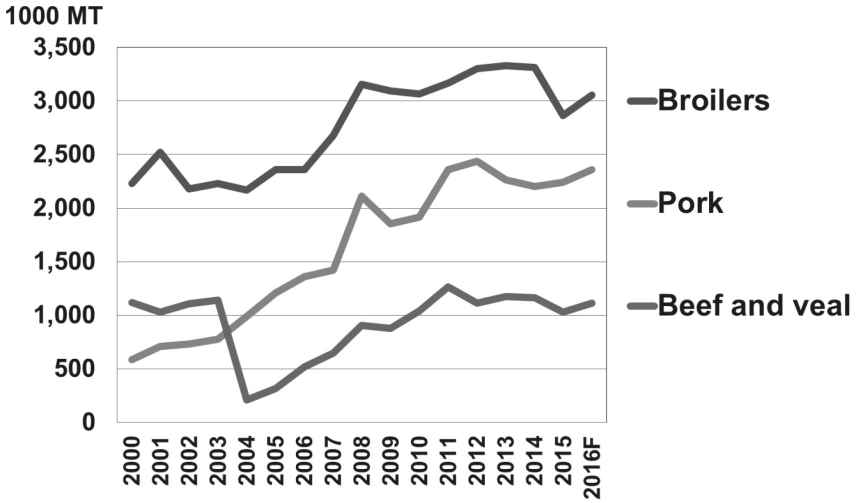
Source: USDA–NASS (History), OCE (April 2016 *WASDE* for 2015 and Agricultural Outlook Forum for 2016). Wheat, corn, and soybeans are in dollars per bushel; cotton is in cents per pound, and rice is in dollars per hundredweight.

Figure 7. **Planting Intentions Down From Last Year**

Crop (mil. acres)	2011	2012	2013	2014	2015	2016F	% change
Corn	91.9	97.3	95.4	90.6	88.0	93.9	6.4%
Soybeans	75.0	77.2	76.8	83.3	82.7	82.2	-0.5%
Wheat	54.3	55.3	56.2	56.8	54.6	49.6	-9.3%
All cotton	14.7	12.3	10.4	11.0	8.6	9.6	11.4%
M. feedgrains	10.4	12.6	14.6	12.9	15.1	13.1	-13.2%
Rice	2.7	2.7	2.5	3.0	2.6	3.0	17.2%
Total 8 crops	249.0	257.4	255.9	257.6	251.6	251.1	-0.2%
CRP	31.1	29.5	26.8	25.5	24.2	23.7	-2.1%
8 crops + CRP	280.2	286.9	282.8	283.2	275.8	274.8	-0.3%

Source: USDA–OCE. The 2016 forecasts are from *Prospective Plantings,* NASS.

Figure 8. **U.S. Meat Exports Expected To Increase**



Source: USDA, *World Agricultural Supply and Demand Estimates,* April 2016.

Figure 9. **Illinois Case Shows Crop Budgets Tightening**

	Corn After Soybeans	Soybeans After Corn
Fertilizers and pesticides	$185.00	$73.00
Seed	$122.00	$76.00
Crop insurance and other direct costs	$52.00	$23.00
Machinery and power	$125.00	$117.00
Total non-land costs	$552.00	$351.00
Yield	201.00	58.00
Price	$3.45	$8.50
ARC-CO	$30.00	$30.00
Crop Revenue	$723.45	$523.00
Revenue to cover rent and salary	$171.45	$172.00
Cash Rent for Illinois	$228	$228

Source: USDA–OCE; University of Illinois 2016 Crop Budgets, *Central Illinois—High Productivity Farmland.*

The CHAIRMAN. Thank you, sir.

And we will finish with Dr. Outlaw. You are recognized for 5 minutes.

STATEMENT OF JOE L. OUTLAW, PH.D., PROFESSOR AND EXTENSION ECONOMIST, DEPARTMENT OF AGRICULTURAL ECONOMICS, TEXAS A&M UNIVERSITY; CO-DIRECTOR, AGRICULTURAL AND FOOD POLICY CENTER, COLLEGE STATION, TX

Dr. OUTLAW. Chairman Crawford, Ranking Member Walz, and Members of the Subcommittee, thank you for the opportunity to testify on behalf of the Agriculture and Food Policy Center at Texas A&M as you focus on the growing farm financial pressure gripping our nation.

For over 30 years, we have worked with Agriculture Committees in both the U.S. Senate and House of Representatives, providing Members and Committee staff objective research regarding the potential farm level effects of agricultural policy changes. Working closely with commercial farmers has provided our group with a unique perspective on agricultural policy.

In 1983, we began collecting information from panels of four to six farmers or ranchers that make up what we call representative farms located in the primary production regions of the United States for most of the major ag commodities. The results I am going to discuss today focus on the financial condition at the end of 2016 and again at the end 2020 for 63 representative crop farms located in 20 states, and *Figure 1* of my testimony has their locations, if you are interested. The analysis utilizes FAPRI's January baseline commodity price projections, and we have a color coding system that I am going to discuss. We have developed a color coding system to provide a quick way of showing how the farms are

doing. Much like your stop light here in front of me, a green indication is a farm that only has a 25 percent chance of not cash flowing or 25 percent chance of losing their real equity. A yellow farm is indicated by a farm that has between 25 and 50 percent chance of losing—not cash flowing, and the same percentage for losing their real wealth. A red farm, as we have indicated here, has a greater than 50 percent chance of not cash flowing at the end of 2016 or 2020, and a greater than 50 percent chance of losing their equity. The *Figures 2* through *5* provide a listing of the farms characterized as either feedgrain and oilseed, wheat, cotton or rice. And I just mentioned, the characterization is based on the farm's gross receipts, whatever they have, 50 percent or greater of in terms of their gross receipts.

As prices change over time, some of these farms that are characterized as a cotton farm might actually be doing better because of the grains they have switched to instead of cotton, and we will talk about that later, I am sure.

So getting to the results: these results are the worst for feedgrains and oilseed farms, as well as wheat and cotton farms, that we have ever had in most of my career, at least since the early 1990s and probably before that. Specifically, 11 of 23 feedgrain farms are projected to end the period in poor financial conditions, so more than ½. Six of 11 wheat farms are projected to end the period in poor financial condition, again, more than ½. Eight of 15 cotton farms and the only bright spot, only four of 14 rice farms are suspected to end the period in 2020 in the red or poor condition. These results already include any projected ARC and PLC payments that will be triggered by low prices or low incomes in future years.

We contact our individual representative farm members when we need their feedback on important events or issues. For this hearing, we specifically asked them about the financial situation in their area, how they are dealing with low prices, and overall observations of the current financial environment.

I have four points I would like to make. First, obtaining financing is much harder. Although all of our producers were financed this year, a number of them had to go back to the bank and put up a lot more collateral than they have ever had to in their careers. The sentiment most feel is that this year is going to be a bad crop year and the situation for financing next year is going to be nearly impossible.

Second, almost everyone said they were putting off machinery updates through the lean times. A number reported that they are going to reduce hired labor and reduce the amount of purchased inputs, which also runs counter to trying to make the yield that they are trying to do. Cash rents have come down a little, but nowhere the amount that commodity prices have fallen, and that is due largely to multi-year lease arrangements and some landlords who just will not budge. The last is probably the most concerning. Most of them are concerned about the future for themselves, but also for young farmers who don't tend to have the equity in their operations that older farmers would have.

So I am going to summarize my comments with three points I would like to make. First, the low prices being experienced on most

of covered commodities are well below the cost of production for almost all of our representative farms. These farms have been shown to represent producers with well below the average cost of production. So if our representative farms are hurting, the average farm or worse than average farm in this country is in terrible shape, and we have just shown that. Second, the current poor situation on farms across the country would be considerably worse, if not for the safety net provided by both Title I commodity programs and policies, and Federal crop insurance. There are some who say that commodity policies are more important than crop insurance, or *vice versa.* I don't believe it is time to pick and choose a winner there. I think they are both incredibly important.

For lenders, lenders tend to view crop insurance as being more important because the insurance guarantee is bankable, meaning it is something on which they can base a loan. On the other hand, producers see the commodity assistance as the only chance they have of coming close to breaking even in a low price environment.

And finally, in my opinion, the interest groups that continue to call for changes that would negatively impact these key policy tools clearly either have no idea how difficult the financial situation is across agriculture, or they simply do not care. Farmers in this country deserve better than to continually be threatened with changes that I consider a dismantling of the safety net.

Mr. Chairman, that concludes my statement.

[The prepared statement of Dr. Outlaw follows:]

PREPARED STATEMENT OF JOE L. OUTLAW, PH.D., PROFESSOR AND EXTENSION ECONOMIST, DEPARTMENT OF AGRICULTURAL ECONOMICS, TEXAS A&M UNIVERSITY; CO-DIRECTOR, AGRICULTURAL AND FOOD POLICY CENTER, COLLEGE STATION, TX

Chairman Crawford, Ranking Member Walz, and Members of the Subcommittee, thank you for the opportunity to testify on behalf of the Agricultural and Food Policy Center at Texas A&M University as you focus on the growing farm financial pressure gripping our nation. As many of you know, our primary focus as been on analyzing the likely consequences of policy changes at the farm level with our one-of-a-kind dataset of information that we collect from commercial farmers and ranchers located across the United States.

Our Center was formed by our Dean of Agriculture at the request of Congressman Charlie Stenholm to provide Congress with objective research regarding the financial health of agriculture operations across the United States. For over 30 years we have worked with the [Agriculture] Committees in both the U.S. Senate and House of Representatives providing Members and Committee staff objective research regarding the potential farm-level effects of agricultural policy changes.

Working closely with commercial producers has provided our group with a unique perspective on agricultural policy. While we normally provide the results of policy analyses to your staff without commentary, I was specifically asked to provide my perspective today.

In 1983 we began collecting information from panels of four to six farmers or ranchers that make up what we call representative farms located in the primary production regions of the United States for most of the major agricultural commodities (feedgrain, oilseed, wheat, cotton, rice, cow/calf and dairy). Often, two farms are developed in each region using separate panels of producers: one is representative of moderate size full-time farm operations, and the second panel usually represents farms two to three times larger.

Currently we maintain the information to describe and simulate around 100 representative crop and livestock operations in 29 states. We have several panels that continue to have the original farmer members we started with back in 1983. We update the data to describe each representative farm relying on a face-to-face meeting with the panels every 2 years. We partner with FAPRI at the University of Missouri who provides projected prices, policy variables, and input inflation rates. The pro-

ducer panels are provided *pro forma* financial statements for their representative farm and are asked to verify the accuracy of our simulated results for the past year and the reasonableness of a 6 year projection. Each panel must approve the model's ability to reasonably reflect the economic activity on their representative farm prior to using the farm for policy analyses.

The results I am going to discuss today focus on the financial condition at the end of 2016 and 2020 for 63 representative crop farms located in 20 states (*Figure 1*). The analysis utilizes FAPRI's January baseline commodity price projections. We have developed a color coding system to provide a quick way of showing how the farms are doing. Each farm is evaluated based on two criteria—their ability to cash flow and maintain real net worth. If a farm has less a 25% chance of not cash flowing or losing equity then it is coded green. Yellow farms have between a 25% and 50% chance of not cash flowing and losing equity. Red farms have greater than a 50% chance of not cash flowing and losing equity.

Figures 2–5 provide a listing of all the farms characterized as either feedgrain and oilseed, wheat, cotton or rice along with our rating of their financial condition at the end of 2016 and 2020. In general, more farms get worse (from green to yellow or yellow to red) than get better by 2020. **The results for feedgrain and oilseed farms, as well as, wheat and cotton farms are the worst (in terms of the highest percentage of farms in the poor category) since the late 1990s.** Specifically,

- 11 of the 23 feed grain and oilseed farms are projected to end the baseline period in poor financial condition.
- 6 of the 11 wheat farms are projected to end the period in poor financial condition.
- 8 of the 15 cotton farms are projected to end the period in poor financial condition.
- 4 of the 14 rice farms are expected to end the period in poor financial condition.

These results already include any projected ARC and PLC support that would be triggered by low prices or low incomes in future years. Unfortunately, the results should be viewed as optimistic because of an assumption we make regarding cash balances. It is important to note that ARC support tends to be frontloaded and with prices remaining low throughout the projection period, the ARC benchmark declines significantly resulting in producers receiving little support by the end of the period.

We contact our individual representative farm members when we need their feedback on important events or issues. For this hearing, we specifically asked them about the financial situation in their area, how they are dealing with low prices, and overall observations of the current financial environment. Thus far we have received comments from about ⅓ of the 300 representative crop producers that make up our panels. Below are a few generalizations I can make after reviewing all of their responses:

1. Obtaining financing is much harder. All of our farmers received financing (although almost all knew of farmers in their areas that were forced out of business). Many had to go from bank to bank to secure financing, endure tougher rules, and put up more collateral. Most feel the worst is still yet to come (meaning after this crop year).
2. Almost everyone said they are putting off capital/machinery updates due to lean times. Many reported reducing the number of hired laborers and amount of purchased inputs.
3. Cash rents have come down a little, but nowhere near the amount that commodity prices and returns have fallen. This is due in-part because some producers have multi-year lease agreements. However several cash lease tenants reported their landlord's have been unwilling to lower cash lease rates. There are a substantial number of farms located in the South and Southeast that have share-lease arrangements. Some of these arrangements have been adjusted to give tenants a slightly larger share of the crop.
4. Most are concerned about the future, both for themselves and for young farmers who don't tend to have the equity in their operations that older farmers have.

In summary, I want to offer a few key points for your consideration:

First, the low prices being experienced by most of our covered commodities are well below the cost of production for almost all of our representative farms. These farms have been shown to represent producers with below-average costs of produc-

tion. So if our representative farms are projected to do poorly, then higher-cost farms are in trouble.

Second, the current poor situation on farms across this country would be considerably worse if not for the safety net provided by *both* Title I commodity policies and Federal crop insurance. There are some in agriculture who say that commodity policies are more important than crop insurance or *vice versa.* I believe they are equally important—especially during times of low prices. For example, lenders tend to view crop insurance as being more important because the insurance guarantee is "bankable", meaning it is something on which they can base a loan. On the other hand, producers see the commodity assistance as the only chance they have of coming close to breaking even in a low price environment.

And finally, in my opinion, the interest groups that continue to call for changes that would negatively impact these two key policy tools clearly either have no idea how difficult the financial situation is across agriculture or they simply do not care. Farmers in this country deserve better than to continually be threatened with changes that I consider a dismantling of the safety net.

Mr. Chairman, that completes my statement.

[CHARTS]

Figure 1. **AFPC's Representative Crops Farms**



Figure 2. **Projected Feedgrain and Oilseed Farm Outlook**

Farm Name	Overall Financial Ranking	
	2016	2020
IAG1350		
IAG3400		
NEG2400		
NEG4300		
NDG3000		
NDG8000		
ING1000		
ING2200		
MOCG2300		
MOCG4000		
MONG2300		
LAG2640		
LANG2500		
TNG900		
TNG2200		
NCSP1800		
SCG3500		
TXNP3000		
TXNP10000		
TXPG2500		
TXHG2500		
TXWG1600		
TXUG1600		

Figure 3. **Projected Wheat Farm Outlook**

Farm Name	Overall Financial Ranking	
	2016	2020
WAW2000		
WAW7000		
WAAW4500		
MTW7000		
ORW4100		
KSCW2000		
KSCW5300		
KSNW4000		
KSNW5980		
COW3000		
COW5640		

Figure 4. **Projected Cotton Farm Outlook**

Farm Name	Overall Financial Ranking	
	2016	2020
TXSP2500		
TXSP4500		
TXEC5000		
TXRP2500		
TXMC1800		
TXCB3000		
TXCB9200		
TXVC4500		
TNC2500		
TNC4050		
ALC3000		
GAC2300		
SCC1800		
NCC1700		
NCNP1500		

Figure 5. **Projected Rice Farm Outlook**

Farm Name	Overall Financial Ranking	
	2016	2020
CAR550		
CAR3000		
CABR1300		
CACR800		
TXR1500		
TXR3000		
TXBR1800		
TXER3200		
LASR2000		
ARMR6500		
ARSR3240		
ARWR2500		
ARHR3000		
MSDR5000		

The CHAIRMAN. Thank you, Dr. Outlaw. I would remind Members that they will be recognized for questioning in order of seniority for Members who were here at the start of the hearing. After that, Members will be recognized in order of arrival. I appreciate the Members' understanding.

With that, I will recognize myself for 5 minutes. Let me start with a general question here. What do you say to those who look at the situation of agriculture and wonder why don't farmers just not plant a certain crop if they don't think they will make money doing it? And I will ask Dr. Outlaw first, because you have done extensive research on this. If you want to start us off?

Dr. OUTLAW. Sure. Basically the producer situation we have right now is they are trying to plant the crop they are going to take the least loss at. Said differently, they are also trying to plant the

crop that they might be able to get an above average yield on, which would make them come closer to breaking even.

But the big question you asked is specifically why don't they just stop? And the reality is that very few farms across this country don't have loans that they have taken out on equipment, land. These investments are quite large. In order to try to service that debt, they have to try to make some money back, and so we have people trying to give it a go. I am not going to sit here and say that every farmer in the United States is in dire straights, but I am telling you that is the trend. And to answer your question, basically we have producers trying to do something that might, either through a higher than average yield or something that happened in the price on the commodity side, make money. They don't want to not farm.

The CHAIRMAN. Right.

Dr. Johansson, what areas of the U.S. are farmers reporting the most financial stress? Is there a specific geography, or are we pretty much all across the country? And when we talk about that kind of stress on farmers, what form does that stress take?

Dr. JOHANSSON. I would say right now, obviously, we have talked about the difficulties for cotton farmers this year. Prices are expected to be low going into planting this year, and are expected to rise significantly over the next 5 years or so. So certainly there will be stress in cotton areas, and we can come back to that question later.

Looking at the farm business income from USDA estimates recently, the regions and the sectors that we see the most declines in crop receipts expected for this year are dairy sectors in the Northeast, Midwest, as well as specialty crop receipts in Florida and the Pacific Coast. Obviously, we are also going to see declines in other areas too, but those are the largest that we are showing right now. We do see some additional declines in pork receipts and poultry as well, so that again will be in the middle part of the country for the most part.

So what form will the stress take? As I mentioned and as we have all heard, producers will try and cut back on their losses in a lot of different ways, but we would expect at least for this year: I can't project out 5 years like Dr. Outlaw just did, but at least for this coming year they will be looking for increased operating loans when they are having difficulties making ends meet, as well as relying on reserves that may have been built up over the last 5 years.

The CHAIRMAN. Thank you.

Mr. Duvall, if you would, I would like to get some comparisons here. We note that there were some huge challenges for agriculture and ag credit during the 1980s. Based on the experience farmers have had over the last few years, how do you think the farm environment now compares to that period in the 1980s? And if it is not as bad as the 1980s, how close are we to that level?

Mr. DUVALL. Well, we are at the beginning of what we saw eventually in the 1980s, and hopefully we have learned a lot from that. Of course, our big concern is about the young men and women that went in lately and haven't experienced anything like this before. But, once this process starts, you start trying to find a way to survive until it comes back, and of course through refinancing, delay-

ing your future plans. A man my age wants to bring his son back, and I brought my son back and purchased another farm. You put those plans on delay to try to help him get started. There are so many things that are going to happen before we get to that point. But what we see happening now are indicators that we are going to get there. Right now, we still have good cash and good assets there, and our land values are beginning to trend down, but they haven't trended down as rapidly as they were during that time. So when that starts happening, then we are going to start seeing the critical stage that we saw during that time.

The CHAIRMAN. Mr. Johnson, do you concur?

Mr. JOHNSON. I do. There is a huge difference between now and the 1980s: interest rates. We were looking at interest rates approaching 20 percent, in some cases exceeding 20 percent. And of course, you saw land values drop by 50 percent in a period of just a couple years. You saw machinery values go even more than a 50 percent drop. And so debt just spiraled out of control. We don't have that interest rate environment right now, but if that changes, this situation is ripe for going very fast in a negative direction, in my opinion.

The CHAIRMAN. Thank you, sir.

I am going to recognize Ranking Member Walz, for 5 minutes.

Mr. WALZ. Thank you, Chairman. Thank you all for your testimony. I would like start, I want to thank you, Dr. Outlaw, for that articulate statement on crop insurance, and I hope that gets broadcast wide because I do think misinformation, and again, when that reared its head at the omnibus, thank goodness the Chairman and others stood for that. So I appreciate that.

I will go quickly here. I want to start with Mr. Johnson and Mr. Duvall. Are you seeing a generational difference on how producers are handling this in any way?

Mr. JOHNSON. Yes, there is a generational difference, and the folks that I think we need to be most concerned about are those who have started farming in, let's say, the last 10 years or 5 years in particular where they started at a time of very high prices, high profitability, and extraordinarily high costs. And one of the characteristics of an agricultural economy is that when market prices go down, the costs go down much, much more slowly and they take a lot, lot longer to go down. And so you will find the economy move into this sort of negative income and negative cash flow situation very quickly. If these young farmers haven't had a chance to build up the cash reserves that Dr. Johansson talked about, then they just don't have the ability to survive nearly as long. That is the big concern, in my opinion.

Mr. DUVALL. Yes, sir, one of the bright spots when our young people come back home, they are so in tune to all of the new technologies that are out there to use, and they are going to be so efficient with what they do and have the opportunity to exercise that knowledge and that ability to use those technologies.

Of course, that also goes back and speaks volumes about research and development and monies that we are spending there with the land-grants and everywhere, and how important that is to continue and keep making that investment in the future so that when times come like this, we have the technologies to be able to

tighten up our belt just a little bit tighter, maybe put the future on hold a little bit, and help us get through this time.

Of course, a lot of our young farmers are dependent on their families and their dads to sign the bottom line. Those guys that are coming in fresh, they are really going to be in for a hard time.

Mr. WALZ. I agree, and this Committee has emphasized beginning farmers and ranchers in this generational issue, and we have a lot of them in there. Now it is our job to keep them in there.

Section 179, the permanent $500,000 deduction, did that help? Is it good? Is it where we were at? I ask that because we don't get credit for doing much around here, but we did do that.

Mr. DUVALL. Most certainly it has. What you did was a good thing to do, and it was of very much help.

Mr. WALZ. So you see a real impact, all right.

Dr. Johansson, I am going to go to you. You said despite slowly lower—because I think I am hearing and we are similar on this. We are using the same data, but you seem a little more optimistic than the others, and I am trying to understand this dynamic of off-farm income and some of that. So your statement was slightly lower expected net farm income, but we still project the majority of farm households will see increases. I don't hear that often, but I trust from the economist. I want to hear the dynamic of what is working.

Dr. JOHANSSON. Well sure. We know that a lot of farm households earn income off-farm, so when I talk about household income for farms, I am talking about both on-farm and off-farm income. So we have seen an increase in farm income relative to the U.S. household income. Starting in 2008, following the recession, farm household income has been growing faster than overall U.S. household income. That is due to a number of factors, not just on-farm income. Obviously we had great on-farm income during those years, but we have had growing off-farm income. That is from investments, increased opportunities for working off the farm as well.

But you are right. It is the same data, it is just explaining it somewhat differently. I am just saying that at the midpoint, ½ the farms above this, ½ below this, at that midpoint we are likely to see those farms with slight positive growth relative to last year. Obviously, last year was a big drop from 2014 to 2015, so it wouldn't have been the same case last year. I am just saying looking at 2016 relative to 2015, it is pretty flat in terms of their change in income, slightly up. But we do also show that at the 50 percent of farms that are below that point are going to be facing some financial pressures, and I think that is what we are hearing about from the other speakers here. We do see the share of farms that are highly leveraged, okay, so when we talk about that debt-to-asset ratio around 13 percent being much lower than it was in the 1980s, so that is an aggregate. That is a good thing. But when we look at the share of farms that are highly leveraged, that is also growing, so that is what is leading to a lot of the discussion that we are having today.

Mr. WALZ. Great, thank you. I yield back.

The CHAIRMAN. The gentleman yields back, and I recognize the full Committee Chairman, Mr. Conaway, for 5 minutes.

Mr. CONAWAY. Well thank you, Chairman, and Tim pretty much started exactly where I did. Let's follow up a little further, Dr. Johansson.

If the median boot size for the Army is a 9, and we buy all size 9 boots, then the folks whose feet are 9 or below are going to be happy campers, but those of us who have shoe sizes bigger than 9 are not going to be really happy. So I worry that when we use those statistics—and it is valid I don't question the number itself—but it could be misleading in the sense that there are very few of them at the median farm household income of $81,600. So how do we communicate better? As part of your analysis, did you do sector by sector? Again, all politics are local. I represent west Texas. I have a lot of cotton farmers that are not at that $81,000 mark, I don't believe. As a part of your work, do you have sector by sector work that could be used to help flesh out and get a better, clearer picture of the stresses? Because I agree with Tim. You sounded a lot more optimistic than Dr. Outlaw did in his comments.

Dr. JOHANSSON. Well, just to go back to the main message that I was saying, and then I will address your point here.

We do see farm prices coming down, and that is going to be making it difficult for——

Mr. CONAWAY. Farm prices for land or crop prices?

Dr. JOHANSSON. Crop prices.

Mr. CONAWAY. Crop prices.

Dr. JOHANSSON. Crop prices and livestock prices are expected to be much lower this year, and that is leading to a lot of the question about how farms are going to meet the bottom line in general.

But when we talk about median and then just aggregating that a little bit, so we can look at the midpoint of small farms, intermediate farms, and large farms. So commercial farms with more than $350,000 in sales, intermediate farms with a full-time operator but less than $350,000 in sales, and then the 60 percent of farms that are considered small, for example. The midpoint of all of those are also reflective of the general point, which is ½ of all of those categories are going up, so size 9½ narrow, wide, and extra wide are all going to be going up a little bit.

The point that is worth focusing on is, as you point out, we hear about the stress in the lower end of distribution. So the new and beginning farmers that are more leveraged, producers that may have taken out more loans in the last couple years to expand their operations, those operations are going to have higher debt-to-asset ratios. It would be nice to compare those to the 1980s, but our data for those disaggregate pieces we can compare the aggregate numbers back to the 1980s, but we can't compare those smaller chunks back to the 1980s. Our data only goes back to the 1990s.

The last thing I will point out is we also follow farm loan delinquencies as well as bankruptcy rates, and those are still at very low levels. Interest rates, as Mr. Johnson pointed out, are at extremely low levels. So there are some areas for concern, mainly because we do see expected costs exceeding expected returns in a lot of cases, but we do have some——

Mr. CONAWAY. Okay, I am a CPA, so when my client's costs are higher than their revenues, it is hard to get to $81,000 net farm income. Does that $81,000 count the program contributions and ev-

erything else? How do we get our production costs higher than production revenues to the point where they are making money?

Dr. JOHANSSON. Yes, that includes program payments as well.

Mr. CONAWAY. Okay, all right. Zippy and Mr. Johnson, can you give us a couple of examples near your home, talking about the ability to get credit, to be able to go to the bank and get the working capital you need? Can you talk to us about that?

Mr. DUVALL. Yes, one middle aged farmer that was telling me that every time he would go to the bank and talk about an operating loan earlier this year, they would say well, what do you think Congress is going to do about cottonseed, because he was a cotton producer. And that bank was almost sitting there waiting to see what was going to happen in this town to whether or not they were going to make that operating loan. I haven't talked to that young man since to see what happened eventually, but that banker was concerned about that.

I heard just this week that in the panhandle of your county there were two cotton farmers that called it quits and are moving out, so I am sure you probably heard that, too.

Mr. CONAWAY. Mr. Johnson, any comments from your folks about lending?

Mr. JOHNSON. Yes, thank you, Mr. Chairman.

The ability to get credit, an indicator of what is happening to FSA loans, and if there is something that I would encourage the Committee to focus on is making sure that there is enough funding for FSA, because that really is the lender of last resort. That is where you are going to see commercial lenders moving their clients to. And the other alarming thing that we hear is a lot of folks are taking their operating credit that didn't get repaid last year and rolling it over either credit or onto land mortgages. We saw that before the 1980s collapse. I worked as a credit counselor and a lot of those years and literally worked with hundreds of farmers facing creditors where they couldn't make their payments. That is a very alarming trend. I mean, it makes sense if the economy improves in the next year or 2. If it does not, then what you do is you put at risk more of the assets, as Mr. Duvall was saying, a farmer that didn't want to mortgage the land in order to keep farming.

Mr. CONAWAY. All right, thank you, gentlemen. I appreciate all your testimony.

The CHAIRMAN. The gentleman yields back, and I am pleased that the Ranking Member of the full Committee could join us today. You are recognized for 5 minutes.

OPENING STATEMENT OF HON. COLLIN C. PETERSON, A REPRESENTATIVE IN CONGRESS FROM MINNESOTA

Mr. PETERSON. Thank you, Mr. Chairman.

I am wondering if any of you have reaction to what I am hearing out in my part of the world. I don't know if it is that way in the South with crop insurance. Crop insurance worked very well when the prices were going up and when the prices were high, but it is the biggest single problem now that producers have in getting credit and surviving this downturn. And it is going to get worse, and the ARC program basically mirrors the crop insurance system in terms of how it works. Now I know in the South most people took

the PLC. I don't know exactly how it is impacting down there, but I am concerned about where this thing is at. I don't know what producers are going to do, if they are going to stick with revenue, if they are going to go back to yield insurance. I don't know. But, I would like your take on this issue, if you have any thoughts on it, and any of you that want to respond.

Mr. JOHNSON. If I could, Congressman, I would make two points. First of all, relative to crop insurance, I absolutely agree with you. Crop insurance in good price periods does an extraordinarily good job. Most policies that are sold today are revenue policies, and so if the price is low, then the revenue guarantee is also low. And so we are hearing more concerns about that. I would encourage the Committee to spend some time looking at that dynamic, because it is in these times when help is needed the most.

The second point I would make is that I know that in the last farm bill there was a need to sort of compromise, and that compromise ultimately meant that the House PLC Program was made an option alongside of the Senate ARC programs. Price protection is extraordinarily important in these kinds of time periods, and so we were very favorably inclined to support the PLC Program that came out of this body, and I would encourage you to look at trying to move those reference prices higher in order to provide that kind of protection. Your point I fully agree with.

Mr. DUVALL. Yes, sir, crop insurance is vitally important to our farmers because they can decide if they can come to a number what their input costs are and try to buy revenue crop insurance to cover that cost. They know that if they don't make that crop, they can at least cover the cost of getting that crop. So it is vitally important, and of course, dependent on the environment they are in, whether or not it is important at one time or other, it just depends on the environment. So I would agree with your comments. But crop insurance is important to our farmers, and there are mixed feelings where I come from in Georgia. There are mixed feelings about crop insurance. We have been a little bit slow to adapt to it down there. A lot of our guys, instead of spending it on premium, put it in pivot irrigation systems, guarantee the production of crop from weather disaster, of course, but they are slowly but surely grasping the idea of crop insurance as revenue protection.

Dr. JOHANSSON. Yes, I would agree with your comments. I know that the producers that I speak to when they come in to talk about various farm programs generally start with crop insurance, that they want to make sure that USDA is firmly supporting that, and certainly we would agree that the program is offering coverage of about $100 billion in liability, and a lot of that is in revenue coverage, as we heard. So, that is providing a large part of the safety net, and as you mentioned, movement from the direct payment programs in Title I to more of an insurance type of program in ARC PLC where those programs, particularly with ARC, do kick in when conditions are difficult, and that is why we are going to likely see our payments going up this coming year.

Dr. OUTLAW. I probably have a little bit different take on this because of all the analyses we do; and, like I said during my testimony, both Title I programs are critically important and crop insurance is critically important, and they serve the same purpose to

keep the farmer on the farm, but as Mr. Johnson said, during low price times, crop insurance, when you are buying a coverage covering 80 percent of a loss, it is not very exciting. And so the combination of Title I that provides a floor on the income that they were going to receive from low prices, plus crop insurance, is about as strong as we are going to get in this kind of a budget environment.

The CHAIRMAN. The gentleman's time has expired.

The gentleman from Illinois, Mr. Bost, is recognized for 5 minutes.

Mr. BOST. Thank you, Mr. Chairman.

This question is for Mr. Duvall and Mr. Johnson. I have been hearing in my district producers say that the USDA *Prospective Planting* report that came out, and they tell me there is no way that they will be able to have that much corn grown in the U.S. this year. You both come from different parts of the country, and what is your take on the *Prospective Planting* report, and does the USDA report come close to what the producers in Georgia and North Dakota are thinking?

Mr. JOHNSON. Thank you, Congressman, for that question.

I was personally surprised at the increase in corn, but I am also very, very pleased I am not the one that has to make those projections. I think what farmers will do faced with a series of price and profit or loss potential outcomes is they are going to look to plant a crop that is going to lose them the least or make them the most, and have lower risk. If you look at the numbers that I provided in North Dakota, they actually suggest that soybeans are going to make money, corn is going to lose money. North Dakota is probably not a representative corn state. We are kind of on the fringe, so I don't know that that is the best example, but I would expect that in our area, you would probably see corn go down, soybeans go up, just based on that analysis. And that is kind of what we have been hearing.

Mr. DUVALL. Of course, those numbers you said are just intended planted acres, and we are going to be watching that to see if we plant everything we intend to.

But I would make an observation that if you look at what happened weather-wise across the country last year, there were a lot of acres that weren't planted.

Mr. BOST. Right.

Mr. DUVALL. Whether it be drought or too much rain, and if I am a farmer, my optimism says I am going to plant those acres this year. So you had an increase there just in those acres there. But we are going to be watching those numbers, but those are intended planted acres.

Mr. BOST. Mr. Johnson, you actually went down a path that I was going to ask next, and that is when North Dakota, and you in your testimony said as much as $2 an acre loss on corn. Do you think that other high prairie states will be moving back to some other crop rather than corn?

Mr. JOHNSON. At the end of the day there aren't a whole lot of choices for farmers. The one thing that they are going to do is they are going to plant.

Mr. BOST. Right.

Mr. JOHNSON. And it is really important, I know folks on this Committee understand that. I don't think the general public gets that. The general public thinks, "You know what, if you are going to lose money on everything, well then don't plant anything, you fool." And the fact of the matter is, that is not an option for farmers. They have to plant for the reasons that Dr. Outlaw mentioned earlier, and lots of reasons. I mean, you just have to plant. I farmed most of my life. You can't imagine not planting just because you are going to lose money. You lose way more money if you don't plant.

My guess is you may see a fair amount of shifting that occurs between that projection and when actual planting conditions emerge. In our place, it depends an awful lot on what planting conditions are like. If the weather starts pushing planting later and later and later, you are going to forego corn. You are going to do shorter season crops.

A contrary point that I would make to a point I made earlier is we have talked to some folks who are planting corn who are looking to increase the amount of corn acreage because they are relatively new in it. They have the ability to do more rotational kinds of things so they have ground that was in canola or wheat or soybeans that can now move into corn, and they look at corn as being a stable yielder, particularly if they have very high soil moisture conditions which corn uses a lot of.

Mr. BOST. I understand the plight of the farmer. I was in the trucking business for years, so we just kept investing until we went broke. So I mean, it is kind of the same.

Mr. DUVALL. I would say from the area that I live in and come from in Georgia, a cotton picker can only pick cotton. A peanut combine can only combine peanuts. We can't change the head on our machines in Georgia and decide to grow another crop. We are corn deficit state, which is good for the guys in the Midwest, because we have a lot of chicken and cattle to feed, but that makes it very difficult in Georgia to be able to just change crops, plus to get out of your rotation could cost you a lot of money in the future.

Mr. BOST. Thank you, and I yield back.

The CHAIRMAN. The gentleman yields back.

I now recognize the gentlelady from Florida, Ms. Graham, for 5 minutes.

Ms. GRAHAM. Thank you, Mr. Chairman, Ranking Member Walz. I appreciate this opportunity. Thank you so much to all the witnesses.

Yesterday I had the pleasure of meeting with a couple groups from the Florida Farm Bureau, I represent the panhandle of Florida, and we discussed the decrease of feed prices and also the decrease in milk prices. Mr. Duvall, I would be curious if you could help illuminate me a little bit more on the relationship between crops and livestock, and why we see these broad declines across both.

Mr. DUVALL. Well, it has a lot to do with the stockpiles of the crops, whatever crop that might be, and how much is out there on the world market, and it has a lot to do with trade.

I was in the dairy business 30 years, and I will be the first one to admit, just about the time I got to understand how they priced

my milk, they changed it. So dairy is a very, very difficult thing to explain. But I do know in listening to my neighbors that are in the dairy business, they are in some of the most trying times they have ever been in. They come off of $20 and $25 milk, and now they are looking at $14 and $15 milk in Georgia. And I got out of the dairy business in 2005, and I was shipping $17 milk then. So there is absolutely no way that they could take the inflation factor and put on what they are having to put in their input costs, maybe with the exception of feed, but everything else, the inflation goes along with the other stuff, and be able to keep up with that kind of price if they are coming back to it.

I am also in the poultry business. I understand how it influences the poultry industry. I grow for an integrator, and they very often told me what a problem they were having when corn was $9 a bushel, but now it is cheap. So they are gaining ground as far as the integrators are. In the poultry business, as far as broilers, it is pretty good because everybody seems to want chicken, and our downtime between batches are really close. And for a producer like me, that is a good thing. So, if corn is high, that is hard on animal agriculture. If it is low, the animal agriculture seems to reap some of the benefit from it. But I can't really explain to you, other than the stockpiles of commodities and how prices dictate it through, especially milk in trade.

Ms. GRAHAM. Thank you. Does anyone else have anything to add to that?

Mr. JOHNSON. Well if I could, I would simply make a point about dairy, particularly as it relates to this Subcommittee's responsibility over the Dairy Margin Protection Program. I know that was a new program that was put into place. It needs quite a bit of attention. We have had lots of complaints from dairy farmers that it just isn't working for them. Most recently, I have learned I believe from USDA sources some alarming numbers about the premiums that are paid for that program are something like $73 million, and yet only about $700,000 has been paid out. So that suggests to me that maybe the balance that we have struck isn't quite right, that there needs to be some "rejiggering" of what those margins are, and one of the things I have suggested in my testimony; listen, I know dairy policy is the most complicated policy in all of agriculture. I have been in this business most of my life, and when the dairy guys all agree on something, that is a time to celebrate. What they all agreed on last time was the Dairy Margin Protection Program with a supply management piece, and that got lopped off. So whether that is part of the mix, that is a question that your Committee is going to have to wrestle with. But in particular, the ranges that were provided in statute need to be adjusted.

Ms. GRAHAM. That is very good guidance, and I am going to try today to work the word *rejiggering* into my conversations. Thank you for providing that word for me today.

I have other questions but my time is almost expired, so I yield back, Mr. Chairman. Thank you. Thank you, gentlemen.

The CHAIRMAN. The gentlelady yields back.

I recognize the gentleman from Georgia, Mr. Scott, for 5 minutes.

Mr. AUSTIN SCOTT of Georgia. Thank you, Mr. Chairman.

Mr. Duvall, you sure look like a fellow named Zippy from Georgia. Have you ever met him?

Mr. DUVALL. I am afraid I have. There are not many of them around.

Mr. AUSTIN SCOTT of Georgia. I am glad you are in that position. I know you will do a great job for the farmers.

One of my primary concerns as a Member of this Committee is when we get into writing the next farm bill, one of the things we have to make sure of is that we don't allow commodity groups to be pitted against commodity groups. This is agriculture and the rural economy, and quite honestly, feeding Americans, that we have to get the policies right for.

As you know, while the commodity prices are mighty low in the farm right now, if you go to the grocery store, you wouldn't know it when you check out, and there seems to be a big disconnect between what Americans are paying for their groceries and what people, who are actually out there growing the crop are receiving for it.

Mr. AUSTIN SCOTT of Georgia. Dr. Outlaw, I was with an ag economist in Tifton a couple of weeks ago and when the meeting was over, for every phone call I got from a farmer, I got from a banker expressing concerns and if farmers don't do good in my part of the world, then nobody makes money. In your analysis, which regions of the country are experiencing the most financial pressure right now, and which ones do you expect to experience the most pressure in the near future?

Dr. OUTLAW. Well, for our purposes, obviously, the South and the Southeast, our results would say they are having more difficult times. But there are also pockets. We visit with these producers quire often and we just came back from North Dakota where they were some of the more unhappy people we have visited with in quite some time, because they made a decent corn crop and then they couldn't ship it, so they were taking prices well below what anybody else has to take for their commodity because there was real shortage near the time they needed to get shipped out. That only happens at a point in time, but it happened at the important point in time where they had to take low prices for their commodities and that was their income for the year.

So we have pockets around the country, out West, far West, and the regions of Oregon and Washington, there are some problems there as well. But if you want to just lay it on it, it is the South and Southeast.

Mr. AUSTIN SCOTT of Georgia. Do you foresee that changing as time goes forward, obviously cotton prices have a tremendous impact on us, more so than they do the Mideast. Although, I will tell you that cotton prices have a tremendous impact on Iowa, because that is where the majority of the cotton pickers that run in the Southeast come from is from John Deere and Acme.

Dr. OUTLAW. My expectation is that producers are looking for any crop they possibly can, canola or oilseeds. One of the letters I received from a North Carolina producer said they are expanding the growth of sweet potatoes in that state tremendously as a niche market, trying to find something they can make a profit on.

My expectation is that this group is going to have to do something to fix cotton, or we won't have the cotton industry. As Dr. Johansson said, looking into the future, all we can do is deal with price forecasts, and it doesn't matter whose forecast you use, the situation looks really poor. And with the price forecast that I am using from FAPRI, which is very similar to USDA's long-term outlook——

Mr. AUSTIN SCOTT of Georgia. Dr. Outlaw, I am almost out of time, but you mentioned cotton a couple of times in there. I am extremely concerned about that.

I want to go back to Mr. Duvall, if I can. Our cotton producers can't just—those cotton pickers cost a lot of money, and I went past a dealership the other day, a tractor dealer, and there were an awful lot of them sitting on the yard. It is not just a matter of the farmer, it is the whole infrastructure that surrounds the ag economy.

Could you speak to kind of the ag economy as a whole, from the farmer to the tractor dealer to the ginners and the impact that it has when farmers can't make that profit?

Mr. DUVALL. Well, if we look at equipment sales, we see that small tractors, small horsepower tractors are going up, which indicates that that is a different area to sell those products in. It is not in agricultural production. But if you look at over 100 horsepower and over 100 horsepower four-wheel drive, over 100 horsepower is down 33 percent and four-wheel drive are down 38 percent across the country. So those indications say that hey, as a farmer, I don't know about these prices. I am going to try to run this tractor 1 more year before I update, and hopefully prices will come back and I will be able to do that. Well how many years can he do that before it starts caving in? And it is a chain reaction, of course. If the farmer makes that decision, that equipment dealer doesn't get to sell that piece of equipment and all the people around that industry are beginning to start crumbling down.

We talk about cotton. Cotton has a huge infrastructure built around it, just like the Renewable Fuel Standard has a big infrastructure built around it. And we need to make sure that safety net—it continues how the financial backing to it to be able to move forward, and of course, we have already discovered the safety net we have in our farm bill does not help cotton.

Mr. AUSTIN SCOTT of Georgia. Thank you for being here, gentlemen.

The CHAIRMAN. The gentleman's time has expired.

We will move now to the other Mr. Scott from Georgia. I recognize you for 5 minutes.

Mr. DAVID SCOTT of Georgia. Thank you very much, Chairman Crawford. Mr. Duvall, it is good to have you here, and let me just say that the Farm Bureau is very lucky to have you as its President.

Mr. DUVALL. Thank you, sir.

Mr. DAVID SCOTT of Georgia. You are a good man, and Georgia is proud of you.

Mr. DUVALL. Thank you, sir.

Mr. DAVID SCOTT of Georgia. Let me first start, Mr. Duvall. We have heard throughout this hearing of all the downward pressures

and the crises facing all of our farmers, particularly our cotton. I am very concerned about that. Georgia is the number two cotton producing state in the nation, that is my state, next to Texas. Many of us on this Committee have been working with Secretary Vilsack to address and try to get you and get cotton folks some help financially. We have done this through their two approaches. In the ginning program we were working on the CCC, which is another program, if we could get some temporary appropriations until we can get back into the farm bill, and then we can permanently correct the situation. What is your understanding? Are you all pleased with how we are moving, and am I accurate in saying that Secretary Vilsack is responding and you feel confident we will be able to get that money to you through one of those efforts?

Mr. DUVALL. Yes, sir. First, let me make a first comment. There is no support of opening up this farm bill that we had, so we want to make sure that everybody understands that. We know there is a lot more damage to be done by opening it up, so we need to find solutions around that. And if we specifically talk about cotton, I have had several conversations with the cotton groups. We are trying to work hand-in-hand with them to move in a direction to find a band aid fix for cotton, and I have had particular meetings with the Secretary and he has the desire to help. Of course, we think the way to fix it is to declare it an *other oilseed* and fix it that way. We fully support the Chairman here, but we also know that there is another avenue that has to do with the ginning assistance that the Secretary is looking into. And I know the cotton groups, ourselves, and the Secretary are looking to try and move forward in that direction.

Mr. DAVID SCOTT of Georgia. Well the reason I asked that is that I have had conversations with the Secretary. My office is working with them, and it is my understanding that we are proceeding in the direction of doing that.

Mr. DUVALL. Yes, sir.

Mr. DAVID SCOTT of Georgia. But that is hearing it from the Administration.

Mr. DUVALL. Yes, sir.

Mr. DAVID SCOTT of Georgia. So I am anxious to hear back from you and the cotton farmers how accurate that is. In other words, what I am saying is do I and others who are very concerned about the cotton farmers need to apply more pressure, or are you saying okay, they are working with us, we are hearing from them. That is what I need to hear.

Mr. DUVALL. According to our last communication with the cotton groups is that their negotiation or the discussions with the Secretary is moving forward but you asked me how I felt. I am beginning to lose my patience in this area because we need to do something for these farmers really facing difficulty.

Mr. DAVID SCOTT of Georgia. Okay. I need to know when I need to push a button more——

Mr. DUVALL. Yes, sir.

Mr. DAVID SCOTT of Georgia. I have been in touch with them. They have gotten back to me. The Obama Administration said they are moving. So I am ready to be your Huckleberry on this and we need to drive them on further.

Now let me go to the other issue, because our farmers are in great crisis. I have never seen it like this, and it is not only this, but it is this massive over-regulation, and nowhere is that more personified than in this WOTUS issue with the EPA. And what I want to ask the Farm Bureau to do is that this ruling, I believe, because the Obama Administration is very stubborn on this and it is very hard to get them to see how terrible this *Waters of the U.S.* rule from the EPA is. So there may be a point where the farming community itself needs to stand up and sue and threaten to sue the EPA if they move forward with this terrible rule. And I want you to know that I will be delighted to join the farmers in this suit against the EPA.

The Obama Administration and EPA has only 7 or 8 more months in this Administration. If they move ahead and we do nothing, then we have a rule taking place. But if we move and stand up and fight against the EPA with our legal rights, which is the foundation of this country, our day in court must be held on this rule. Because if it goes into effect, even if it is the last day of this Administration, then we have to move to overturn it, to remove it with whatever the new one is in.

So I want to appeal to the farming community that there comes a time when farmers have to stand up and fight back, and if we can move with legal action against the EPA, because they are totally wrong in this, that farmers' property is his private property. They need those independent pools and wells and digging and ditching so they can have the irrigation, so they can have water on their property when we have the droughts. The animals still have to have water. The plants have to have water. And furthermore, to come on and put additional financial pressure on these farmers, to fine them, make them pay for permits. They can come on their property night or day, anytime. That is wrong. We can make a stand in the courts, and the whole point of what I am saying is at least a judge can give the farmers a stay until this Administration is gone. And then we have another chance, a new day with a new Administration that can come in and treat the farmers and our agriculture industry with the respect they deserve.

Mr. DUVALL. Yes, sir, and I appreciate what you are saying, and I will welcome your assistance to help us. We already have a legal team that is already working on it. We are in the process of doing that right now.

Mr. DAVID SCOTT of Georgia. Good. Put me on it and if I can be helpful by having my name on that suit with you, please put it on there.

Mr. DUVALL. Yes, sir, and we will bring you up to date of where we are at with that.

Mr. DAVID SCOTT of Georgia. Thank you.

The CHAIRMAN. The gentleman's time has expired.

We will continue with Georgia and recognize Mr. Allen, for 5 minutes.

Mr. ALLEN. You can put another Georgian to join Congressman Scott on that legal battle.

First, Zippy, I want to welcome you. It is your first testimony before a House Committee as President of the American Farm Bureau, and of course, before leading the Farm Bureau, you led Geor-

gia's Farm Bureau, and I remember one of my first meetings campaigning for Congress was to go down to Macon and meet you in your office, and I was delighted to have that opportunity to talk with you. Because, being born and raised on a farm, if you remember, my brother was also a Commissioner there in Columbia County, and you were a former Commissioner, I believe, in Green County.

Mr. DUVALL. Yes, sir.

Mr. ALLEN. So you have had an incredible career of public service, and obviously, too, a great farmer. I have no doubt that you are going to do a great job for the farmers across America. I am just glad to have you in this position.

Mr. DUVALL. Thank you.

Mr. ALLEN. In addition to obviously, President Duvall, we have a distinguished panel here, and we have heard and I hear it in the district about the farm income being down 56 percent over the last 3 years. And it was interesting. We just had the Masters golf tournament in Augusta and of course, one of the things that they do there is sell a lot of merchandise, which is very generous of them to allow patrons to come in and buy things that they can remember their trip there.

But one thing that I did see is that everything that I bought was made in China, and last that I have heard is that China is paying their farmers $1.40 a pound for cotton. Their cotton is inferior to our cotton. Our farmers are getting paid, what, I don't know. It was 62¢. I understand it is below 60¢ now a pound on the world market.

Mr. DUVALL. It is 56¢, 57¢.

Mr. ALLEN. Yes, and our cotton is far superior. It is not contaminated. It is not handpicked. It is not contaminated, and in fact, and my guess is, that a large amount of our cotton has to be used in the making of that material that I purchased at the Masters, because their cotton is inferior.

But what I don't understand is if we are buying all the merchandise, why aren't they paying our farmers a fair price for cotton? If we are going to be the consumer, and I have never heard anybody really address this, and I don't know if you have thought about it, and I am hitting you probably blind on this question. Or maybe we have talked about it. I don't know. But I don't understand if we are the consumer and we are going to pay the price for nice cotton goods, why can't we demand that we get a fair price for our cotton? Is there any task force or anybody that is looking at that as far as in World Trade Organization anything like that to your knowledge?

Mr. DUVALL. I can't tell you. I may have some staff that could answer that question.

Mr. ALLEN. Right.

Mr. DUVALL. I don't know that we have a task force looking at that, but I can tell you that China has been the in the immediate past buying up big stocks of cotton.

Mr. ALLEN. Right.

Mr. DUVALL. They have a tremendous amount of cotton stored over there to be able to feed their manufacturing plants that are selling it back to us, of course. And you gave me the perfect oppor-

tunity to say what I have said for so long, and it not just deals with Georgia, rural Georgia, but it appeals to rural America. If we as a people decide that we are going to invest in rural America and further process what we grow here, we will put people back to work and we will make rural America thrive.

Mr. ALLEN. Right.

Mr. DUVALL. And that is exactly what you are saying.

Mr. ALLEN. Yes. In other words, we are at their mercy as long as we don't have a—is what you are saying.

Mr. DUVALL. That is exactly right.

Mr. ALLEN. Yes, and so we have to—we as a country have to make that decision, because right now, we are exporting 80 percent of the cotton in my district.

Well listen, thank you so much. I am just about out of time, but thank you for being here. We need to solve this problem because as you know, if we lose our cotton, we are going to lose our gins and I don't know how long it would take to rebuild that infrastructure?

Mr. DUVALL. It would take, if it could ever be rebuilt, it would take years upon years to rebuild it.

Mr. ALLEN. Yes.

Mr. DUVALL. Could I make one statement?

Mr. ALLEN. Yes, sir.

Mr. DUVALL. If you look at farm assistance from countries, developing countries, if you look at us compared to China, about 17¢ of every dollar that goes to a China farmer comes as assistance from the government, where we are sitting at about 7¢. So they are already at an advantage above us, and their cotton producers too are getting better at it.

Mr. ALLEN. Let me tell you, all our farmers want is a fair fight.

Mr. DUVALL. That is exactly right.

Mr. ALLEN. Level playing field.

Thank you, Zippy. Keep up the good work. I yield back.

The CHAIRMAN. The gentleman yields back.

The gentleman from California is recognized for 5 minutes.

Mr. LAMALFA. Thank you, Mr. Chairman. Thank you, panelists, for being here today, and I am glad to be able to join in the discussion here. I totally get what you are talking about in some of the testimony I heard earlier where, around my farm, you decide how much farther can you push a tractor or a pickup or what have you as opposed to replacing it. I pulled one of the D–8s out of the shop the other day built in the 1940s, puttered around on that until I had to fix a fuel pump, but that is a different thing. So and then last all, the dealer brought out a demo rice combine, and so I jumped on there for a few minutes and tried that out. By the way, what is the price? They said with a 25′ macked on header and tracks and rear wheel assist, $600,000 for a rice combine. It blew my mind. So, we will make our old stuff go another 10 years maybe, but don't tell the dealer that.

Dr. Johansson, you talked about it a little bit earlier. I didn't get to hear all of it, but so we saw last year over ½ million acres of land were fallowed. I am from California and we have our own set of problems there, but the drought we are temporarily relieved from that. The good Lord has blessed us with a lot of rain and

snow pack this year, and our lakes are filling largely, if we can have those that regulate the water let them fill all the way. California has had a respite. It has its own problems such as forcing the $15 minimum wage and they are looking at decreasing hours you can work on the farm without overtime from the standard of 10/60 to 8/40. So we have a lot of stuff coming at us in California, and who knows if the drought is going to be back in place next year.

And so I don't quite share the optimism that was talked about a little bit earlier with the stability for most farm households, and my colleagues here talking about the cotton situation and others. So the cost of everything is going up, especially in California where we enjoy the bonus of 60¢, 80¢ higher per gallon of fuel. So I know nobody can fix California until the attitude changes. But can you elaborate a little more on where the optimism comes from for farm households and for the farmgate?

Dr. JOHANSSON. Yes, that is a great question. I would point out, as we heard earlier that dairy policy is probably the most complicated policy that you can talk about, but certainly talking about regional production in California and the West Coast rivals that. There is a lot going on out there, as you pointed out. Certainly California has been hard-pressed to deal with the water issues out there over the last 5 years, and as you mentioned, the water situation seems to have improved this year, but we are still——

Mr. LAMALFA. Not everybody is out of the woods in the Simi Valley

Dr. JOHANSSON. We are still 80 percent of normal, so not recovering yet. We would want to see 100 percent of normal to start recovering.

So certainly we have seen a lot of changes in production in California as a result of the water issues. We have seen some fallowing of rice land, for example. We have seen a lot more tree nuts going in, and now tree nut prices are coming back down. So, back to my point, I obviously talked about the larger macroeconomic story of China's economic growth slowing down, the global economic conditions slowing, whereas the U.S. is relatively stable. So that is causing our dollar to be relatively strong. It is causing a lot of prices to come down for commodities. Our producers are facing a pretty competitive trading environment overseas. Certainly, that is the case for a lot of the California commodities that we would see.

Pointing out this household income story certainly provides economists a lot of areas for discussion. There is a lot behind those aggregate numbers and when we start digging into them, we see the stories that we are talking about today. There are farms that are very highly leveraged, and they are going to have a hard time finding the financing, paying for the financing and meeting the expected costs that we are going to see this year, given the fact that prices are coming down. That being said, I wouldn't want to say that the bottom end of the distribution for financial leverage paints the whole story for the whole farm economy. There are a lot of producers out there that did relatively well over the last 5 years. They do have financial reserves. They did buy a lot of equipment after the Section 179 went through. They have new equipment and as everybody here would—knows that there are ups and downs in the

farm economy and we just need to take advantage of the good times and hope that the safety net is sufficient to cover the times that are more difficult.

Mr. LAMALFA. It just seems the cost structure has ratcheted up and will not be coming down on inputs, whether it is machinery or what you put in at the field. Those don't come down, so the pendulum not only swings, but pivots and stays farther at one side.

Dr. JOHANSSON. Yes, and the costs certainly don't come down at the same time as the prices do, as Mr. Johnson pointed out and fortunately, we have seen very low energy prices, even for California. Prices have come down and that has helped in a lot of the chemical input side. So some input prices are coming down and helping on that, and again, fortunately we have very low interest rates so taking out loans isn't expected to add a lot to up righting costs right now.

Mr. LAMALFA. All right. I will yield back, Mr. Chairman. Thank you.

The CHAIRMAN. The gentleman yields back.

Before we adjourn, I would like to recognize the Ranking Member for any closing comments he would like to make.

Mr. WALZ. I thank the Chairman, and to the witnesses, thank you again as always. A lot of good food for thought helping us prepare as we go forward, and I would like to associate myself with the gentleman from Georgia who commented about value-added is a real win for us, if we can do that.

And I was just going to ask, maybe just a quick yes or no, and maybe we could get it later, but Dr. Johansson or Dr. Outlaw, have either of you done an analysis on what would happen if we reduce or eliminate the RFS, what would happen to commodity prices? Has that been done by either one of you?

Dr. JOHANSSON. There has been reports put out on how prices would respond to that. Most of those were done, either when we were in the drought back in 2012 or when oil prices were pretty high at $100 a barrel, for example. I don't know if I have seen any that have been done looking at sort of the low oil price, low commodity price environment we are in right now, but the Congressional Budget Office put out a report maybe last year on this topic.

Mr. WALZ. Well, I appreciate all of your expertise and greatly appreciate it. I want to make a note that joining us was Minnesota Farm Bureau President Kevin Paap. I appreciate his advocacy for our producers in the first district of Minnesota. I yield back.

The CHAIRMAN. The gentleman yields back.

I want to thank the witnesses as well. This has been very productive and I look forward to working with you all, going forward, and we certainly do have a task in front of us dealing with the next farm bill, and we appreciate your input.

Under the Rules of the Committee, the record today of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from witnesses to any question posed by a Member.

This hearing of the Subcommittee on General Farm Commodities and Risk Management is adjourned.

[Whereupon, at 11:28 a.m., the Subcommittee was adjourned.]

FOCUS ON THE FARM ECONOMY
(TIGHTENING CREDIT CONDITIONS)

TUESDAY, APRIL 19, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMODITY EXCHANGES, ENERGY, AND CREDIT,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:00 a.m., in Room 1300 of the Longworth House Office Building, Hon. Austin Scott of Georgia [Chairman of the Subcommittee] presiding.

Members present: Representatives Austin Scott of Georgia, Lucas, Neugebauer, Davis, Conaway (*ex officio*), Crawford, David Scott of Georgia, Vela, Kirkpatrick, and Aguilar.

Staff present: Bart Fischer, Caleb Crosswhite, Callie McAdams, Josh Maxwell, Matt Schertz, Mollie Wilken, Stephanie Addison, Faisal Siddiqui, Anne Simmons, Lisa Shelton, Matthew MacKenzie, Nicole Scott, and Carly Reedholm.

OPENING STATEMENT OF HON. AUSTIN SCOTT, A REPRESENTATIVE IN CONGRESS FROM GEORGIA

The CHAIRMAN. Good morning. This hearing of the Committee on Agriculture: *Focus on the Farm Economy: Tightening Credit Conditions,* will come to order.

Mr. Conaway, did you want to say anything before my opening statement?

OPENING STATEMENT OF HON. K. MICHAEL CONAWAY, A REPRESENTATIVE IN CONGRESS FROM TEXAS

Mr. CONAWAY. No, just a welcome to our witnesses, and I look forward to hearing from them, and look forward to this hearing of your's and David, the Scott Brothers show, this morning.

The CHAIRMAN. Thank you, Mr. Chairman. Good morning, and welcome to today's hearing. This is the second in the series of hearings that each Subcommittee is holding on the state of the farm economy.

As we know, the agricultural economy is highly cyclical. Given the recent 56 percent drop in net farm income and the hard times that inevitably come along with that, I believe it is important to hold hearings like the one today to make sure the credit needs of producers are being met and will continue to be met, particularly if current market conditions continue into the future.

While providing credit to America's farmers and ranchers is vital, it is a growing challenge for many lenders in the United States. Perhaps no one knows this better than lenders in cotton country. After a recent period of historic highs, crop prices have plummeted due to various factors which were discussed at last week's hearing before the General Farm Commodities and Risk Management Subcommittee. While input costs have softened, they remain near historic highs, and some of our biggest foreign competitors are sharply increasing their subsidies, tariffs, and non-tariff trade barriers. Unfortunately, burdensome government regulations have added to the challenges faced by America's farmers and ranchers, with the EPA continuing to push for new and costly regulations.

Meanwhile, farmland values are on a downward trend, and while some livestock producers are rebounding on the balance sheet with lower feed costs, our western producers are struggling with consecutive years of drought. It is times like these that our farmers and ranchers are most in need of reliable sources of credit at competitive rates. Thankfully, we have a network of commercial and community banks, USDA loan programs, and the Farm Credit System that each play a crucial role in providing that access.

In order to sustain an abundant supply of food and fiber well into the future, we must ensure that a responsible farm safety net and sound agricultural credit policies are in place now. To that end, I am pleased to welcome a distinguished group of witnesses and look forward to learning more from them about their perspective on current credit conditions and their outlook for credit conditions in rural America.

[The prepared statement of Mr. Austin Scott follows:]

PREPARED STATEMENT OF HON. AUSTIN SCOTT, A REPRESENTATIVE IN CONGRESS FROM GEORGIA

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The CHAIRMAN. With that, I would like to recognize the Ranking Member, Mr. David Scott, also from Georgia, for any opening statement that he may have.

OPENING STATEMENT OF HON. DAVID SCOTT, A REPRESENTATIVE IN CONGRESS FROM GEORGIA

Mr. DAVID SCOTT of Georgia. Thank you, Chairman Scott, and thank you to this distinguished panel for coming to speak with us about this very important subject, and I think a very critical issue right now of the tightening credit conditions.

Without access to credit, farmers cannot put a crop in the ground, and they cannot do the important work of feeding the world. I am especially worried about beginning farmers who are the future of production agriculture in this country and in the world. If we cannot provide the path to capital for these new farmers, we will continue to have an aging population of farmers. This is an issue that I am, and this Committee, is very much concerned about, beginning farmers. And I want to give a shout out and some credit to Farm Credit, who is working closely with me in coming up with ways and means that we can address the issue of beginning farmers. Because according to the 2012 Census of Agriculture, the average age of the principle operator of a farm is 58.3 years old. That is nearly 60 years old, ladies and gentlemen. In 1982, that age was 50.5. So within a span of just 30 years, the average age of the farmer has gone up nearly 10 years. This trend will continue if we don't have new farmers who are taking over family farms, and then also getting new faces, young people in this country starting out their own agriculture careers.

I want to add a little word here about our cotton farmers, this is a very critical issue. And what the cotton farmers are going through now is an example of what so many other farmers and growers, whether it is peanuts, whether it is tobacco, whether it is watermelons, whatever. Right now cotton farmers in my State of Georgia and around the country are in a situation where the price of cotton doesn't cover the variable costs of production. The cost of cotton doesn't cover the variable cost of production, much less the total costs, including any land rents that must be paid.

This is why I say the issue is critical. The Department of Agriculture predicts that prices could stay low for the next 3 to 5 years. That is why this is a crisis. It is a long-term issue, and we have to have a long-term strategy to deal with it. And with total farm debt forecast to hit $372.5 billion in this year alone, I wonder if some farmers will have problems accessing credit in 2017 and 2018.

So we have a lot of issues here. I look forward to hearing the panel's comments, and thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Scott.

The gentleman from Arkansas, Mr. Crawford, is not a Member of the Subcommittee, but has joined us today. Pursuant to Committee Rule XI(e), I have consulted with the Ranking Member, and

we are pleased to welcome him to join the questioning of the witnesses.

I would like to welcome our witnesses to the table. Mr. Timothy Buzby, President and Chief Executive Officer, Federal Agricultural Mortgage Corporation, Washington, D.C.; Dr. Allen Featherstone, Professor and Head of the Department of Agricultural Economics, Kansas State University, Manhattan, Kansas; and Mr. Randy Nelson, President, CHS Capital, LLC, Inver Grove Heights, Minnesota.

Mr. Buzby, please begin when you are ready.

STATEMENT OF TIMOTHY L. BUZBY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FEDERAL AGRICULTURAL MORTGAGE CORPORATION (FARMER MAC), WASHINGTON, D.C.

Mr. BUZBY. Thank you, Chairman Scott, Ranking Member Scott, and distinguished Members of the Subcommittee. Thank you for your invitation to appear today to testify on behalf of the Federal Agricultural Mortgage Corporation, commonly known as Farmer Mac. My name is Tim Buzby, and I am the President and CEO of Farmer Mac. I am here to give you a perspective of what Farmer Mac is seeing in the field related to credit conditions and the overall health of the agricultural financial community.

As the secondary market created to serve rural America, Farmer Mac works with over 900 institutions of all kinds in all 50 states through its programs, alliances, and partnerships. By working with such a vast network of lenders throughout the country, Farmer Mac not only introduces more competition into the marketplace to help your constituents receive the lowest interest rates and most favorable terms possible for their financing needs, but we are also able to give you a unique perspective on credit conditions across America.

Allow me to sum up briefly what is in my written testimony with a few observations on what Farmer Mac has seen most recently.

Working capital levels are currently being tested. It appears farm debt is slowly climbing from historical lows. The Farm Credit System reported nearly a seven percent increase in loans outstanding for agricultural production, intermediate term, and real estate lending in 2015 compared to 2014. Commercial banks and savings institutions reported a similar percentage increase in loans outstanding for agricultural production and real estate lending. Farmer Mac's purchases of USDA guaranteed loans increased eight percent from 2014. This rising lending activity highlights the growing demand for agricultural credit, but also demonstrates the willingness and ability of ag lenders to meet that demand.

Although market data indicates good credit availability in early 2016, we urge market participants to exercise caution and patience as the current industry cycle plays out. Specifically, we believe lenders should apply disciplined lending practices, and at the same time, be supportive but firm with their customers' requests. Regulators should be aware of the scope of potential credit problems, but also should be cognizant that agriculture is a long-term endeavor and that sometimes the best cure for a troubled credit is not always liquidation. Producers should be aware that major increases in agricultural commodity prices do not appear to be imminent, and

that cost containment could provide a new path to a new profitability.

Congress should continue to support the tools available to farmers and ranchers to help offset lower incomes and provide access to credit. One of those tools is Farmer Mac, and we stand ready and able to continue our mission of providing capital to rural America.

I understand that there is some concern about land values, so let me touch briefly on this important matter. Of the nearly $3 trillion in farm assets in 2014, over 80 percent was in the value of agricultural land and buildings. Between 2004 and 2014, the USDA estimate of the total value of farm real estate increased by more than $1 trillion, a doubling of asset values in just 10 years. The rising tide did not affect all regions equally. Much of the increases were centered in the midwestern United States and major grain producing states.

Let me give you a couple of observations on this. Revenue generated by agricultural real estate has fallen sharply, and it is natural for an asset with declining future cash flow potential to also decline in value. Farming expenses have not fallen at the same rate as farm revenues, which puts additional pressure on the ultimate profitability of farmland. The U.S. dollar strengthened tremendously in 2015, lowering commodity prices and making agricultural exports less attractive in foreign markets. Interest rates have not changed significantly since 2010 and remain near historic lows. A lower interest rate environment supports asset values by reducing the discount rate of future cash flows, and it makes the returns on farm assets more attractive, relative to other investment opportunities.

As we look forward, there is great competition in the agricultural lending space, and this is particularly helpful for borrowers. More and more borrowers are prudently choosing to finance farm purchases and refinancing with long-term fixed rate mortgages to lock in low and known interest costs.

At Farmer Mac, we work with lenders of all sizes, from those who sell us loans as small as $50,000, to multi-million dollar purchases. We have a unique solution for lenders who work with small family farms, and those that require sophisticated lending facilities. Farmer Mac continues to provide a stable source of liquidity, capital, and risk management tools to help rural lenders meet the financing needs of their customers. With a diverse array of lending products and capital sources, Farmer Mac is well positioned to provide lenders across America with the sophisticated and low cost lending products demanded by today's rural borrowers.

Thank you, and I would be happy to answer any questions you may have.

[The prepared statement of Mr. Buzby follows:]

PREPARED STATEMENT OF TIMOTHY L. BUZBY, PRESIDENT AND CHIEF EXECUTIVE OFFICER, FEDERAL AGRICULTURAL MORTGAGE CORPORATION (FARMER MAC), WASHINGTON, D.C.

Introduction

Chairman Scott, Ranking Member Scott, and distinguished Members of the Subcommittee, thank you for your invitation to appear today to testify on behalf of the Federal Agricultural Mortgage Corporation, which is commonly known as "Farmer

Mac." My name is Tim Buzby, and I am the President and Chief Executive Officer of Farmer Mac. I appreciate the opportunity to appear before your Subcommittee today to provide some insight about what Farmer Mac sees taking place in the rural credit financing markets, especially as it pertains to the availability of credit.

Farmer Mac

Farmer Mac's position at the intersection of Main Street and Wall Street allows us to provide a unique perspective about the environment for rural credit. We are a stockholder-owned, federally chartered corporation that combines private capital and public sponsorship to serve a public purpose. Established under legislation first enacted in 1988, Congress has charged Farmer Mac with the mission of providing a secondary market for a variety of loans made to borrowers in rural America, including mortgage loans secured by agricultural real estate, loans made to rural utility cooperatives, and certain loans guaranteed by the U.S. Department of Agriculture (USDA). This secondary market increases the availability of long-term credit at stable interest rates to America's rural communities, including farmers, ranchers, rural residents, and rural utility cooperatives, and provides those borrowers with the benefits of capital markets pricing and product innovation. In Farmer Mac's role as the secondary market for rural America, we work closely with lenders of all sizes, including commercial and community banks, Farm Credit System institutions, credit unions, rural utility cooperative lenders, and insurance companies to offer more financial choices to their rural customers and help them keep pace with today's capital-intensive environment.

For over a quarter-century, Farmer Mac has remained steadfast in its mission of delivering capital and liquidity and increasing lender competition for the benefit of American agriculture and rural communities. Our team of 72 employees located in Johnston, Iowa and Washington, D.C. share a mutual passion for rural America and in serving our customers. We take pride in the work we do and the important role we play in American agriculture. While we work directly with rural lenders, ultimately the greatest benefit we are able to provide is to your constituents—America's farmers, ranchers, rural utility cooperatives, and business owners in rural communities. To date, over 1,400 lenders across the nation have used Farmer Mac's programs and solutions to increase capital and liquidity and reduce their credit risk. By working with such a vast network of rural lenders, we inherently introduce more competition into the marketplace, which helps your rural constituents to receive the lowest interest rates and most favorable terms for their financing needs. In fact, the interest rates available to borrowers through the products offered by Farmer Mac are some of the most competitive in the market today. However, whether or not a rural borrower ultimately chooses a Farmer Mac loan product, Farmer Mac's participation in the rural lending arena provides that borrower with the opportunity to obtain a low interest rate on terms that work for that individual. That is good for rural borrowers, their families, their communities, and rural America in general. Since its creation, Farmer Mac has helped to fund loans to nearly 70,000 borrowers in all 50 states, resulting in approximately $39 billion of investment in rural America.

Agricultural Credit Demand and Availability

American agriculture is no stranger to cyclicality. The industry has been through three widely recognized business cycles, the first in the 1940s, followed by the second in the late 1970s through the 1980s, and most recently beginning in 2005. Each cycle has been characterized by a rapid increase in farm profitability followed by a reversion to trend or an over-correction below trend. In the trench of the cycle, producers often offset lower income levels by consuming working capital earned during the profitable years, perhaps selling liquid assets, or taking on additional debt to meet cash flow demands of their farming operations. For 2016, USDA forecasts a third consecutive year of lower farm incomes. While the financial health of the sector remains largely intact, the industry is certainly feeling some stress as the current cycle nears its trough. Working capital levels are under stress today, and it appears farm debt is slowly climbing from historical lows.

Recent activity in both the retail and secondary lending markets underscore the growing need for agricultural financing. According to year-end call report data for 2015, the Farm Credit System (FCS) reported $147.3 billion in loans outstanding for agricultural production, intermediate-term, and real estate lending, *up nearly seven percent from 2014.*[1] Similarly, commercial banks and savings institutions reported $171.9 billion in loans outstanding for agricultural production and real estate

[1] Federal Farm Credit Banks Funding Corporation 2015 Annual Information Statement (*https://www.farmcreditfunding.com/*).

lending at the end of 2015, also *up nearly seven percent from 2014.*[2] Applications for credit through Farmer Mac's programs remained elevated through 2015. Farmer Mac approved more than 80 percent of all applications for Farm & Ranch lending during the calendar year and purchased a record $748 million of Farm & Ranch loans during the year. Farmer Mac's purchases of Farm Service Agency (FSA) and other USDA guaranteed loans also remained robust in 2015 with $363 million in transactions, up eight percent from 2014. This rising lending activity highlights the growing demand for agricultural credit but also demonstrates the willingness and ability of agricultural lenders to meet that demand.

Despite the cyclical headwinds from the overall agricultural economy, Farmer Mac sees other indicators of credit availability to a wide variety of borrowers. In 2015, Farmer Mac purchased or committed to purchase loans secured by agricultural real estate that were producing more than 70 different agricultural commodities in 42 states from over 300 lending institutions. Participating lenders included commercial banks, FCS institutions, insurance companies, and many other non-bank financial institutions dedicated to serving the financial needs of our nation's farmers and ranchers. We continue to see strong interest in our programs from rural lenders, with some 80 new lenders signed up during 2015 and over 1,200 lenders eligible and approved to transact business with Farmer Mac. Approximately 40 percent of all Farmer Mac transactions during 2015 involved small operators, and over 95 percent of transactions involved a family operation. This business diversity by borrower location, size, and style as well as by customer and industry underscores the breadth and depth of agricultural lending today.

Although market data indicates good credit availability in early 2016, we urge market participants to exercise caution and patience as the current industry cycle plays out. Creditors should apply disciplined lending practices and at the same time be supportive but firm with their customers' requests. Regulators should be aware of the scope of potential credit problems, but they should also be cognizant that agriculture is a long-term endeavor and that sometimes the best cure for a troubled credit is not always liquidation. Producers should be aware that low commodity prices are likely to be with us for a while, and that cost containment could provide a new path to renewed profitability. Long-term fixed rate debt at today's historically low interest rates, which Farmer Mac helps many lenders to provide, can be an important tool to help stabilize the cost structure for many producers. In addition, lawmakers should continue to support the tools available to farmers and ranchers to help offset lower incomes and provide access to credit.

Land Values

Farm real estate represents the overwhelming majority of the agricultural balance sheet. Of the nearly $3 trillion in farm assets in 2014, over 80 percent was in the value of agricultural land and buildings. Between 2004 and 2014. the USDA estimate of the total value of farm real estate increased by more than $1 trillion, a doubling of asset values in just 10 years. The rising tide of farmland values did not affect all regions equally—much of the rapid rise in land values was centered in the midwestern United States in major grain producing states. The USDA reports increases in farmland value of 243 percent in Nebraska, 222 percent in Iowa, and 134 percent in Illinois between 2004 and 2014. These increases are undoubtedly a result of the industry's recent expansionary cycle and commodity price boom beginning in 2005.

More recently, factors influencing farmland values have been mixed. As previously mentioned, certain commodity prices have fallen sharply, and it is natural for an asset with declining future cash flow potential to also decline in total value. Farming expenses have not fallen at the same rate as farm revenues, which puts additional pressure on the ultimate profitability of farmland. In addition, the U.S. dollar strengthened tremendously in 2015, which lowered commodity prices and made U.S. agricultural exports less attractive in foreign markets. However, several factors have also combined to help support farmland values. Interest rates have not changed significantly since 2010 and remain near historical lows. A lower interest rate environment supports asset values by reducing the discount rate of future cash flows, and it makes the returns on farm assets more attractive relative to other investment opportunities. Additionally, the supply of farmland available for sale does not appear to be growing significantly. This current trend is particularly significant as lower supplies are typically associated with higher market prices. Finally, Federal crop insurance and other support offered to farmers such as the Agricultural Risk Coverage (ARC), Price Loss Coverage (PLC), and the Margin Protection Pro-

[2] Federal Financial Institutions Examination Council Quarterly Call Report Data, 2015Q4 (*https://cdr.ffiec.gov/public/*).

gram (MPP) significantly lower market risk for producers and thus lower the inherent revenue volatility of the underlying farmland assets. We cannot stress enough how vital the current safety net policies are to agricultural lenders. They provide a great level of certainty in an industry that is anything but certain.

The combined market forces described above have netted out a modest decline in farmland values through early 2016, focused largely in the Midwest. According to the University of Nebraska-Lincoln, land values in Nebraska decreased six percent from early 2014 through February 2016.[3] A recent survey released by Iowa State University shows the value of medium-quality Iowa cropland fell 17 percent from September 2014 to March 2016.[4] Similarly, the annual survey results from the Illinois Society of Professional Farm Managers and Rural Appraisers (ISPFMRA) showed average farmland values in Illinois fell by nine percent in 2015.[5] The relatively modest declines experienced in some states are very different from the dramatic changes seen during the 1980's farm crisis, which is a testament to the strength and resiliency of U.S. agriculture today. Indeed, in other parts of the country, the appreciation of farmland values continued in 2015. According to data from the USDA's National Agricultural Statistics Service (NASS), farmland values in western states like Washington, Oregon, and California increased in 2015. These states produced a wider variety of agricultural products and thus were not so sensitive to changes in grain and oilseed prices. Similarly, land values in states like Georgia and others in the South and Southeast were near zero or slightly positive with a greater diversity of agricultural production.

Agricultural Sector Analysis

Much of the decline in agricultural profitability in recent years is a result of market changes for bulk crop commodities like corn, soybeans, and cotton. Global supplies of nearly all bulk commodities are in surplus, putting downward pressure on world prices. U.S. producers are at an added disadvantage with a strengthening dollar that puts further downward pressure on both commodity prices (that are denominated in U.S. dollars) and the relative value of U.S. exports. Cotton producers face additional pressure from significant supplies in China, the world's largest consumer of cotton, and signals of the country's willingness to liquidate those supplies in large trade blocks. Combined, the USDA estimates that the decline in crop prices has caused a drop of nearly $50 billion in net farm income between 2013 and 2016.

However, bulk commodity producers are not the only ones coming under pressure. Milk and dairy product prices are down significantly in 2016 due to greater competition from foreign producers. Cattle prices are softening from historical highs as consumers began to balk at record-setting retail beef prices in 2015. Hog prices have decreased due to the rebound in hog inventories after the 2013 outbreak of the Porcine Epidemic Diarrhea Virus (PEDv) and tighter export markets. Poultry producers are also experiencing lower market prices due to higher domestic supplies, a result of several import bans on broiler meat after the 2015 outbreak of Highly Pathogenic Avian Influenza (HPAI). Finally, fruit and nut producers are seeing lower prices and tighter export markets affected by the stronger U.S. dollar in 2015. In general, the pattern of lower commodity prices has cause an increased demand for credit, as well as a need for the lender and borrower to work together more collaboratively when addressing the borrower's financing needs.

For additional insight into these and other topics, I have attached the spring edition of *The Feed,* Farmer Mac's quarterly perspective on agriculture. While much of what is trending in agriculture today seems negative, we believe the medium- and long-term prospects for the sector remain favorable, a function of the many years of profitability in the last decade, the strength of the farm balance sheet, and the grit of America's farmers and ranchers.

Conclusion

As mentioned at the beginning of my testimony, American agriculture has always been cyclical in nature. Farmers and ranchers have long memories, and they, more than most, pay close attention to mistakes made in the past to avoid them in the future. The conservation programs enacted and maintained after the weather-related disasters in the early 20th century are a prime example of that. Farmers,

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[3] *2016 Trends in Nebraska Farmland Markets: Farming and Ranching on the Margin.* University of Nebraska-Lincoln (*http://agecon.unl.edu/2016-trends-nebraska-farmland-markets-farming-and-ranching-margin*).

[4] *Iowa Farm & Ranch Chapter #2 REALTORS© Land Institute March 2016 Land Value Survey.* Iowa State University Extension and Outreach (*https://www.extension.iastate.edu/agdm/wholefarm/html/c2-75.html*).

[5] *2016 Illinois Farmland Value and Lease Trends.* Illinois Society of Professional Farm Managers and Rural Appraisers (*http://www.ispfmra.org/*).

ranchers, and their lenders also learned some hard lessons from the agriculture financial crisis of the late 1970s and 1980s. Today, producers are much more aware of the need to build working capital as the first line of defense against price volatility. I would be remiss if I did not also point out that the current low interest rate environment significantly helps borrowers. Looking ahead, credit conditions appear to be beginning to tighten modestly as the financial impacts of the recent stresses to farm incomes are becoming apparent in the financial position of some agricultural producers. For producers with higher profit margins and strong balance sheets, credit remains available at a low cost, while for other producers that lack these attributes, the cost is beginning to increase.

There is no doubt that policies which enable our farmers and ranchers to market and sell their commodities overseas are more important than ever. It is no secret that we can feed the world, but our friends working on the farms and ranches in rural America need the tools to do this. Free and fair trade agreements are essential. In addition, just as the nation's economy and the world's economy are very different than they were in the late 1980s, so is the agricultural economy. Farms have naturally grown larger through consolidation, especially to help lower costs through scale. This is not necessarily a bad thing, but it simply points to a new reality, which depends on increasing efficiencies to maintain profitability. The participants in the agricultural financing markets have adjusted to these changes, and we believe that public policies in this regard should also reflect this new environment while continuing to recognize the importance of small farms and family operations in maintaining the vitality and diversity of American agriculture.

ATTACHMENT

The Feed [*]

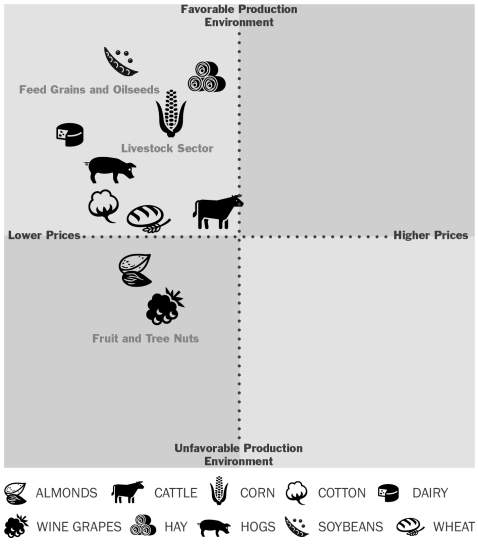
Farmer Mac's Quarterly Perspective on Agriculture

Spring 2016

Issue No. 3

Executive Summary

Production and Market Price Perceptual Map



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Continued

Key Highlights

Farm income in 2016 is expected to be down across most farm business types.

Farm debt is increasing but now at a decreasing rate; estimated annual farm debt payments are still low compared to the 1980s.

Agricultural exports face major headwinds, but there are reasons to remain optimistic.

For the third consecutive year, net farm income is projected to fall in 2016 as a result of lower commodity prices and ample global supplies. Very few sectors touted higher prices at the end of 2015 compared to the beginning, and the price forecasts for 2016 are lower for most major ag commodities. However, government payments through the Agricultural Risk Coverage (ARC) and Price Loss Coverage (PLC) programs should help offset the lower profitability for crop producers. Farm assets were down in 2015 and are projected down again for 2016 due to the liquidation of financial assets to meet cash flow needs, lower inventory values carried at lower market prices, and small declines in real estate values. Real estate and non-real estate debt look to be on the rise in 2016 but at a slower pace than during the transition years of 2014 and 2015. Weather conditions in the West are improved because of El Niño precipitation, particularly in the Pacific Northwest. Though considerably more precipitation may be required to fully alleviate the effects of the drought, a wet 2016 water year is a good start. The U.S. Department of Agriculture (USDA) projects an overall decrease in acres planted to crops in 2016, largely driven by lower wheat acreage. Acres planted to corn are expected to increase in 2016. Crop prices have declined in recent months due to the large carry-in crop from the 2015 harvest. Stiff competition persists for U.S. dairy producers in foreign markets, and lower market prices are likely to remain throughout the year. Cattle herds continue to rebuild in 2016, putting downward pressure on cattle prices. Reduced profitability for feedlots will likely continue to depress cattle prices throughout 2016. Broiler prices were down in 2015 on higher cold storage inventories, but demand is inching up on the pricing differential between poultry and beef, while it is hopeful that avian influenza concerns ease in overseas markets. Wine grape producers received lower prices in 2015, which was the result of a good harvest, increased interest in mid-to-higher priced wines, and increased competition from the craft beer industry. Hops prices have soared in response to a tough harvest and the rapid growth of craft brewing.

Farm Economy Highlights *(Resource 1, 2)*

Key Highlights

USDA economists expect farm income to decline for the third consecutive year in 2016.

Farm equity is expected fall again in 2016, but farm assets are holding up fairly well.

Although debt levels continue to increase, estimated inflation-adjusted annual debt payments are still significantly lower than the 1980s.

The initial USDA projections for the 2016 farm economy could be an inflection point. Net farm income, an accrual-based economic measure of sector income, is projected to fall by only three percent to $55 billion. This is a small drop compared to the declines in 2014 and 2015 of 27 and 38 percent, respectively. Net cash income, the amount of income left to producers after they have paid for all cash expenses, is also expected to decline in 2016 but by only two percent to $91 billion. Net cash income is a sounder measure of sector financial health for lenders as it gives a better picture of cash available for living expenses and debt servicing. Commodity prices have stabilized somewhat in early 2016, unfortunately at lower levels, which appears to be driving the leveling-off of farm income. This year will represent the third consecutive year of lower crop prices and the second year of lower livestock and protein prices. Producers in all major classes of sector production show stable-to-lower than expected incomes during the year with dairy producers showing the largest drop due to declines in milk prices. While a third successive decline in farm

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incomes is historically rare, producers are adapting to the lower market price environment from a position of relative financial strength.

Farm assets are also expected to compress in 2016 while debt levels are set to expand. Farm assets are expected to decline by just under two percent this year to $2.7 trillion, driven by lower real estate values, lower crop and livestock inventory values, and lower levels of financial assets. The combined effects of the asset value declines indicate a realized or unrealized loss of nearly $130 billion since 2014. Simultaneously, farmers and ranchers are expected to take on additional debt loads to offset the lower level of incomes. While the total debt load projected for 2016 will hit a nominal high at $372 billion, when adjusted for inflation, the level of combined farm debt does not exceed the historic highs reached in the 1980s. Not only is the projected level of farm debt below peak, the annual cash required to service that debt is well below the levels witnessed during the farm crisis years. By reversing the USDA's debt servicing ratio and adjusting for inflation, *Figure 2* demonstrates the buildup of debt service requirements in the 1980s driven largely by higher interest rates. Debt payments today have roughly the same principal component but a significantly lower portion attributable to the interest payment. Given today's accommodative interest rate environment, the cash flow required to service debts remains well below the sector net cash income. In 1981, however, the sector debt payments exceeded net cash income, causing significant sector-wide financial stress. Today, expected net cash income is 1.8 times the estimated sector debt payments, just below the historical average of 2.1 times. Clearly, a dovish interest rate environment is beneficial to farmers, ranchers, and agricultural lenders.

Figure 1: Farm Business Net Cash Income Trends by Year and Production Type

Average Farm Business Net Cash Income by Year

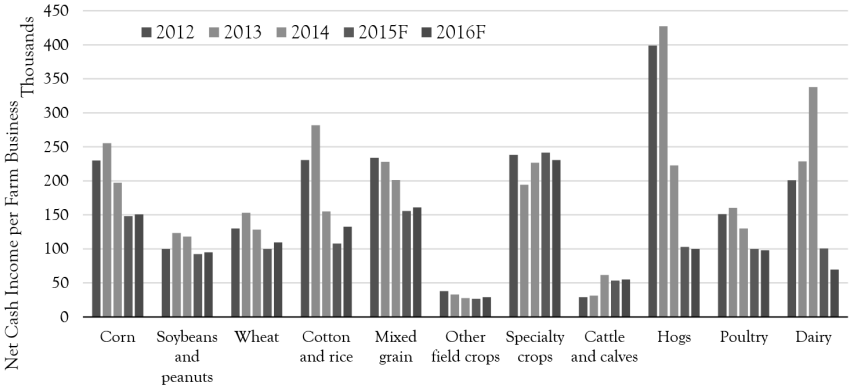
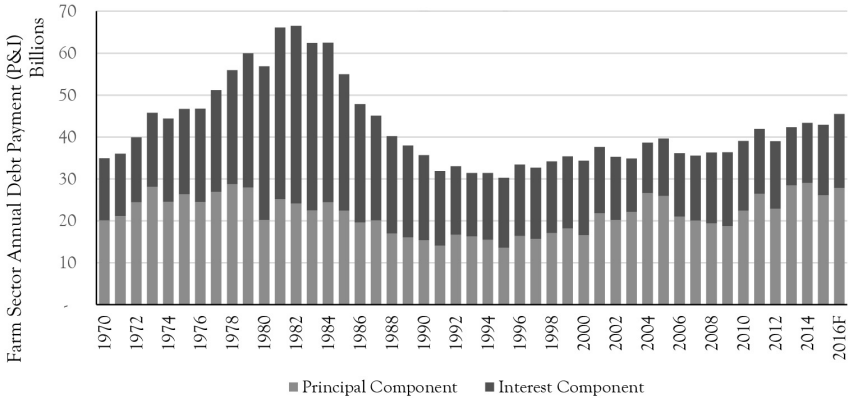


Figure 2: Real Farm Debt Payments

Inflation-Adjusted Farm Sector Debt Payments

(2009=100)



Special Report: Agricultural Exports and the U.S. Dollar (*Resource 3, 4, 5*)

Key Highlights

Agricultural trade represents approximately ⅓ of the value of U.S. agricultural production.

The recent strength of the U.S. dollar has proved to be a headwind for agricultural exports.

Certain states (California, Illinois, and North Dakota, among others) are more sensitive to changes in foreign demand due to a higher percentage of annual agricultural cash receipts exported.

Bulk commodities (*e.g.*, soybeans, corn, wheat, *etc.*) represent a high percentage of the total value of U.S. agricultural exports.

Expanded trade opportunities remain a bright spot in the future of the U.S. agriculture sector.

Trade is now a major source of demand for the U.S. agriculture sector. In 2015, the USDA Foreign Agricultural Service estimates that U.S. ag exports fetched $133 billion in receipts, which is roughly 31 percent of the total value of U.S. agricultural production during the calendar year. In 1970, the ratio of agricultural exports to production was only 13 percent. Some of the growth has come from expanded trade with long-term trading partners like Mexico, Canada, and Japan; approximately 40 percent of the value of exports is with these three countries, up from 25 percent in 1980. Other growth has come from new and expanded markets such as China, where sales of agricultural products represent over 15 percent of total U.S. exports, up from just five percent in 1980.

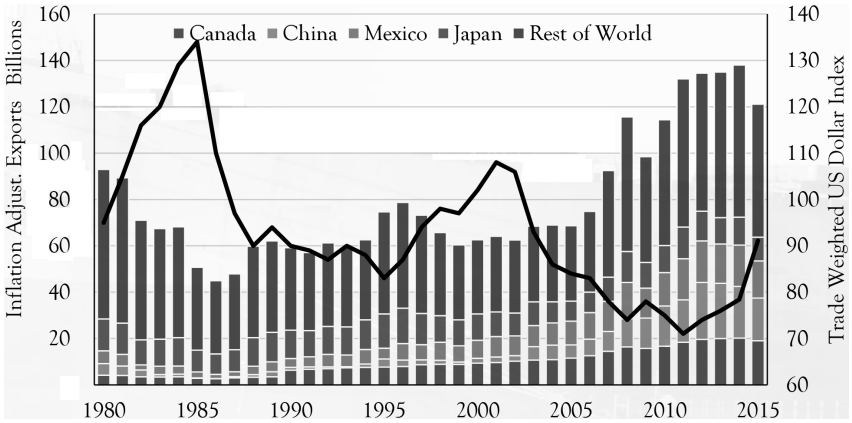
However, there are several conditions that threaten U.S. agricultural export markets. First, currency effects from a stronger dollar in 2015 have made U.S. agricultural products more expensive relative to competitors in Brazil, Australia, and the European Union (EU). *Figure 3* shows the history of U.S. agricultural trade adjusted for inflation overlaid with an index of U.S. dollar strength. During all three spikes in U.S. dollar strength, agricultural export values declined, particularly in the early 1980s and the 1990s. In fact, the correlation coefficient between the two metrics is −0.71 implying a very strong, inverse relationship between the two. In 2015, U.S. ag exports slumped by more than 11 percent while the U.S. dollar strengthened by 16 percent. The U.S. dollar has weakened somewhat in early 2016, but it remains highly elevated compared to 2014. Second, global supplies of agricultural products have rebounded significantly from the lows experienced in 2012 and 2013. The extraordinary run of commodity prices from 2008 through 2013 triggered a worldwide expansion in the production of bulk commodities—between 2007 and 2015, world production of corn, soybeans, and wheat increased by 22, 46, and 20 percent, respectively. The rise in global production has increased the competition faced by U.S. producers tremendously, particularly from South American producers in Brazil and Argentina. Finally, global politics have seeped into the farm gate. In 2014, Russia banned imports of Western products in retaliation for sanctions related

to its annexation of Crimea and intervention in Eastern Ukraine. Domestically, trade has become a hot-button issue in the 2016 Presidential race, with virtually all candidates in both parties stepping back from international trade deals like the Trans-Pacific Partnership (TPP). All of these circumstances create considerable headwinds for the expansion of U.S. agricultural exports.

Figure 3: U.S. Agricultural Exports and the U.S. Dollar

U.S. Agricultural Exports

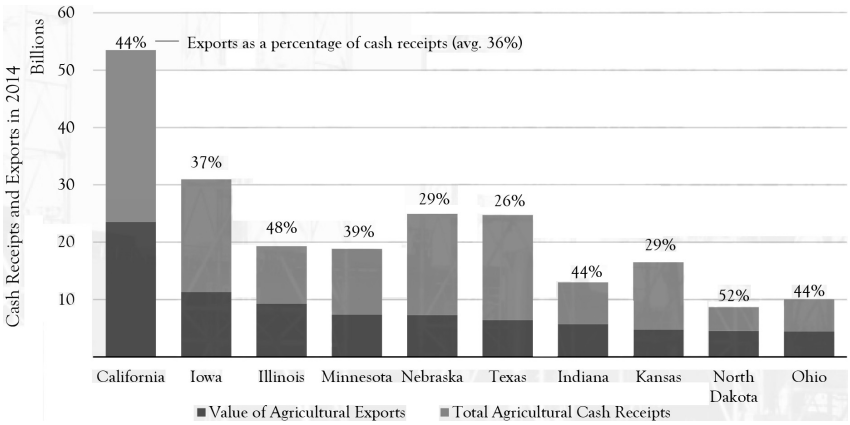
(2009=100)



Pressure on U.S. agricultural exports will not affect all producers equally. Some states export a higher percentage of their agricultural production than others. *Figure 4* depicts the top ten agricultural exporting states and how much of their 2014 cash receipts were represented by export values. California had the highest absolute level of agricultural exports in 2014, but North Dakota exported the highest proportion of its total agricultural cash receipts at 52 percent. The higher the proportion of exports to sales, the greater the exposure to foreign markets and a downturn in agricultural trade. States like California, Illinois, and North Dakota have higher export to sales ratios owing to the types of goods produced within their borders. For example, California is a major producer of almonds and about 75 percent of each almond crop is exported to global markets. Field crops such as soybeans and corn represent roughly ⅓ of U.S. ag exports. Soybeans alone represent 16 percent of 2014 U.S. ag export values. Producers of these commodities will likely be adversely affected by a slowdown in global trade in 2016.

Figure 4: U.S. Agricultural Exports by State of Production

Importance of Exports to State Agriculture



Despite these headwinds, there are still many good signs for U.S. agricultural exports. Over 95 percent of the world's population in 2015 lived outside the United States, and that number will likely increase in the future as emerging markets in Africa and Asia continue to develop. The most recent United Nations estimates put world population at nine billion by 2040, a full decade earlier than many thought just 5 years ago. The global population growth presents an incredible opportunity for U.S. farmers and ranchers to increase reach and market size. The TPP may have lost some steam during the U.S. Presidential primary season, but there is still good support for the trade deal in many corners of Congress. Trade agreements like the TPP and the Transatlantic Trade and Investment Partnership (T-TIP) will open the doors to these growing markets, giving a growing number of consumers access to the richest, safest, and healthiest food the planet has to offer.

Weather (*Resource 6, 7*)

Key Highlights

El Niño brought improvement to drought conditions across the West until a mild and dry February, though March was certainly moister.

California snowpack is improving but appears to be close to normal, rather than a "blockbuster" El Niño snow year.

Soil moisture conditions in the U.S., particularly in the Midwest, are good heading into spring.

As El Niño conditions begin to wane, warm and dry conditions can form in the Midwest from late spring into mid-summer. Current seasonal forecasts are consistent with this tendency.

The much-hyped El Niño of 2015–2016 began the year largely living up to expectations as widespread rain and snow improved the drought situation throughout much of the West. However, a mild and dry February halted some of the progress as California Sierra Nevada snow water equivalents (SWE) diminished from above normal at the beginning of the month to below normal by the end of the month. March trended back toward a stormier pattern, which helped bring SWE closer to historical averages. Heading into spring, attention in California will turn toward reservoir fill rates as the winter snow melts, along with state and Federal water allocations for 2016, which are both expected to remain modest. Much of the Pacific Northwest has experienced a significant improvement in drought conditions through the winter.

Soil moistures throughout the United States are generally at or above normal for this time of year, particularly throughout the Midwest. This augurs well for spring planting, provided that moisture levels do not increase significantly and impede field work.

As the 2015–2016 El Niño begins to diminish throughout the spring and early summer, the amount and timing of precipitation in the Midwest should be monitored. As El Niño events fade, there is often a trend for warm and dry weather in the Midwest from late spring into summer. Current seasonal forecasts reflect this

pattern. This is not to say that a widespread drought is expected; however, poorly-timed dry weather can certainly affect seed germination and crop growth.

Figure 5: Drought Monitor Map

(USDA, NOAA, University of Nebraska-Lincoln)

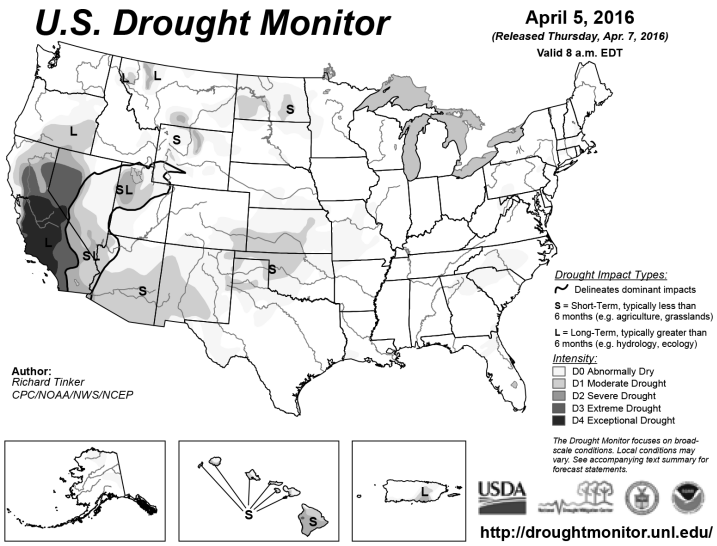
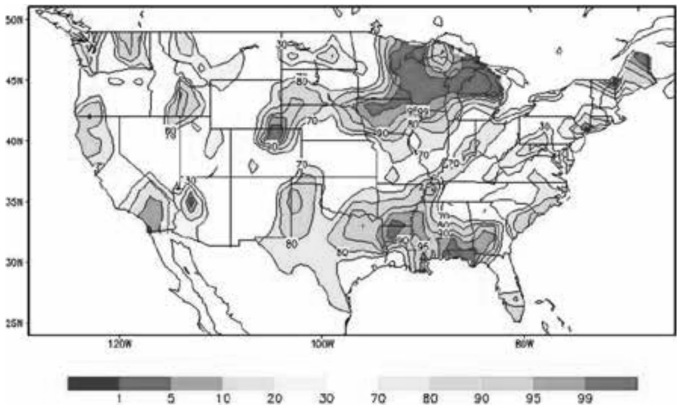


Figure 6: U.S. Soil Moisture Ranking

Calculated Soil Moisture Ranking Percentile

April 7, 2016



Corn & Soybeans (*Resource 4, 8*)

For corn and soybean growers, 2016 looks to rhyme fairly well with 2015. Global supplies of both commodities head into the planting season at multi-year highs. World production of corn and soybeans increased two and 13 percent, respectively, in 2015, and expectations for 2016 demonstrate similar levels of production due to record crops in China, Argentina, and Brazil. In the U.S., early USDA surveys show more acres planted with corn and soybeans in 2016 compared to 2015, with many acres coming out of wheat. The higher acres planted may or may not increase production, however, as the probability of a dry growing season is higher after a strong El Niño weather pattern. Soil moisture is very good heading into the plant, so more

time will be needed to better estimate the size of the U.S. crop in 2016. But supplies are ample heading into planting season.

Demand for corn and soybeans is expected to increase in 2016. Grain consuming animal units are up in the early part of the year, and the lower feed prices should motivate protein producers to increase the number of animals on feed and their time on feed. Ethanol and biodiesel production remains steady despite lower oil and gas prices, and lower prices at the pumps may lead to an increase in national gasoline consumption this travel season. Export market growth will likely be limited by intense competition from South American growers in 2016. Brazil is expected to have a very large safrinha, or second corn crop, which harvests at virtually the same time as the U.S. crop (see *Figure 8*). Argentina is quickly developing as a major competitor for U.S. corn producers after its recent Presidential election. Specifically, the new Administration is very pro-agriculture, and in December of 2015, just 5 days after the Presidential inauguration, it reduced export tariffs and instituted currency controls that will prompt producers to expand production and exports of corn. And while Argentina's harvest timing does not directly compete with the U.S., a larger supply of spring corn will hurt growers with crop in the bins after harvest.

The net of the supply-demand forces for grains indicate lower prices in 2016. The USDA projects a season-average corn price of $3.45 per bushel (a $0.15 drop from 2015) and a soybean price of $8.50 per bushel (a $0.30 drop from 2015). Barring a major supply-side or U.S. dollar disruption, these lower prices are likely to persist into 2017.

Figure 7: Historical Crop Plantings and Expectations for 2016

Crop Planting Trends

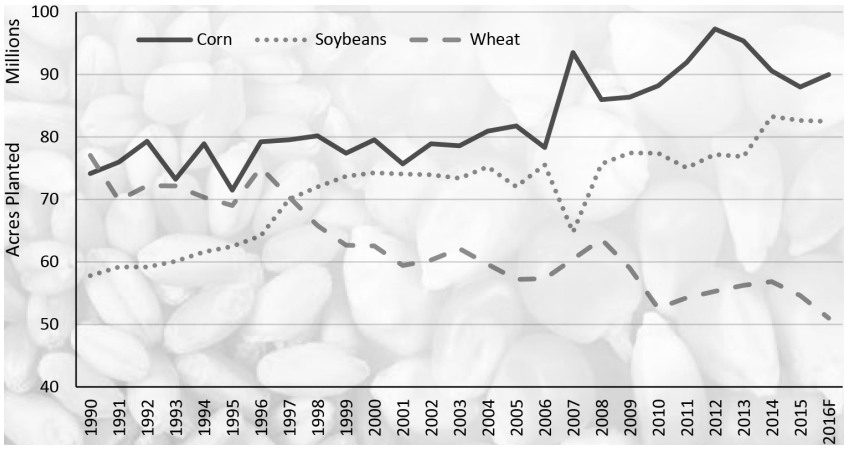


Figure 8: Global Crop Harvest Timing Grid



Dairy (*Resource 4, 9, 10*)

Key Highlights

Low world dairy prices persist in response to more than adequate supplies.

Milk production rose in 2015 for major exports in the U.S., the EU, and Oceania.

Producer profitability will be tight in 2016 with continued low milk prices but stable production costs.

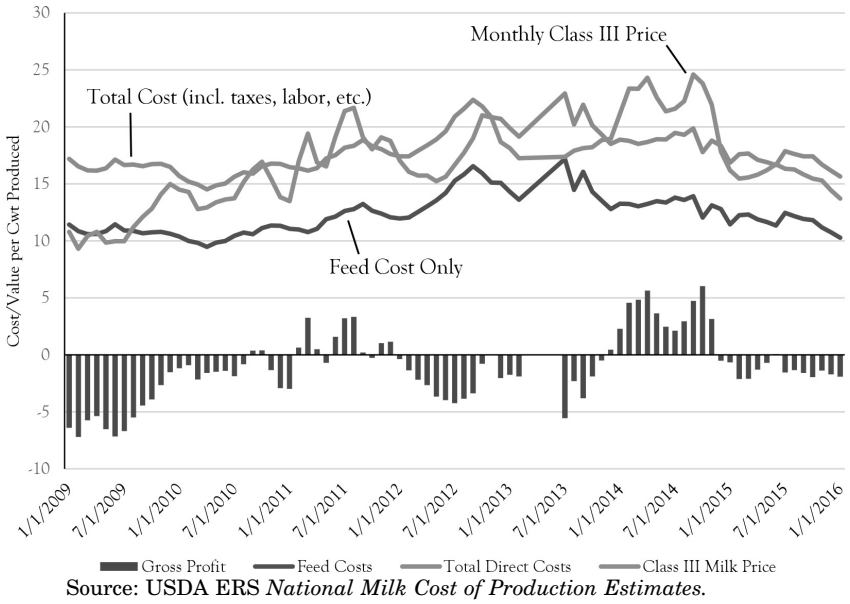
Supply-side economics in the dairy industry continue to drag sector profitability. USDA data shows U.S. production in the winter months from December to February is up by almost two percent on a higher number of cows combined with a higher average output per cow. The ratio of ending stocks-to-use, a relative measure of dairy supplies in inventory at the end of each calendar year, reached its highest levels in 2015 since 2009 for many dairy products. Milk production at California dairies continues to struggle in early 2016 due to lower output per cow. The stress on herds from the extended drought conditions is likely the major contributor to the decline, but water conditions have improved in many parts of the state. Global supplies remain in surplus after strong production in 2015 and slower global trade in early 2016.

Product demand remains muted in the early months of 2016. Domestic dairy product use has held steady during the winter months, but exports are down dramatically through January. Russia continues its ban on Western agricultural imports through August 2016, and their disappearance from the import picture has put more European dairy products onto the world market. Chinese dairy imports picked up in late 2015 and early 2016, and that has provided some support to world dairy prices. U.S. producers are at an added disadvantage to both the EU and Oceania due to the currency effects of a stronger dollar.

The combined effects of the supply and demand functions imply continued pressure on producer profitability in 2016. The Federal Order Class III milk price for March was $13.78 per cwt, up slightly from February but well below prices in 2014 and 2015. The USDA is forecasting an average Class III milk price near $13.90 per cwt for 2016. Feeding costs could abate somewhat in 2016 if grain and hay prices stay low. Supplies are not likely to contract by much, so producers must look to control costs and spur demand growth at home and in new overseas markets. Implied profit margins based on estimated costs of production and a Class III milk price have been negative for 14 consecutive months, but the implied margins are not nearly as severe as they were in 2009 when the dairy industry last faced a major cyclical downturn. This year is unlikely to turn into another 2009, as restaurant sales remain strong, domestic cheese consumption is holding up, and global trade is merely subdued, not closed.

Figure 9: Historical Dairy Profitability

U.S. Average Dairy Returns



Source: USDA ERS *National Milk Cost of Production Estimates.*

Almonds (*Resource 11, 12*)

Key Highlights

The 2015 California almond crop weighed in at approximately 1.8 billion pounds, roughly equal to the 2014 crop.

Grower almond prices peaked in early 2015 and have continued to decline into early 2016 on weaker export demand.

Inventories sit at near-term highs putting downward pressure on prices.

While the 2015 almond crop failed to break any records, producers maintained production levels attained in 2014. California, the state that produces nearly 100 percent of all U.S. almonds and over ½ of the world's annual supply, spent the entirety of the growing year in a deep drought with restricted access to state and Federal water allocations. Yields were down again in 2015, likely a factor of the deepening drought and early bloom. Lower yields were offset by the greater bearing acreage under production, a trend that has been increasing in recent years due to more acres planted to orchards. Non-bearing almond acreage stood at 150,000 acres in 2014, a 20 year high. As orchards mature, more of the almond acreage begins to bear nuts, and the total potential production increases. Global supplies were up in 2015 on higher production in Australia and the EU, but U.S. producers dominated world trade, as U.S. almonds represented over 85 percent of almond shipments in 2015.

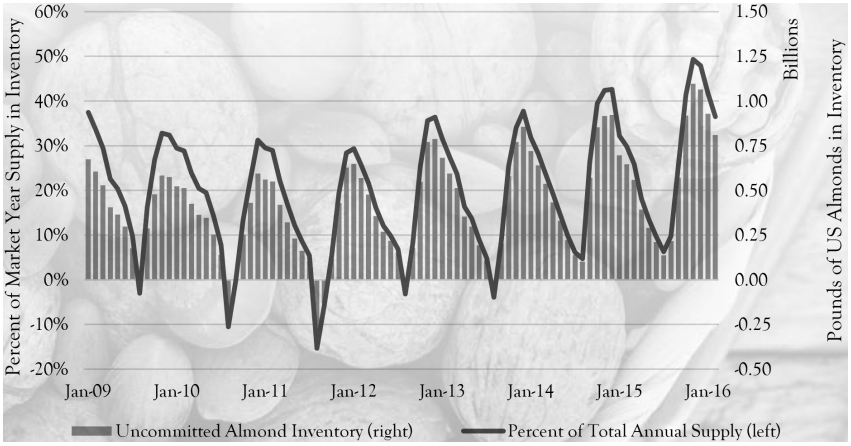
Demand for U.S. almonds weakened during the last year. A robust export market in 2014 drove up prices more than 15 percent during the year, but both domestic and foreign consumers pulled back in 2015. U.S. almond exports fell five percent during the 2014/15 marketing year on ample global supply and a stronger U.S. dollar, and domestic consumption fell by ten percent. Shipments have picked up in early 2016, but the drop in demand during 2015 left higher carry-in and boosted inventories on the almond balance sheet.

In response to these market conditions, almond prices have dropped considerably since early 2015. The combination of steady supplies and lower demand pushed up uncommitted inventories in early 2016 to new heights. The Almond Board of California reports inventory levels monthly, and while in most years committed shipments of almonds pushed the inventory levels into a negative position during the late summer months, the last 2 years have seen positive inventories during that

same period (see *Figure 10*). However, lower prices and a drop in the U.S. dollar are spurring sales, so market prices may find some support by mid-year. Reports published by Derco Foods, an almond trading company, show its market prices dropping nearly 60 percent in mid-to-late 2015 from over $5.00 per pound to nearly $2.00 per pound. While the average price to growers is likely closer to $3.00 per pound, this intense price volatility will negatively affect prices paid to almond growers in 2016 and 2017.

Figure 10: U.S. Almond Inventories

U.S. Almond Inventory Trends



Livestock (*Resource 13, 14, 15*)

Key Highlights

Beef market conditions signal herd expansion and lower cow/calf prices in the near future.

Pork production is up in 2016 but the higher supplies and weaker export markets have put downward pressure on hog price expectations.

Broiler sales continue to struggle overseas and prices are down as a result of large inventories.

Beef



Beef production in the U.S. is set to rebound in 2016 after a 5 year slide (*Figure 11*). Cattle inventories are on the rise and the good pasture conditions and cheaper feed prices during 2015 have spurred cow/calf operators and feedlots to increase animal weights prior to slaughter. Cattle producers are retaining more heifers in 2016, and the higher retention signals further expansion into 2017. Demand for beef buckled somewhat during 2015 as consumers faced record-high retail prices and exporters dealt with a stronger dollar. Since March of 2015, retail beef prices have fallen between three and seven percent depending on cut and quality. Changes in market prices take time to work backward through the supply chain, but fed and feeder cattle prices have fallen by almost 20 percent since early 2015.

The outlook for cattle and beef prices is muddled by competing effects of supply and demand. Supplies are certainly headed higher thereby signaling lower prices, but demand is also likely to head higher in the face of lower retail prices and a stable-to-weaker U.S. dollar. Feedlots face mounting losses in early 2016: the implied net loss per head peaked in December 2015 at $560 due to the high feeder cattle prices (see *Figure 12*). Feedlots will need to lower placement costs in order to swing back to profitability, and that fact may be the final straw to push prices down further throughout the year.

Figure 11: Meat Production Trends and Expectations

U.S. Meat Production Trends

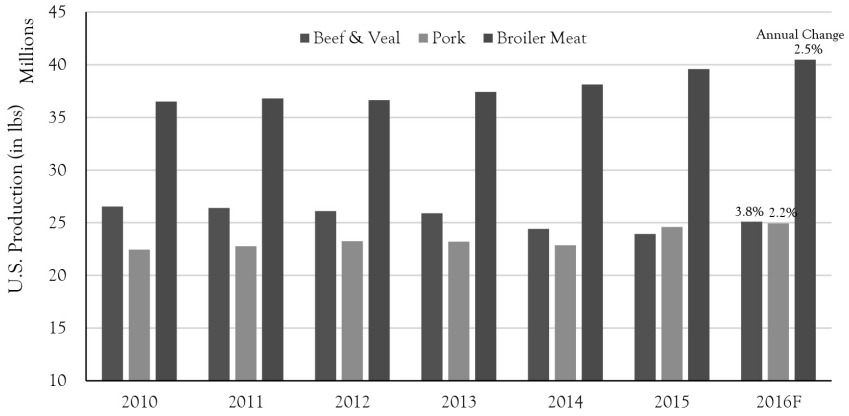
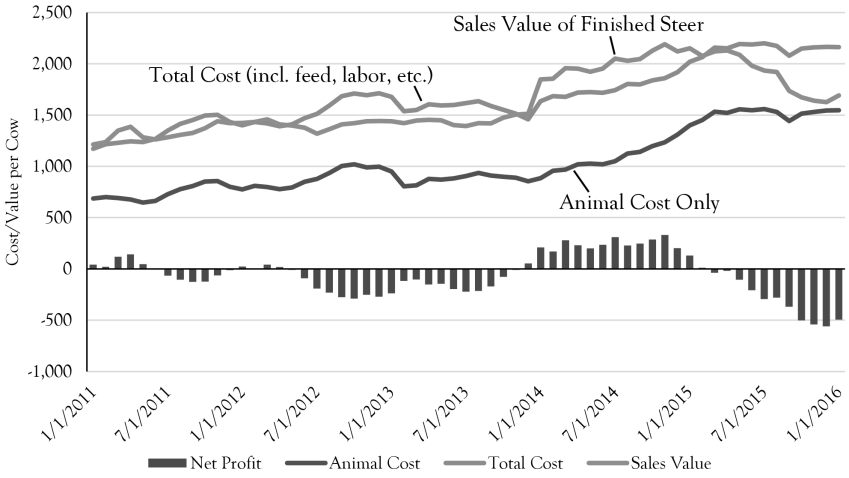


Figure 12: Historical Feedlot Operation Profitability

Iowa Feedlot Returns by Month



Source: Iowa State University Extension and Outreach, *Estimated Livestock Returns.*

Hogs



Pork producers are also ramping up production in 2016 but demand has been increasing. The USDA estimates U.S. pork production will be up 2.2 percent this year as a function of both larger litters and higher slaughter rates. The hog industry has largely recovered from the Porcine Epidemic Diarrhea Virus (PEDv) outbreak of 2014, and that recovery has brought about higher hog supplies. China, the world's largest producer and consumer of pork, has tightened environmental restrictions on hog producers in the last 2 years, and the tighter regulation is just beginning to be reflected in the country's annual production numbers. Pork production in China fell just under one percent in 2015, and output looks to be steady or lower in 2016. Demand for pork looks good in early 2016 with the USDA projecting record high domestic consumption during the year. The retail price differential between pork and beef fell precipitously during 2015, and the relative value of pork likely spurred additional demand for swine. Export markets look attractive despite the strong U.S. dollar on a shortfall of production in China and better-than-expected sales in Japan.

The factors of supply and demand have had mixed effects on hog prices. The rebound of the U.S. hog inventories put clear and immediate downward pressure on live hog prices. Prices soared to $85 per hundredweight in early 2014 as the PEDv outbreak leveled pig litters, but by the end of 2015, prices fell back below historical averages to nearly $45 per hundredweight. The increase in pork demand will keep prices from falling too much further, and will likely provide support throughout 2016. Hog prices could see another dip if slaughter capacity gets constrained again in 2016, as most facilities are running at or near capacity. Barring a major supply-side disruption, the USDA puts the live equivalent price for hogs between $50 and $55 per hundredweight throughout the calendar year.

Broilers



Last, broiler meat production and demand are both up in early 2016. More weight per bird and birds per flock are expected, which would drive up already high levels of frozen meat stocks. The Highly Pathogenic Avian Influenza (HPAI) outbreak of 2015 devastated many egg and turkey operations, but broiler production went largely unaffected. When many foreign markets, including large importers like China and South Korea, banned the importation of U.S. poultry, production soon outpaced consumption and stocks built up. The large stocks in cold storage pushed broiler meat prices down with wholesale prices falling 27 percent from January to December. Prices stabilized at the end of 2015 and into early 2016, but the stocks will take time to draw down. Weekly prices have fluctuated a great deal since January 2016 due to the oversupply. Domestic demand has been excellent in early 2016 as consumers have enjoyed lower relative prices for chicken compared to pork or beef for

the last 18 months. Exports are down but should pick up later in 2016 as the resurgence of HPAI was limited to one case in Indiana this January.

The mixture of supply and demand factors in the broiler industry indicate a flat-to-increasing price trend in 2016. The supplies of broiler meat continue to build, and production is not slowing down. However, U.S. per capita consumption should support the market prices that currently range from 80¢ to 90¢ per pound. Export markets could provide a boost later in the year depending on the international response to HPAI. Feed costs are likely to abate in 2016, so profitability in the poultry sector should be better in 2016 than in 2015.

Wine and Beer (*Resource 16, 17, 18, 19*)

Key Highlights

California grape crush in 2015 shows good yields but lower prices for most non-premium growing regions.

Hop growers expanded production in 2015 in response to higher prices and growing demand from the craft beer industry.

Demand for both wine and beer looks strong in 2016.

Since the 1970s, the U.S. has continually expanded as a producer and consumer of wine. Acres planted to wine grapes in California increased four-fold between 1970 and 2014, and in 2014, the U.S. ranked fourth in total world wine production behind France, Italy, and Spain. California viticulturists generated 3.8 million tons of grapes following the 2015 harvest, roughly equaling output from the record 2014 crush. As a result of the surprisingly good crush in 2015 and changes in consumer demographics, average California wine grape prices came under pressure last year. According to the Silicon Valley Bank (SVB) 2016 Wine Report, sales of low-cost, bulk wine were down 4.5 percent from 2014 while sales for wines more than $9 per bottle increased an average of approximately ten percent. The "premiumization" of wine consumption is causing a divergence of grape prices; premium growing regions such as Napa and Sonoma counties experienced increases in average prices paid to growers while bulk growing regions in the San Joaquin Valley saw decreases in average prices paid to growers.

Consumers are changing agricultural-based adult beverage preferences in other ways that threaten the U.S. wine industry: the craft and specialty beer industry has been on a major run in the last 10 years. Between 2006 and 2015, the number of craft beer establishments doubled, and the estimated revenues attributable to those institutions more than doubled. Hops, a distinguishing ingredient for many craft beers, has benefitted from the increase in production. Hops prices are up from $2.05 per pound in 2006 to over $4.38 per pound in 2015. Market prices have incented higher planted acreage in the principal growing regions of Washington, Oregon, and Idaho, and the economics have been good enough to spur hops farmers to plant in Pennsylvania, New Jersey, and Virginia among other East Coast states where craft brewers are closer to final markets. Small hopyards are becoming agritourist destinations, and millennial consumers appear to expend on craft beers and quality wines in equal amounts depending on convenience and value. The U.S. wine industry will certainly experience competition from craft brewing, but fortunately there looks to be more than enough demand to go around as the millennial generation matures into prime consuming age.

Figure 13: Wine Grape Market Trends

Californina Wine Grape Production and Price Trends

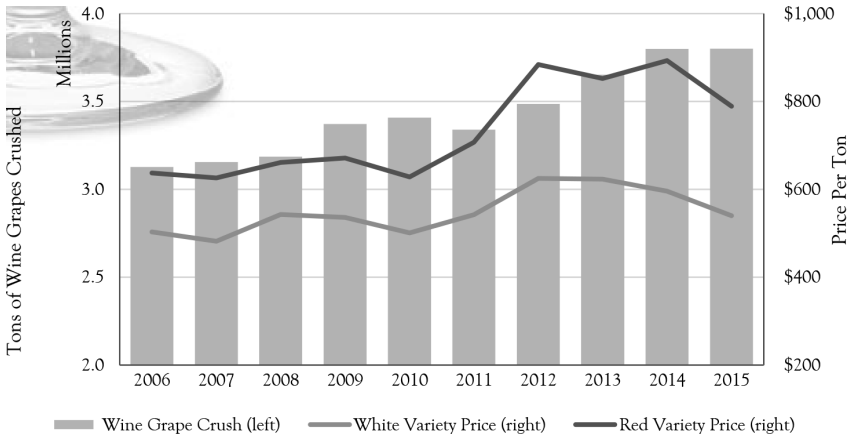
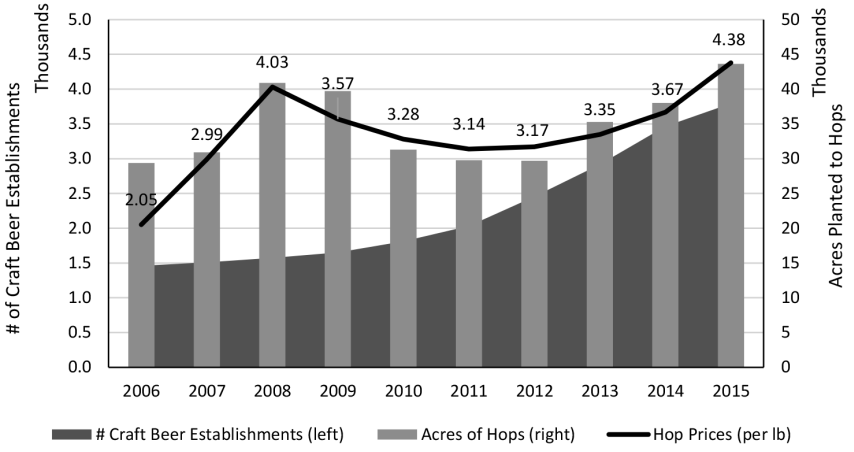


Figure 14: Craft Beer, Hop Production, and Prices

Craft Beer and Hop Production



Areas of Interest (*Resource 1, 6, 7, 20*)

California Drought

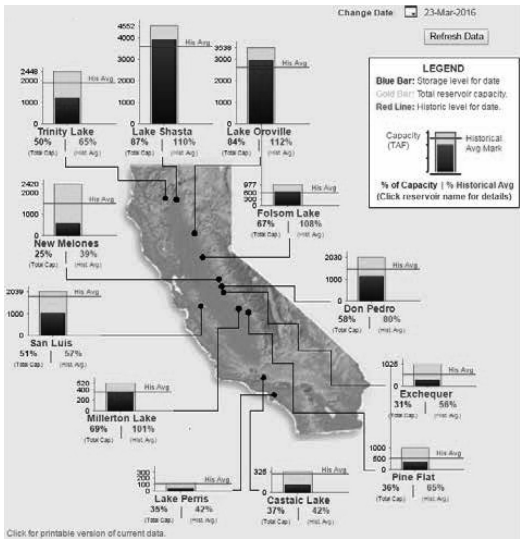
The 2016 water year unquestionably ameliorated a parched California, but the Western drought is far from over. Reservoir levels throughout the state received a much-needed recharge in March. Lake Shasta began 2016 at 31 percent of capacity, and Lake Oroville began the year at 29 percent of capacity. The reservoirs approached the end of March at 87 and 84 percent of capacity, respectively. Near the end of March, California snowpack was also much deeper than recent history standing at nearly 90 percent of average. Despite the infusion of much-needed water and snow this water year, the drought lingers throughout the fruitful San Joaquin Valley. According to USDA expense data, irrigation costs have skyrocketed during the last few years climbing from $400 million per year in 2009 to over $1.1 billion in 2014. Drought Monitor reports show significant reductions in Northern California during the month of March, but the bulk of Central and Southern California remain in the most severe category of drought intensity. State Water Project officials announced in March agricultural water allocations at 45 percent of contracted amounts, a big improvement from the 20 percent allocations in 2015 and the zero

percent in 2014. These increases should be met with cautious optimism in 2016, and conditions must continue to be monitored closely.

Figure 15: California Department of Water Resources Reservoir Level Map (March 23)

Conditions for Major Reservoirs: 23 MAR 2016

Data as of Midnight 23 MAR 2016



Report Generated: 24–MAR–2016 7:40 a.m.

GMO Labeling Laws

There is no more divisive topic in food and agribusiness today than the use of genetically modified organisms (GMOs) in the food system. GMOs can be a principal or secondary ingredient in many finished consumer food products, and GMO versions of corn and soybeans are a very high percentage of U.S. acres planted. Opponents of GMO crops argue that the long-term effects of human consumption of genetically engineered food products are unknown, that the genes can increase the power or potency of insects and disease, and that once in the food production system, the genes that have been modified can end up in unexpected places or mutating in unknown ways. Advocates of GMO foods argue that science has proven the resulting products are safe for human consumption, that they increase plant resistance to a number of stresses like drought or disease, and that genes can be modified to improve the nutritional content of foods. The debate took a new turn in 2014 when the State of Vermont enacted a law requiring labels to disclose the use of GMO ingredients in consumables that goes into effect in July 2016. Many food manufacturers and grocers have attempted to fight the legislation citing the burden it creates to have independent labeling of goods across state borders. In July 2015, the U.S. House of Representatives passed the Safe and Accurate Food Labeling Act of 2015 which disallowed states from enacting individual food labeling laws and instead created a Federal standard for voluntary labeling of foods with GMO ingredients. The bill was referred to the U.S. Senate last July, and while it cleared the Senate Agriculture Committee early this March, it has failed to gain enough support in the wider Senate body, thus ending debate on the bill. July is rapidly approaching, and food companies are now starting to prepare for the possibility that state-based labeling laws are here to stay. These labeling requirements will increase the costs for food manufacturers, and those costs may be passed along to producers, consumers, or some combination of the two.

Resources

The information and opinions or conclusions contained herein have been compiled or arrived at from the following sources:

1. USDA Farm Sector Finances (*http://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances.aspx*).
2. USDA Farm Sector Financial Ratios (*http://www.ers.usda.gov/data-products/farm-income-and-wealth-statistics/farm-sector-financial-ratios.aspx*).
3. USDA Foreign Agricultural Service Global Agricultural Trade System Data (*http://apps.fas.usda.gov/GATS/Default.aspx*).
4. USDA Foreign Agricultural Service Production, Supply, and Distribution Data (*https://apps.fas.usda.gov/psdonline/psdhome.aspx*).
5. United Nations Department of Economic and Social Affairs, Population Division (2015). *World Population Prospects: The 2015 Revision.* New York, United Nations.
6. National Drought Mitigation Center's Drought Monitor (*UNL/NOAA; http://droughtmonitor.unl.edu/*).
7. NOAA Weather Prediction Center (*http://www.wpc.ncep.noaa.gov/*).
8. USDA Office of the Chief Economist—*2016 Commodity Outlooks* (*http://www.usda.gov/oce/forum/commodity.html#commodity*).
9. University of Wisconsin—*Understanding Dairy Markets* (*http://future.aae.wisc.edu/*).
10. U.S. Dairy Export Council (*http://www.usdec.org/*).
11. Almond Board of California Position Reports (*http://www.almonds.com/newsletters/position-reports*).
12. Derco Foods Almond Price Reports (*http://www.dercofoods.com/en/english-reports/english-almond-reports*).
13. USDA Economic Research Service *Livestock, Dairy, and Poultry Outlook* (*http://www.ers.usda.gov/publications/ldpm-livestock,-dairy,-and-poultry-outlook/.aspx*).
14. Iowa State University Extension (*http://www2.econ.iastate.edu/estimated-returns/*).
15. USDA Meat Price Spreads (*http://www.ers.usda.gov/data-products/meat-price-spreads.aspx*).
16. Wine Institute Statistics (*http://www.wineinstitute.org/resources/statistics*).
17. 2016 Silicon Valley Bank Wine Report (*http://www.svb.com/wine-report/*).
18. 2015 California Grape Crush Report (*http://www.nass.usda.gov/Statistics_by_State/California/Publications/Grape_Crush/*).
19. IBISWorld U.S. Craft Beer Production Report (August 2015).
20. California Department of Water Resources (*http://cdec.water.ca.gov/index.html*).

About *The Feed*

The Feed is a quarterly agricultural economic outlook for current events and market conditions within agriculture. The report is broad-based, covers multiple regions and commodities and incorporates data and analysis from numerous sources to present a mosaic of the leading industry information, with a focus on the latest information from the United States Department of Agriculture and their Economic Research Service. There are several regularly included sections like weather and major industry segments, but the author rotates through other industries and topics as they become relevant in the seasonal agricultural cycle. Where the report adds value to readers is through its unique synthesis of these multiple sources into a single succinct report. Please enjoy.

About the Authors

Author—Jackson Takach, Farmer Mac's resident economist, is a Kentucky native whose strong ties to agriculture began while growing up in the small farming town of Scottsville. He has since dedicated a career to agricultural finance where he can combine his passion for rural America with his natural curiosity of the world and his strong (and perhaps unrealistic) desire to explain how we interact within it. He joined the Farmer Mac team in 2005, and has worked in the research, credit, and underwriting departments. Today, his focus includes quantitative analysis of credit, interest rate, and other market-based risks, as well as monitoring conditions of the agricultural economy, operational information systems analysis, and statistical programming. He holds a Bachelor's degree in economics from Centre College, a Master's degree in agricultural economics from Purdue University, and a Master's of Business Administration from Indiana University's Kelley School of Business. He has also been a Chartered Financial Analyst (CFA) charterholder since 2012.

Contributing Author—Curt Covington, Farmer Mac's Senior Vice President, Agricultural Finance, leads the company's business development efforts, as well as the company's credit administration and underwriting functions. Curt's passion for rural America developed at a young age on his family's grape and tree nut farm in Selma, California. He has since leveraged his passion into a long career in ag lending, which spans almost 4 decades. In addition to his role at Farmer Mac, Curt is a respected leader in the agricultural mortgage industry and is actively involved in leadership roles within industry trade groups, including the RMA Agricultural Lending Committee, the Agricultural Lending Institute, The Agricultural Banking Institute of the Americas, and Federal Financial Institutions Examination Council (FFIEC).

Contributing Author—Brian Brinch, Farmer Mac's Vice President Financial Planning and Analysis manages the development of Farmer Mac's financial projections and plans, stress testing, and data analytics. Brian's interest in Farmer Mac began while attending Pennsylvania State University for his Masters in Agricultural and Applied Economics where he won the Outstanding Master's Thesis Award for his thesis titled "An Analysis of Farmer Mac Prepayment Penalty Designs". Prior to his study of agricultural economics, Brian received his Bachelor's degree in meteorology at Penn State. Today, he is the company's unofficial weatherman with an uncanny ability to predict the weather more accurately than any news station in the country. Brian is also a CFA charterholder and FRM Certified.

About Farmer Mac

Farmer Mac is the stockholder-owned company created to deliver capital and increase lender competition for the benefit of American agriculture and rural communities. For more than a quarter-century, Farmer Mac has been a vital partner in helping American's rural lenders meet the evolving needs of their customers, bringing the financial strength of the nation's premier secondary market for agriculture right to their customers' farms and ranches. Lenders of all sizes use Farmer Mac's broad portfolio of loan products to offer more financial choices to their rural customers, helping them keep pace with today's capital-intensive agricultural industry.

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The CHAIRMAN. Dr. Featherstone.

STATEMENT OF ALLEN M. FEATHERSTONE, PH.D., PROFESSOR AND HEAD, DIRECTOR OF MASTER IN AGRIBUSINESS PROGRAM, DEPARTMENT OF AGRICULTURAL ECONOMICS, KANSAS STATE UNIVERSITY, MANHATTAN, KS

Dr. FEATHERSTONE. Chairman Scott, Ranking Member Scott, and Members of the Commodity Exchanges, Energy, and Credit Subcommittee of the House Committee on Agriculture, I want to thank you for inviting me to testify. My name is Allen Featherstone, Professor and Head of the Department of Agricultural Economics, Kansas State University.

With a 56 percent decrease in U.S. net farm income reported by USDA occurring over a 3 year period, concern has begun to arise regarding the future direction of cash rents and land values, along with the overall credit situation. With a decline of 56 percent, some regions of the U.S. have experienced smaller declines, some larger declines.

Kansas State University works with roughly 2,000 farmers statewide through the Kansas farm management associations. These producers provide balance sheet and income statement information that allows the understanding of the distribution of financial performance, and provides an overall financial picture of Kansas farms. The north central region in Kansas is the first association where we have completed information for 2015. They experienced a dramatic change in the profitability of production agriculture. Beginning in 2007, net farm income in north central Kansas increased from between $85,000 to $150,000 per farm per year, 8 years of excellent profitability. In 2015, average net farm income in this region dropped precipitously from an average per farm of $102,500 in 2014 to an average of $11,500, an 89 percent reduction. This was the lowest level of net farm income for that region since 1985. Based on preliminary analysis with the other five Kansas farm management associations within the state, declines in incomes of this magnitude will be common across all of Kansas.

Kansas State University, in conjunction with the University of Georgia, conducts a semiannual nationwide survey of lenders to understand agricultural credit conditions. The most recent survey was conducted in March 2016, and uses similar methodology to the University of Michigan Consumer Sentiment Survey. The survey obtains agricultural lender sentiment on a number of factors for the last 3 months, the next year, and the longer-term. Several important changes have occurred in the agricultural economy since the fall of 2015 survey. Non-performing loans have increased during the past 3 months. Agricultural lenders expect that non-performing loans will increase during the next year. According to the survey, non-performing loans are expected to increase for corn and soybean farms and wheat farms. For the livestock sector, agricultural lenders expect more non-performing loans for beef farms and dairy farms.

During the spring 2016 survey, that same survey, 48 percent of agricultural lenders indicated that land values decreased, 45 percent indicated they remained the same, and six indicated they increased during the previous 3 months. The expectation of land value changes in the next year became markedly more negative in the fall of 2015 to the spring of 2016.

In conclusion, the declining net farm income in 2015 has made for an uncertain agricultural lending environment. The agricultural production sector and lending sectors are intertwined, causing many lenders to be asking the same questions as agricultural producers regarding the future, as they make decisions regarding loan restructuring and other lending decisions.

If the sector is entering a major readjustment phase, several factors should be considered. The averages will not drive a bust, but the lower tail of the distribution can; therefore, more attention needs to be paid to the distribution of financial performance indicators, and less on the averages. Given the thinness of agricultural land markets, small increases in land parcels on the market can have major effects on the price of land. The debt-to-asset ratio was more of a lagging indicator of financial stress during the 1980 boom to bust cycle where the debt-to-EBITDA (earnings before interest,

taxes, depreciation, and amortization) ratio was more of a leading indicator.

Farmers and agricultural lenders are entering a current downturn in a strong financial position because of several years of excellent profitability. Crop year 2016 will be a pivotal year in production agriculture. Given that average net farm income in some regions were the lowest they have been since 1985, a repeat of that in 2016 will cause some agricultural producers and lenders to make difficult decisions before entering the spring of 2017.

Thank you.

[The prepared statement of Dr. Featherstone follows:]

PREPARED STATEMENT OF ALLEN M. FEATHERSTONE, PH.D., PROFESSOR AND HEAD, DIRECTOR OF MASTER IN AGRIBUSINESS PROGRAM, DEPARTMENT OF AGRICULTURAL ECONOMICS, KANSAS STATE UNIVERSITY, MANHATTAN, KS

Chairman Scott, Ranking Member Scott, and Members of the Commodity Exchanges, Energy, and Credit Subcommittee of the House Committee on Agriculture; I want to thank you for inviting me to testify. My name is Allen Featherstone, Professor and Head of the Department of Agricultural Economics, Kansas State University.

The agricultural economy suffered from two major boom-bust cycles in the 20th century. The first occurred in the 1920s through the mid-1930s and the second from 1973 to 1986. With the recent decline in net farm income, lenders, farmers, and policymakers are beginning to question whether 2007 was the start of another major boom-bust cycle with 2015 being the beginning of a bust period. There are similarities with the 1973 to 1986 cycle, but there are also differences. The last two cycles developed differently, and when the next cycle occurs, it will likely be unlike the previous cycles.

U.S. net farm income has declined from $123.3 billion in 2013 to a forecasted amount of $56.4 billion in 2015 and by another $1.6 billion forecasted for 2016 (USDA–ERS). With a 56% decrease in U.S. net farm income occurring over a 3 year period, concern has begun to arise regarding the future direction of cash rents and land values along with the overall credit situation; the bust phase of a major agricultural readjustment. While the balance sheet of the production agriculture sector was strong at the end of 2015 due to several years of sector profitability, declining net farm incomes could negatively affect land values causing the balance sheet to erode because the value of land represents in excess of 75% of the asset values on the farm balance sheet.

Kansas State University works with roughly 2,000 farmers statewide through the Kansas farm management associations. These commercial producers provide balance sheet and income statement information to the Department of Agricultural Economics that allows the understanding of the distribution in financial performance and provides an overall financial picture of Kansas farms.

The Current Situation

An understanding of the current situation begins by examining the net farm income from the U.S., Kansas, and north central Kansas (*Figure 1*). The Kansas and north central Kansas numbers are dollars per farm and are measured on the left-side of the axis. The aggregate U.S. net farm income are measured in billions of dollars and are on the right axis. Before 2007, average net farm income per farm in north central Kansas ranged in the $43,000 to $53,000 per year. Beginning in 2007, net farm income increased to between $85,000 and $150,000 per farm through 2014, 8 years of excellent profitability. In 2015, average net farm income in this region dropped precipitously from an average of $102,508 in 2014 to a 2015 average of $11,452, an 89% reduction. This was the lowest average level of nominal net farm income for that region since 1985.

The north central region in Kansas (*Figure 1*) is the first association in the state of Kansas with completed information for 2015, and indicates a dramatic change in the profitability of production agriculture. Based on preliminary analysis of the other five Kansas farm management associations (KFMA) within the state for 2015, declines in incomes of this magnitude will be common across all of Kansas and likely for similar agricultural production regions in the Midwest and Great Plains. In addition, it is important to observe the similarity in U.S. and Kansas trends in *Figure 1.*

Agricultural land values are an important factor in the overall well-being of the production agriculture sector given that they represent roughly 80% of the assets on a farmer's balance sheet. Land serves as collateral and enhances a farmer's ability to obtain credit. Thus, decreases in land values affect the ability to obtain credit. According to USDA, from 2006 through 2015, U.S. average cropland value increased from $2,300 to $4,130 per acre, an increase of roughly 80%. Taking into account inflation, agricultural land values increased by roughly 55% in real terms. *Figure 2* provides a view of Kansas agricultural land values since 1950 adjusted for inflation. Using 2015 as a base, inflation adjusted land values in 1973, the beginning of the last boom-bust period, were about $800 per acre in Kansas. Inflation-adjusted land values peaked in 1980 at roughly $1,470, an increase of 85%. Inflation-adjusted land values subsequently fell to $690 in 1987, a decline of 53% from the peak. Agricultural land values in Kansas in 2015 are 101% higher than they were in 2006 in inflation-adjusted terms. They are also 38% higher than the peak of the last boom-bust cycle in real terms in Kansas.

Agricultural land markets are driven by the returns to land, farm returns and non-agricultural factors such as development potential and recreational returns. Therefore, not all states or regions of the United States are experiencing the situation that the Corn Belt, Great Plains, and South are currently experiencing. The inflation-adjusted increase in agricultural land values since 2006 (blue) and the 2015 land value percentage increase from the 1978 to 1983 high for various states (orange) are in *Figure 3.* Since 2006, Illinois, Oklahoma, and Texas (Corn Belt and Great Plains states) have experienced greater than a 30% increase in agricultural land values. For these three states, current land values are 46% (Illinois), 10% (Oklahoma), and 65% (Texas) higher than the inflation-adjusted peak in the last boom-bust cycle. Thus, the land value experience is not homogeneous among states and regions of the U.S. The Corn Belt and the Great Plains experience is different than much of the rest of the U.S.

Credit Conditions

The Department of Agricultural Economics at Kansas State University, in conjunction with Brady Brewer at the University of Georgia, conducts a semi-annual nationwide survey of lenders to understand agricultural credit conditions. The most recent survey was conducted the second half of March 2016 and uses a similar methodology to the University of Michigan consumer sentiment survey. The survey obtains agricultural lender sentiment on interest rates, spread over the cost of funds, farm loan volume, non-performing loans, and land values for the last 3 months, the next year, and the longer-term (2 to 5 years). As an example, participants are asked whether they expect interest rates will increase, decrease, or remain the same. If all survey participants indicate that an item is expected to increase, the index is 200. If all indicate an item is expected to decrease, the index is zero. If an equal amount of lenders expects an item to increase as expect an item to decrease, the value is 100.

While this survey is nationwide, responses are concentrated in the Midwest and the Great Plains, and to a lesser extent in the South and the Atlantic region. The survey respondents are mainly employed by commercial banks or the Farm Credit System. The complete report can be found at *http://www.ageconomics.k-state.edu/research/ag-lender-survey/index.html* (Attachment). Several important changes have occurred in the agricultural economy since the fall 2015 survey (*Figure 4*). Non-performing loans have increased during the past 3 months as during the spring 2016 survey window, 43% of participants indicate that non-performing loans have increased compared to 12% during the Fall 2015 survey window. Agricultural lenders expect that non-performing loans will increase during the next year, 77% in the spring of 2016 compared to 53% in the fall of 2015. Over the next 2 to 5 years, the sentiment is that non-performing loans will increase, but that sentiment has lessened slightly over the last two surveys. Looking at non-performing loans by crop industry sector, non-performing loans are expected to increase for corn and soybean farms and wheat farms. For the livestock sector, agricultural lenders expect more non-performing loans for beef farms and dairy farms.

The survey also measures lender expectations on agricultural land values (*Figure 5*). During the spring 2016 survey window, 48% of agricultural lenders indicate that land values decreased and 45% indicate that they remained the same, and 6% indicate they increased during the previous 3 months. The spring 2015 results indicated that 35% indicated decreases, 57% indicated no change, and 8% indicated increasing land values for the previous 3 months. The expectation of land value changes in the next year became markedly more negative from the fall of 2015 to the spring of 2016 with the index falling from 32 to 16. Currently 84% of lenders expect land values to fall over the next year and 16% expect they will remain the same. For the

longer-term, the sentiment has not changed much over the last four surveys; roughly 65% expect decreases, 25% expect no change, and the remainder expect land price increases. The overall sentiment by agricultural lenders turned more pessimistic from the fall of 2015 to the spring of 2016.

The survey provides lenders the opportunity to add any other open-ended comments they would like to make. *Table 1* reports the comments from those lenders that chose to provide them. Certainly some lenders are experiencing difficult agricultural lending conditions.

Measuring Financial Stress

The concern expressed by agricultural lenders indicate the importance of measuring financial stress. One measure that is commonly used is the debt-to-asset ratio. *Figure 6* from a forthcoming Choices article by Paul Ellinger (University of Illinois), Allen Featherstone, and Michael Boehlje (Purdue University) takes a look at alternative measures of financial stress. The average debt-to-asset ratio in Kansas and Illinois was greater than 30% in 2001 and 2002 and it has generally declined to 19% for both states by the end of 2014, the most recent data available. The average debt-to-asset ratios did not peak until 1985 and 1986 the United States and Kansas, the end of the last boom-bust cycle.

The use of an average debt-to-asset ratio as a measure of financial stress without examining the distributional characteristics across agricultural producers may be incomplete. A study by Featherstone and Chris Boessen (University of Missouri) published in the *North Central Journal of Agricultural Economics* (*http://aepp.oxfordjournals.org/content/16/2/249.abstract*) in 1994 examined the loan loss experience of a nationwide lender, Equitable Agribusiness during the 1980s farm crisis. They found that 75% of the loans that defaulted were originated from 1977 to 1980. They also found that 80% of loans defaulted from 1983 to 1986. The loans that defaulted were made during the time just before the land values peaked and most performed for 5 to 6 years before they defaulted. They further report that only 10.9% of loans made from 1977 to 1980 defaulted, the worst time to be lending to agriculture, *ex-post.* Thus, it is important to examine the margin and not the average. During the last financial crisis, many farmers experienced financial stress; however, it was a minority of the producers moving the sector average. Because, in the Midwest where only 2% to 4% of agricultural land is sold each year, small increases in the land on the market can cause significant land price changes.

Figure 7 measures the distribution of debt-to-asset ratios for Illinois Farm Business Farm Management (FBFM) farms. A common underwriting standard in agricultural lending is that the borrower should have at least as much at risk as the lender—that is, at least 50% equity in the business. *Figure 7* indicates that 8.7% of Illinois farmers did not meet this underwriting standard at the end of 2014.

An alternative measure that Ellinger, Featherstone and Boehlje propose is the Debt-to-EBITDA ratio. In many respects, the use of a debt-to-asset ratio is indicative of a lending era that has passed as the agricultural lending sector has moved from a collateral based lending system (debt-to-assets) to a cash flow based lending system (Debt-to-EBITDA). This measure is used in corporate lending and can be compared to a Moody's ratings system. In general, a rating of B or below is typically believed to be a speculative investment with significant or high credit risk, and Ca ratings are highly speculative and near or in default. The Debt-to-EBITDA ratios exhibit higher variability over time than the debt-to-asset ratios (*Figure 8*). Ellinger, Featherstone, and Boehlje found that the aggregate debt-to-asset ratios did not peak until 1985 and 1986 for farms in the United States and Kansas, whereas the Debt-to-EBITDA ratios were highest in 1981 and 1982 at the beginning of the farm financial crisis. Thus, the debt-to-asset ratio may be more of a lagging indicator. Moreover, the financial stress in agriculture in the early 2000s is also more evident with the Debt-to-EBITDA measure.

While the averages, are useful, the distribution of farms are important. Ellinger, Featherstone and Boehlje report that the proportion of farms with Caa and Ca ratings at the end of 2014 were 27.8% and 13.4% for Illinois and Kansas, respectively and had increased from the 2012 levels of 5.7% in Illinois and 10.7% in Kansas. In addition, the percentage of farms in the highest two categories (AAA and AA) fell by 14.2% in Illinois over the last 2 years and by 4.4% in Kansas over the last year.

From 2014 to 2015, the average north central Kansas Debt-to-EBITDA ratio using data from 243 farms increased from 2.45 to 4.20 or two rating classes (*Figure 9*). A similar net-farm income in 2016 for north central Kansas with no change in debt would increase the ratio to 6.54 and into the Caa category. Other notable changes that occurred on north central farms in 2015 was a reduction in average working capital from $313,131 to $230,250. This represents a reduction of $82,881 per farm

or 26.5%. The working capital to assets ratio fell from 12.9% to 9.6%. The average debt-to-asset ratio increase from 21.8% to 23.0%.

Comparisons with the 1980s

Data on individual farms are available from the KFMA since 1973. This allows a comparison of the condition at the end of 2014 with the condition of farms in 1979; 2 years before the bust began. Featherstone, Roessler, and Barry estimated a synthetic Standard & Poor's credit scoring model using Farm Credit Loans based on three origination ratios; a leverage ratio, a working capital percentage ratio, and a capital debt repayment capacity ratio. Their study is available in volume 28 issue 1 of the *Review of Agricultural Economics*. (*http://aepp.oxfordjournals.org/content/28/1/4.abstract*) This model was used to synthetically rate each farm in the KFMA data, each year assuming all the loans were new loans. The results of this analysis allows comparison of the situation at the end of 1979 with the current situation (*Figure 10*). The distribution indicates that the 2014 distribution has a slightly higher percentage of farms rated in the BB and BB+ range and a slightly fewer percentage of farms rated in the BB−, B+, and B ranges than in 1979. Thus, the financial condition of farms is slightly higher in 2014 than it was in 1979. However, the situation changed very quickly from 1979 to 1981.

Similarly, the distribution of the debt-to-asset ratios were also compared. In 1979, the average debt-to-asset ratio was 24.6%, while it was 19.0% at the of 2014. There were 19.4% of the farms with a debt-to-asset ratio greater than 40% in 1979, compared to 12.6% in 2014. Finally, there were 1.3% of the farms with a debt-to-asset ratio greater than 70% in 1979 compared with 2.3% in 2014. Thus the sector at the end of 2014 was in a moderately better leverage position compared to 1979.

The Farm Safety Net

One of the major questions agricultural producers and lenders have as we enter a low price environment is the ability of the farm safety net to alleviate significant financial hardship in the sector. The farm safety net currently consists of crop insurance and either the ARC or PLC programs. Revenue insurance products have been valuable in Kansas for farmers managing through an extended drought. *Table 2* presents an example of the minimum revenue guarantee for corn assuming a 150 bushel production history and a coverage election of 80%. The lower bound on coverage per acre for corn has declined from $678 per acre in 2013 to $463 per acre in 2016 with the declining corn price. This represents a 32% increase in the amount of risk that a farmer is bearing. Similar changes occur for soybeans (31%) and winter wheat (41%). Thus, farmers are managing a substantially higher level of risk with the 2016 crops than they were just 3 years ago.

While the levels of revenue guaranteed have been dropping, the cost of production per acre has been increasing. *Table 3* illustrates the *ex-post* variable and total cost of production for non-irrigated corn and soybean production from the KFMA gathered from actual farm records. From 2006, the variable cost per acre for corn production increased from $191 to $322 per acre, an increase of nearly 70%. The variable cost for soybean production increased from $125 to $229 per acre, an increase of nearly 83%.

Land Value Effects

With the decline in net farm incomes, concerns arise with regards to the potential land value effects. Taylor, Featherstone, and Gibson have estimated the relationship between net farm income, cash rents, and land values in Kansas. Using the net present value model, the agricultural land market in Kansas and data from 1973 to 2012, the relationship between land values and net farm income was estimated. They found that land adjusts to changes in net farm income slowly with a 1 year elasticity at the state level of 6.7%. The long-run elasticity is 96.9%, which is very close to the 100% suggested by the income capitalization model. At the state level, the long-run multiplier for income in Kansas is 21.71 which implies a capitalization rate of 4.61%.

These estimates were used to forecast changes in Kansas land values given futures prices and income expectations, *ceteris paribus*. Futures prices were collected for the harvest time contracts through 2018 for the July contract from the Kansas City Board of Trade for wheat and from the Chicago Board of Trade for the December contract for corn and the November contract for soybeans. These prices were adjusted for historical basis and used to forecast net farm income through 2018. *Figure 11* presents the historical corn and soybean price received and the expected basis-adjusted price into the future for corn and soybeans. In addition, the net farm income was calculated based using expected trend yield and the price expectations.

Corn prices received by Kansas farmers are expected to remain at around the $4.00 per bushel range through 2018, while soybean prices received are expected to

remain around the $8.50 per bushel range (*Figure 11*). Net farm income was the highest in 2012 at $81.91 per acre. That amount is expected to decline to $49.01 for 2016. After 2016, net farm incomes are expected to increase to $53.04 per acre in 2018.

The estimated results suggest that Kansas land values would peak in 2016 and begin to slowly decline. If market conditions were to remain the same, land values could ultimately decrease to $1,171 per acre, a 28% decline from current levels assuming the land price earnings multiple returns to the longer-term average of 4.61%. Declines of this magnitude could negatively affect the financial condition of the sector.

Conclusions

In conclusion, the declining net farm income in 2015, has made for an uncertain agricultural lending environment. The agricultural production sector and the agricultural lending sectors are intertwined causing many lenders to be asking the same questions as agricultural producers regarding the future of production agriculture as they make decisions regarding loan restructuring and other normal lending decisions. If the sector is entering a major readjustment phase, several important factors should be considered.

(1) The averages will not drive a bust, but the lower tail of the distribution can. Therefore, more attention needs to be paid to the distribution of financial performance and less on the averages.

(2) Given the thinness of agricultural land markets, small increases in land parcels being liquidated can have major effects of the price of land.

(3) The debt-to-asset ratio was more of a lagging indicator of financial stress during the 1980s boom-bust cycle whereas the Debt-to-EBITDA ratio was more of a leading indicator.

(4) The lending industry has moved more to a cash flow based loan assessment and less of a collateral based loan assessment.

(5) Farmers and agricultural lenders are entering the current downturn in a strong financial position because of several years of excellent profitability.

(6) Relative to entering adjustment phase in the 1980s, farms are in a moderately stronger financial position.

[CY] 2016 will be a pivotal year in production agriculture. Given that average net farm income in some regions were the lowest they have been since 1985, a repeat of that in 2016 will cause some agricultural producers and lenders to make difficult decisions before entering the spring of 2017.

Thank you.

[TABLES AND FIGURES]

Table 1. Opened-Ended Comments from the Spring 2016 Kansas State Agricultural Lender Survey

"The ag finance environment is tough. 2015 was very tough. Projections for 2016 look worse."
"Cropland values have declined 15–25% depending on quality. Pasture values have stayed fairly constant, although the lack of sales might indicate that they are priced too high given the market."
"With these crop prices expect a significant gut check by the producers. I am seeing significant decrease in capital purchases and family living. I expect other operating expenses to follow."

Table 1. Opened-Ended Comments from the Spring 2016 Kansas State Agricultural Lender Survey—Continued

"We are in the early stages of a major correction in the Ag economy. Given the accumulation of corn & soybean inventories, this could be a prolonged and painful process. Eventually an equilibrium of costs and revenues will be reached and the Ag economy will stabilize. The producers that made conservative decisions will weather the storm, others will need to make major adjustments or fail. We have seen a 20% reduction in AG real estate values with more reductions to follow. We are seeing values of farm equipment fall by up to 33%. I expect further softness in Ag equipment to follow as forced liquidations place more equipment on the market and this market will need to find market clearing price levels."
"Stronger dollar is putting pressure on margins in virtually all Ag sectors. Dairy has held up surprisingly well *vs.* world market due to domestic demand for butterfat. Expecting tighter margins for cow/calf ahead as we are into herd building, expect feedyard margins to improve in last quarter of 2016. Potato and onion margins remain tight and expecting to remain tight as alternative crops which compete for acreage struggle to provide positive margins. The last 7 or so years have been very profitable for tree fruit which has spurred orchard development. With new orchard acres and more productive plantings coming on line it is expected that tree fruit will be coming under pressure for next ½ dozen years."
"We only have one farm loan that is classified. If commodity prices remain low, could be more in the future."

Table 2. Crop Revenue Coverage Minimum Revenue Guarantee Example for Corn, 2013–2016

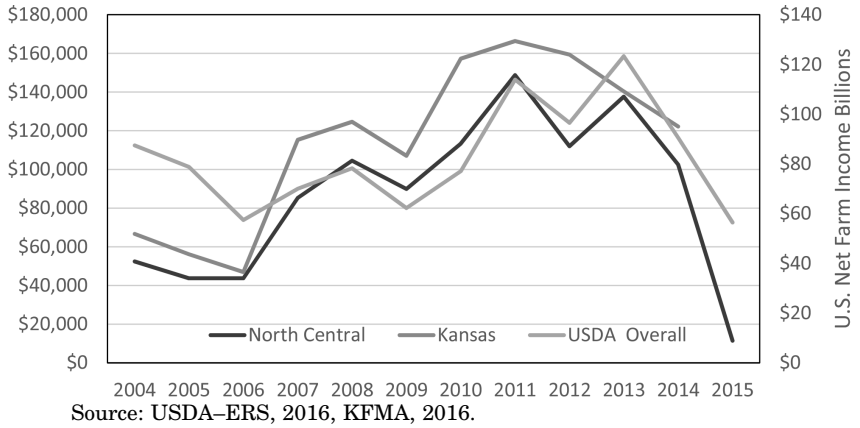
	2013	2014	2015	2016
APH (bushel)	150	150	150	150
Coverage Election	80%	80%	80%	80%
Guaranteed Bushel	120	120	120	120
Base Price (per bushel)	$5.65	$4.62	$4.15	$3.86
Coverage (per acre)	$678	$554	$498	$463

Table 3. KFMA Non-Irrigated Corn and Soybean Cost of Production per Acre

	Corn		Soybean	
	Variable Cost	Total Cost	Variable Cost	Total Cost
2005	$188	$263	$118	$177
2006	$191	$269	$125	$183
2007	$231	$331	$145	$229
2008	$265	$374	$167	$250
2009	$267	$371	$173	$261
2010	$268	$382	$176	$268
2011	$281	$391	$192	$286
2012	$325	$435	$202	$299
2013	$308	$420	$224	$342
2014	$322	$447	$229	$339

Source: KFMA, 2016.

Figure 1. U.S., North Central Kansas, and Kansas Net Farm Income



Source: USDA–ERS, 2016, KFMA, 2016.

Figure 2. Kansas Inflation-Adjusted Land Values, 1950 through 2015

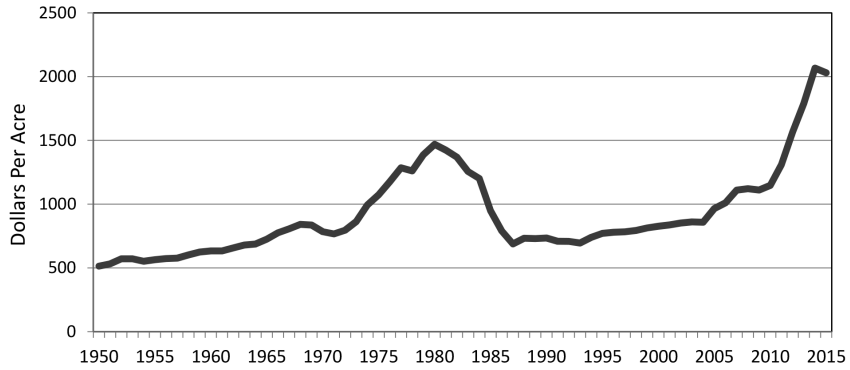


Figure 3. Inflation-Adjusted Land Value Price Changes since 2006 and the 1980s for Selected States

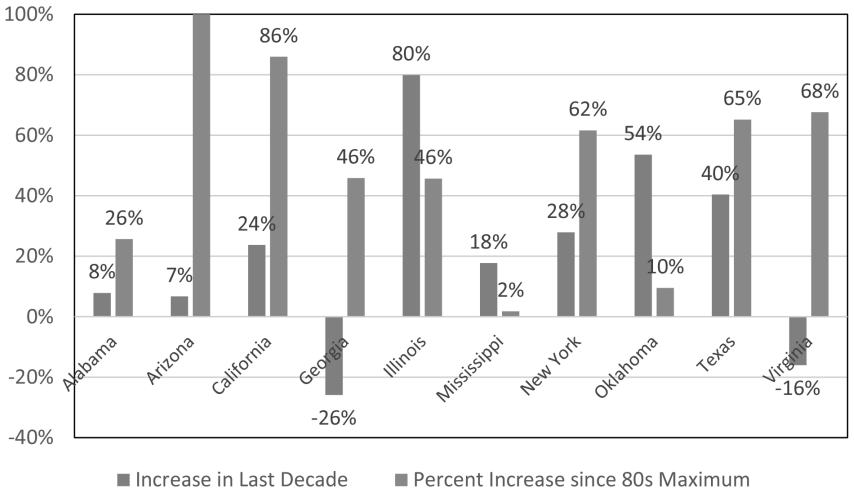
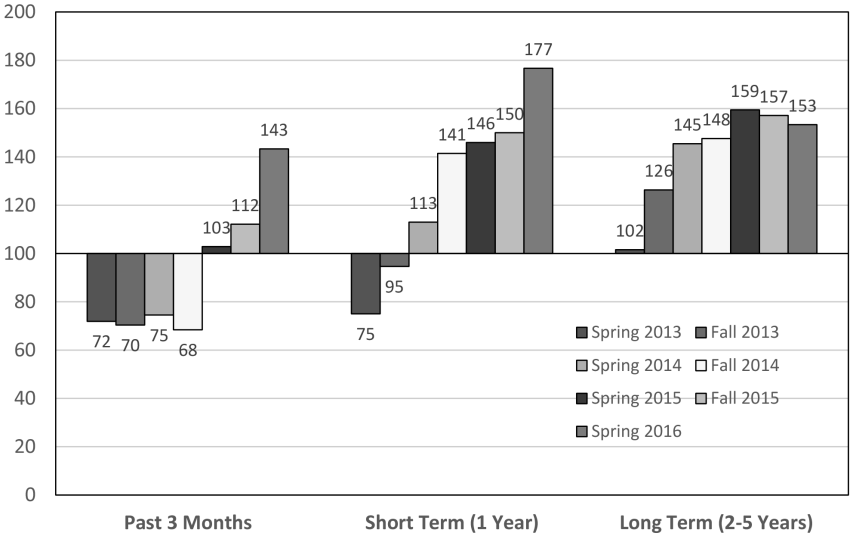
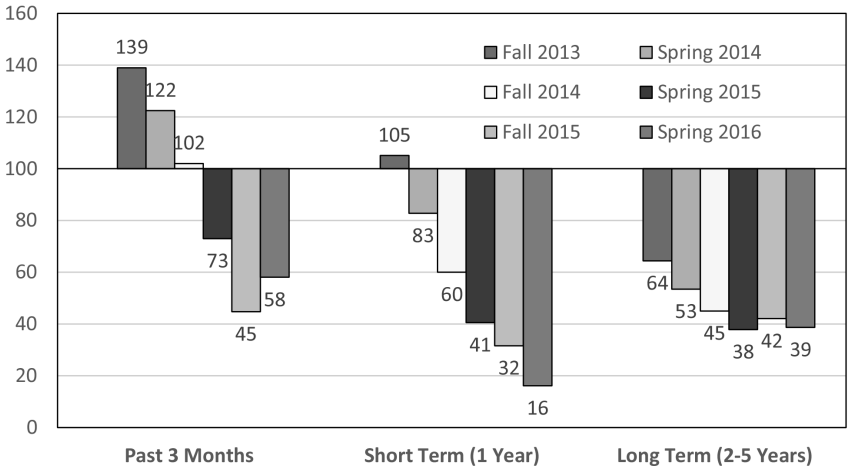


Figure 4. Non-Performing Total Farm Loans—Diffusion Index of Survey Respondents



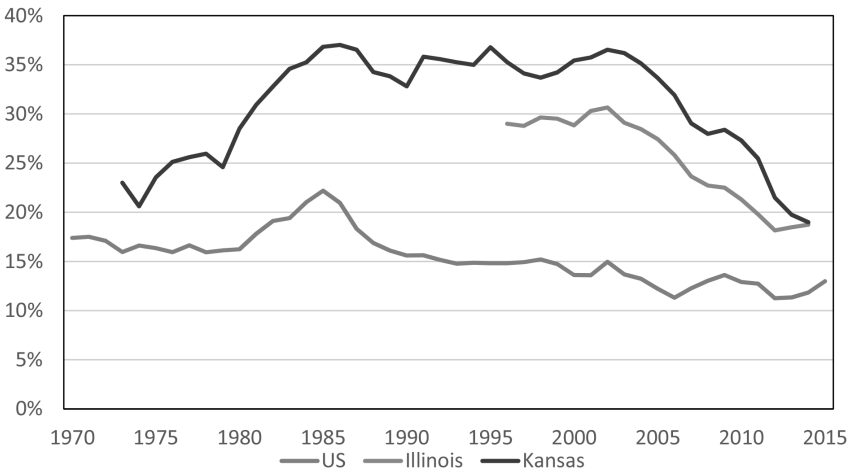
Source: Brewer, Featherstone, Wilson, and Briggeman.

Figure 5. Land Value Price Expectations



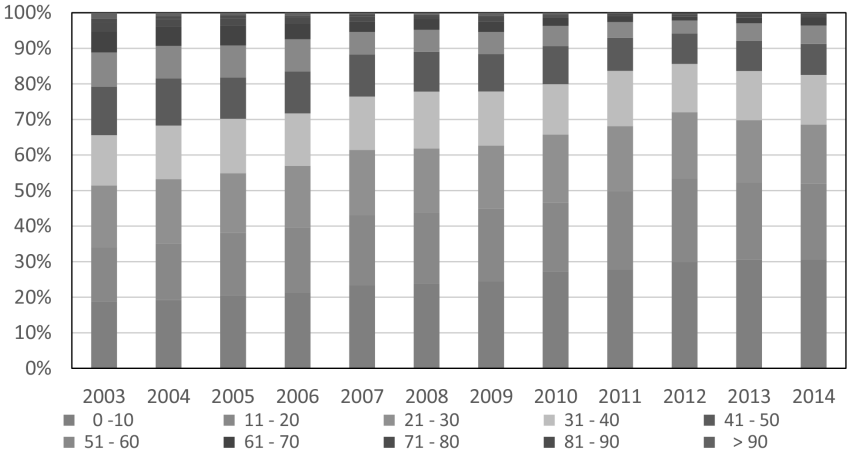
Source: Brewer, Featherstone, Wilson, and Briggeman.

Figure 6. United States, Illinois, and Kansas Debt-to-Asset Ratios



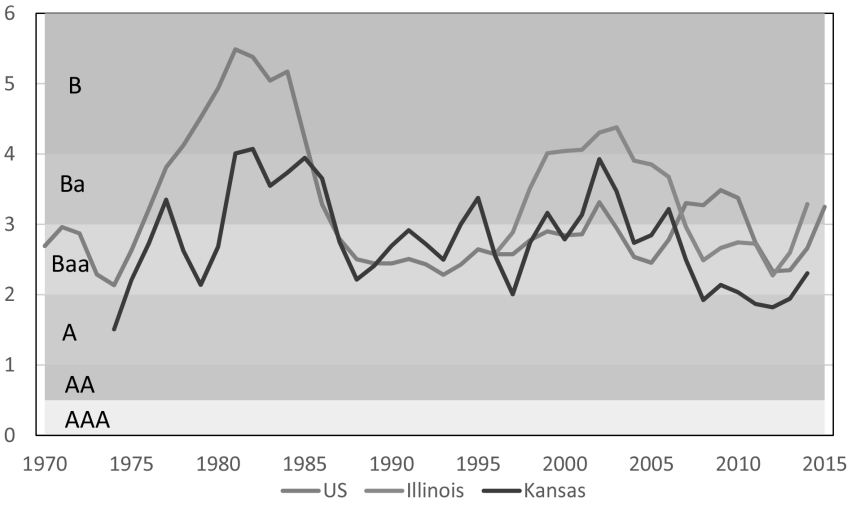
Source: Ellinger, Featherstone, and Boehlje.

Figure 7. Distribution of Debt-to-Asset Ratios for Illinois Farms, 2003–2014



Source: FBFM, 2016.

Figure 8. U.S., Illinois and Kansas Debt-to-EBITDA Ratios



Source: Ellinger, Featherstone, Boehlje.

Figure 9. U.S., Kansas, and North Central Kansas Debt-to-EBITDA Ratios

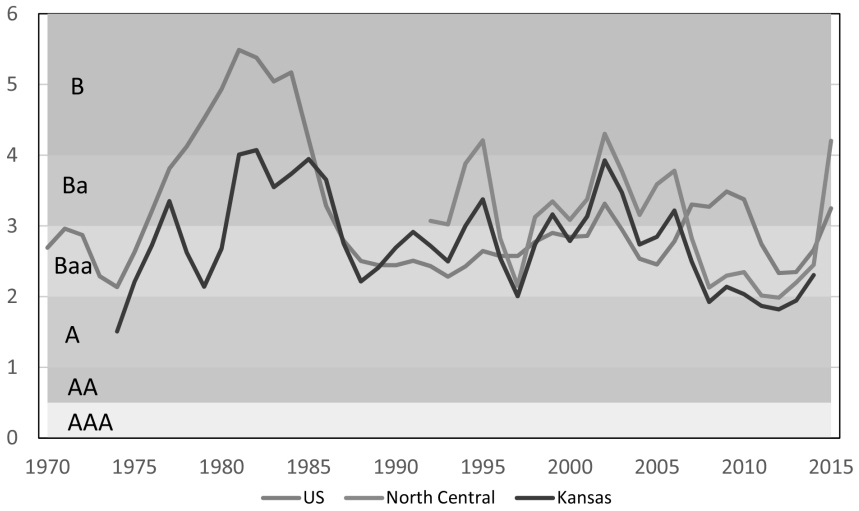


Figure 10. Synthetic Credit Ratings of Kansas Farm Management Association Farms, 1979 and 2014

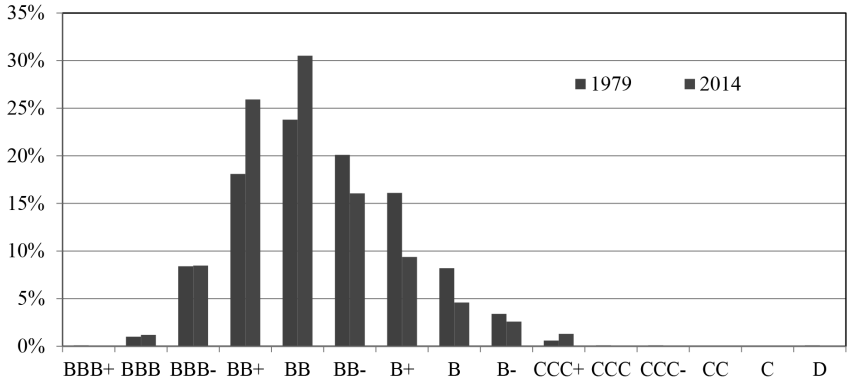
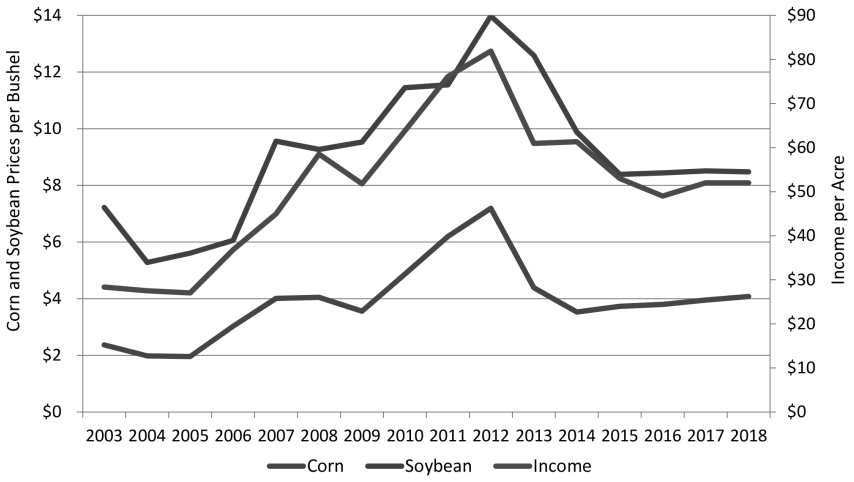


Figure 11. Expected Corn and Soybean Prices and Net Farm Income in Kansas, 2016–2018



[ATTACHMENT]

Agricultural Lender Survey

Kansas State University

Brady Brewer,[1] **Allen Featherstone,**[2] **Christine Wilson,**[3] and **Brian Briggeman.**[4]

Results: Spring Survey 2016

Survey Summary and Highlights

For the Spring 2016 edition of the agricultural lender survey, lenders from across the nation reported their expectation for interest rates, spread over cost of funds, farm dollar volume, non-performing loans, and agricultural land values. The major theme from lender responses is that the agricultural economy is slowing and that the expectations for relief to farmers is a few years away. This sentiment is summed up by the comments of one respondent:

> *"We are in the early stages of a major correction in the agricultural economy. Given the accumulation of corn & soybean inventories, this could be a prolonged and painful process. Eventually an equilibrium of costs and revenues will be reached and the agricultural economy will stabilize. The producers that made conservative decisions will weather the storm, others will need to make major adjustments or fail."*

Many lenders stated that low commodity prices and stubbornly high input prices continue to put pressure on cash flows. Below is a summary of the highlights from the Spring 2016 survey.

- Short-term expectations are for land values continues to decrease.
- Lenders indicate a reversal in the downward trend for spread over cost of funds. This is the first increase in spread over cost of funds reported since the inception of this survey in Spring 2013, and may be indications of an increased risk premium needed for agricultural lending.
- From Fall 2015 to Spring 2016, lenders noted that the number of non-performing loans rose for total farm loans.
- Lenders expect non-performing loans to continue its rise, particularly for the corn and soybeans, wheat, and beef sub-sectors.

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[1] Assistant Professor, University of Georgia.
[2] Professor, Head and Director of the Masters of Agribusiness Program, Kansas State University.
[3] Professor and Director of Undergraduate Programs, Kansas State University.
[4] Associate Professor, Director of Arthur Capper Cooperative Center, Kansas State University.

- Demand for farm operating loans remains high as liquidity and cash flow are problematic for many producers.
- Respondents reported cash rental rates remain elevated and have been slow to adjust with the decline in commodity prices.

The Department of Agricultural Economics at Kansas State University conducts a semi-annual survey of Agricultural Lenders to gage the recent, short term and long term future assessment of the credit situation for production agriculture. The results provide a measure of the health of the sector in a forward looking manner.

Each institution surveyed provided their sentiment on the current and expected state for: (1) farm loan interest rates; (2) spread over cost of funds; (3) farm loan volumes; (4) non-performing loan volumes; and (5) agricultural land values. Within each of these key areas, different loan types were assessed (farm real-estate, intermediate and operating loans) as well as the different agricultural sectors (corn and soybeans, wheat, beef, dairy, *etc.*).

The survey responses are summarized using a diffusion index. This index is calculated by taking the percentage of those indicating increase minus the percentage of those indicating decrease plus 100. Therefore, an index above (below) 100 indicates respondents expect or experienced an increase (decrease) in the measure of interest. For example, *Figure 2* illustrates that the index for the Spring 2016 expected long-term farm real estate loan interest rates equals 197. This number can be described as 97% more respondents felt farm real estate loan interest rates will go up in the long run than those who felt interest rates would go down.

Figure 1, Demographics of Survey Respondents

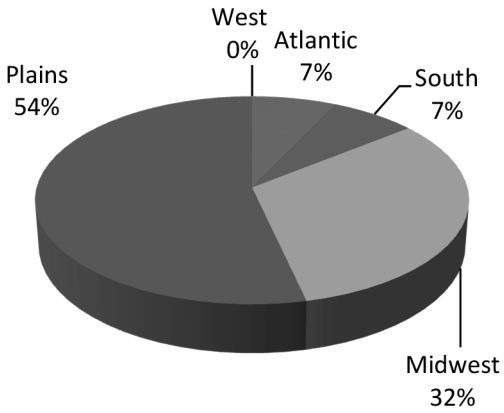
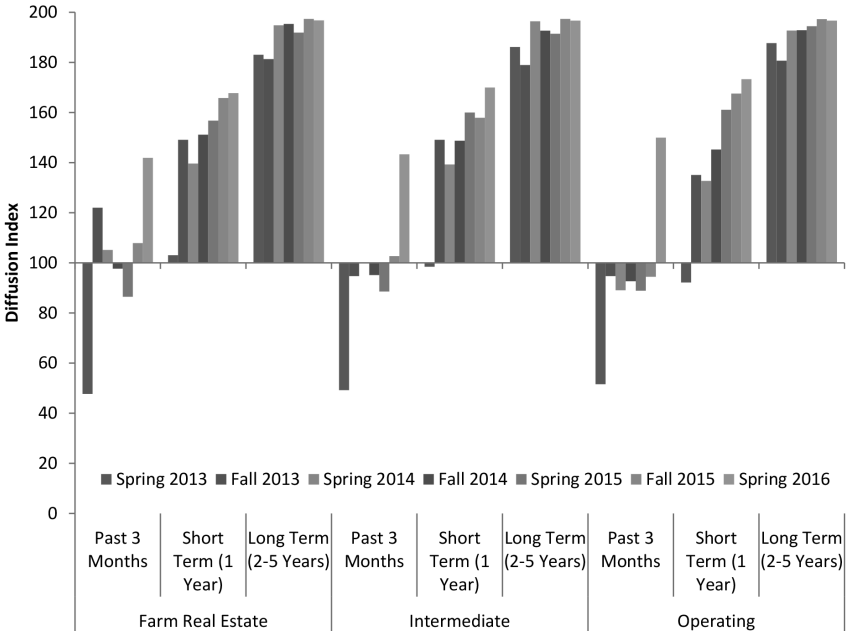


Figure 1 shows the demographics of the Spring 2016 survey respondents by primary service territory. The five territories are: Midwest, West, Atlantic, South and Plains. *Table 1* has a list of the states in each region. Fifty-four percent of survey respondents came from the Plains region while 32%, 0%, 7% and 7% came from the Midwest, West, Atlantic, and South regions, respectively. Nine percent of respondents indicated their respective lending institution was national in scope.

Lenders expect interest rates to rise. *Figure 2* shows the continued expectation of higher interest rates in the future. Over the past three months, 45% of respondents indicated an increase in interest rates for farm real estate loans. This rise was partially caused by the increase of the Fed Funds Rate by the Federal Reserve in December 2015. Staying with past trends, no respondents expect interest rates to decrease in the short-term or long-term. Furthermore, this survey was the third consecutive survey where no respondent expects a decrease in interest rates in the short-term or long-term (*Table 2*).

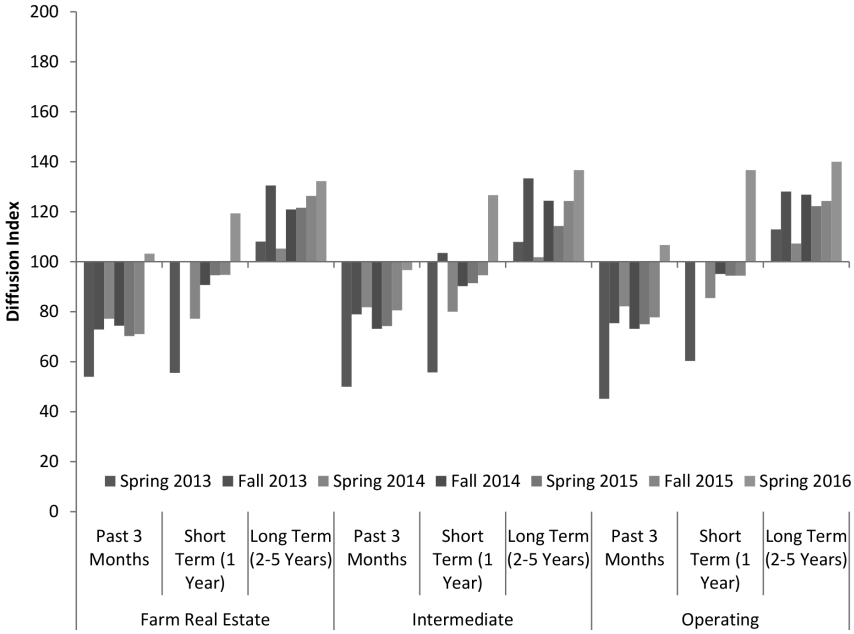
Figure 2, Loan Interest Rates—Diffusion Index of Survey Respondents



The spread over cost of funds is the difference between the loan interest rates charged by the lending institution and the interest rate paid by the financial institution for the funds that they deploy in their business. The reason for obtaining information for both loan interest rates and spread over cost of funds is to gauge competition in the agricultural lending market. A decrease in the spread over cost of funds suggests competition for agricultural loans among lending institutions may be increasing. Also, this information may reflect an increase in the premium for agricultural lending.

This survey marks the first time lenders have indicated an increase in the spread over cost of funds over the past three months. *Figure 3* shows that survey respondents expect this trend to continue for both the short-term and long-term for all loan categories. However, despite more respondents reporting an increase in spread over cost of funds, the majority of lenders reported no change in the spread over cost of funds. Lender expectations for the future increases still remain divided with 50% of lenders expecting no long-term change and 50% of lenders expecting an increase.

Figure 3, Spread Over Cost of Funds—Diffusion Index of Survey Respondents

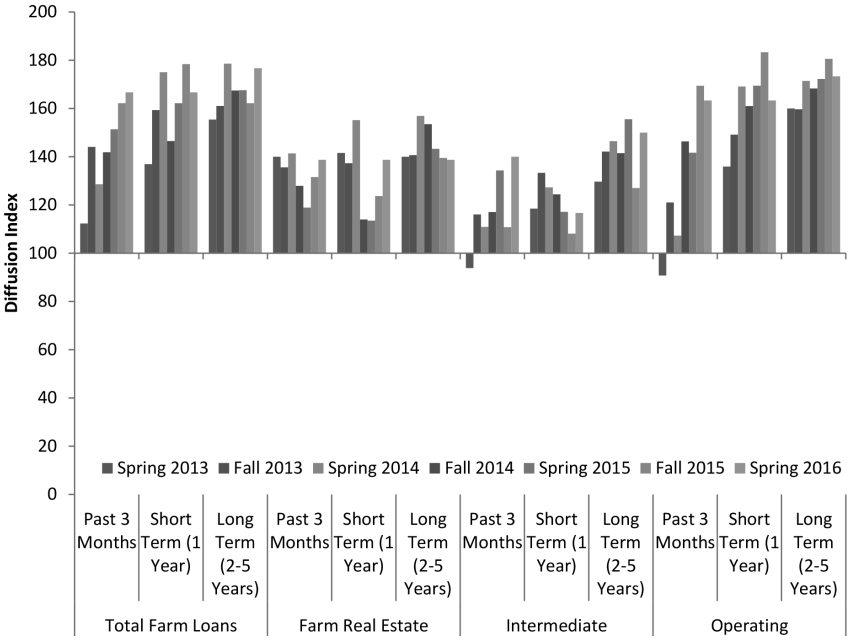


While farm loan volumes rose significantly over the past 3 months, the increase farm real estate loan volumes are expected to slow. *Figure 4* shows the responses for the aggregate amount of agricultural lending. Lenders expect total farm loan volumes to continue to increase, but farm real estate loan volumes are not expected to rise by as many respondents as in previous surveys. The current high demand for funds is a reflection of the deteriorating liquidity position of farmers and is more pronounced for operating credit.

The sentiment for farm real estate loans continues on a downward trend in the long term that started with the peak in lender expectation in Spring 2014. This is partly due to the decreasing demand for farmland. The expectation for operating loan volume remains high for the short-term and long-term due to lower cash farm receipts, though it has decreased slightly in the short-term from the Fall 2015 survey likely due to expectations of lower operating expenses. One respondent noted:

"I am seeing significant decrease in capital purchases and family living. I expect other operating expenses to follow."

Figure 4, Farm Loan Volume—Diffusion Index of Survey Respondents

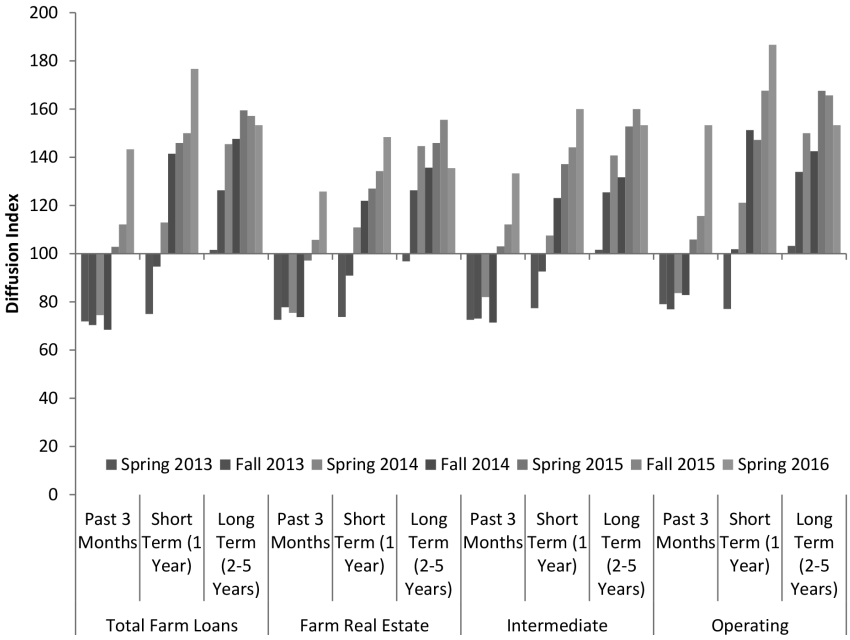


Lenders expect non-performing loans to increase. *Figure 5* shows the results for non-performing loans analyzed by loan type. 43% of respondents indicated an increase in non-performing loans. It is concerning that this increase represents a 31% percentage point increase from Fall 2015 (*Table 2*). Agricultural lenders expect that non-performing loans will increase during the next year, 77% in the spring of 2016 compared to 53% in the fall of 2015. Over the next 2 to 5 years, the sentiment is that non-performing loans will increase, but that sentiment has lessened slightly over the last two surveys.

With that said, not all lending institutions are feeling the pressure. Rising non-performing loans are not necessarily universally felt by all lenders. One respondent noted:

> *"We only have one farm loan that is classified. If commodity prices remain low, could be more in the future."*

Figure 5, Non-Performing Loans, By Loan Type—Diffusion Index of Survey Respondents



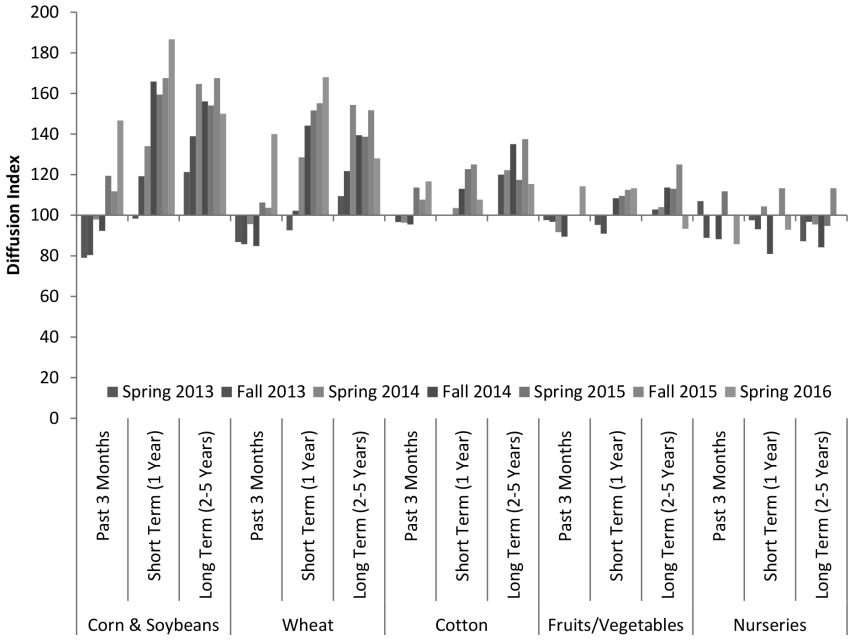
Non-performing loans are rising across all crop production sectors. *Figure 6* shows the non-performing loans by crop industry sector. Respondents continued to indicate an increase in expectations for non-performing loans for corn and soybeans and wheat.

"With these crop prices expect a significant gut check by the producers."

Fruits and vegetables also experienced an increase in the long-term expectation for non-performing loans. This is partly due to expanded orchard plantings in reaction to recent, sizeable profits.

"The last seven or so years have been very profitable for tree fruit which has spurred orchard development. With new orchard acres and more productive plantings coming on line it is expected that tree fruit will be coming under pressure for next half dozen years."

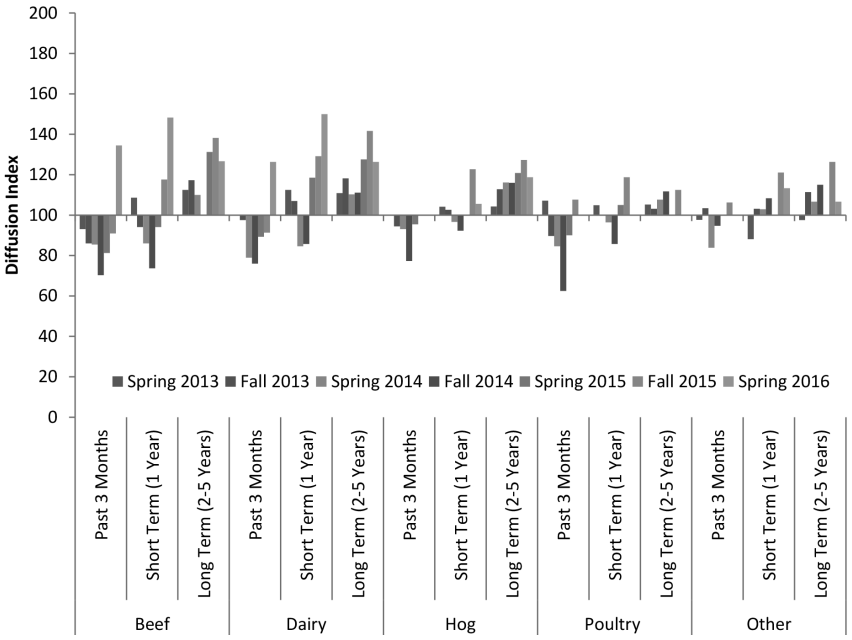
Figure 6, Non-Performing Loans, By Crop Industry Sector—Diffusion Index of Survey Respondents



Similar to the crop sector, non-performing loans for livestock producers are expected to rise. *Figure 7* shows the non-performing loans for various livestock sectors. This was the first survey that respondents indicated an increase in non-performing loans for the beef sector during the past three months. Recent declines in livestock prices are beginning to impact loan performance.

"Expecting tighter margins for cow/calf ahead as we are into herd building, expect feed yard margins to improve in last quarter of 2016."

Figure 7, Non-Performing Loans, By Livestock Industry Sector—Diffusion Index of Survey Respondents



During the spring 2016 survey window, 48% of agricultural lenders indicate that land values decreased and 45% indicate that they remained the same, and 6% indicate they increased during the previous 3 months. The spring 2015 results indicated that 35% indicated decreases, 57% indicated no change, and 8% indicated increasing land values for the previous three months. The expectation of land value changes in the next year became markedly more negative from the fall of 2015 to the spring of 2016 with the index falling from 32 to 16. Currently 84% of lenders expect land values to fall over the next year and 16% expect they will remain the same. For the longer term, the sentiment has not changed much over the last four surveys; roughly 65% expect decreases, 25% expect no change, and the remainder expect land price increases. The overall sentiment by agricultural lenders turned more pessimistic from the fall of 2015 to the spring of 2016. One respondent stated:

> *"Cropland values have declined 15–25% depending on quality. Pasture values have stayed fairly constant, although the lack of sales might indicate that they are priced too high given the market."*

Figure 8 Land Values—Diffusion Index of Survey Respondents

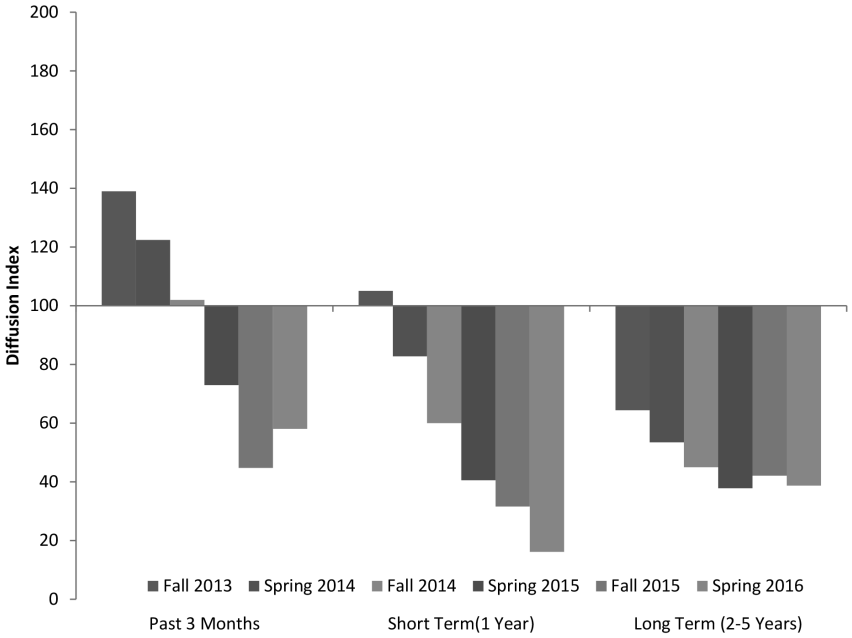


Table 1, States in Each Region

Atlantic	CT, DE, KY, ME, MD, MA, NH, NJ, NY, NC, PA, RI, TN, VA, VT, WV
South	AL, AR, FL, GA, LA, MS, SC
Midwest	IA, IL, IN, MI, MN, MO, OH, WI
Plains	KS, NE, ND, OK, SD, TX
West	AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY

Table 2, Respondent Responses

	Interest Rates									Spread Over Cost of Funds								
	Farm Real Estate			Intermediate			Operating			Farm Real Estate			Intermediate			Operating		
	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher
Past Three Months																		
Spring 2013	55%	42%	3%	52%	43%	2%	48%	50%	0%	56%	35%	10%	56%	37%	6%	58%	39%	3%
Fall 2013	17%	44%	39%	12%	58%	30%	18%	70%	12%	36%	56%	8%	30%	61%	9%	32%	61%	7%
Spring 2014	14%	67%	19%	13%	78%	30%	16%	50%	5%	28%	67%	5%	24%	71%	5%	23%	71%	5%
Fall 2014	14%	74%	12%	12%	78%	7%	15%	44%	7%	30%	65%	5%	29%	68%	2%	32%	63%	5%
Spring 2015	19%	76%	5%	11%	89%	0%	11%	89%	0%	30%	70%	0%	26%	74%	0%	25%	75%	0%
Fall 2015	5%	79%	13%	8%	78%	11%	11%	81%	6%	32%	63%	3%	22%	72%	3%	25%	69%	3%
Spring 2016	3%	52%	45%	0%	57%	43%	0%	50%	50%	10%	77%	13%	13%	77%	10%	13%	67%	20%
Short Term																		
Spring 2013	11%	75%	14%	14%	72%	12%	17%	73%	9%	48%	51%	3%	46%	54%	2%	43%	52%	3%
Fall 2013	0%	44%	56%	0%	51%	49%	0%	65%	35%	22%	56%	22%	19%	58%	23%	23%	54%	23%
Spring 2014	5%	50%	45%	5%	50%	45%	7%	53%	40%	32%	60%	9%	31%	58%	11%	27%	60%	13%
Fall 2014	2%	44%	53%	2%	46%	51%	2%	50%	48%	23%	63%	14%	22%	66%	12%	22%	61%	17%
Spring 2015	0%	43%	57%	0%	40%	60%	0%	39%	61%	24%	57%	19%	20%	69%	11%	22%	61%	17%
Fall 2015	0%	34%	66%	0%	42%	58%	0%	32%	13%	24%	58%	18%	27%	51%	22%	31%	44%	25%
Spring 2016	0%	32%	68%	0%	30%	70%	0%	27%	73%	6%	68%	26%	7%	60%	33%	3%	57%	40%
Long Term																		
Spring 2013	2%	14%	85%	2%	9%	88%	2%	8%	89%	31%	34%	38%	30%	29%	38%	27%	32%	40%
Fall 2013	0%	19%	81%	0%	21%	79%	0%	19%	81%	14%	42%	44%	12%	42%	46%	14%	44%	42%
Spring 2014	0%	5%	95%	0%	4%	96%	0%	7%	93%	26%	42%	32%	27%	44%	29%	25%	42%	33%
Fall 2014	0%	5%	95%	0%	7%	93%	0%	7%	93%	16%	47%	37%	27%	46%	39%	15%	44%	41%
Spring 2015	0%	8%	92%	0%	9%	91%	0%	6%	94%	22%	35%	43%	23%	40%	37%	22%	33%	44%
Fall 2015	0%	3%	97%	0%	3%	97%	0%	3%	97%	16%	42%	42%	16%	43%	41%	19%	38%	43%
Spring 2016	0%	3%	97%	0%	3%	97%	0%	3%	97%	16%	35%	48%	13%	37%	50%	13%	33%	53%

Farm Dollar Volume

	Total Farm Loans			Farm Real Estate			Intermediate			Operating		
	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher
Past Three Months												
Spring 2013	32%	22%	45%	12%	35%	52%	28%	46%	22%	40%	26%	31%
Fall 2013	5%	46%	49%	7%	51%	42%	9%	66%	25%	12%	54%	33%
Spring 2014	20%	32%	48%	9%	41%	50%	16%	56%	27%	29%	35%	36%
Fall 2014	12%	35%	53%	16%	40%	44%	20%	44%	37%	12%	29%	59%
Spring 2015	5%	38%	57%	14%	54%	32%	11%	43%	46%	8%	42%	50%
Fall 2015	5%	27%	68%	8%	53%	39%	8%	70%	19%	3%	22%	72%
Spring 2016	0%	33%	67%	10%	42%	48%	7%	47%	47%	7%	23%	70%
Short Term												
Spring 2013	9%	43%	46%	8%	43%	49%	9%	58%	28%	6%	50%	42%
Fall 2013	0%	41%	59%	8%	46%	46%	5%	56%	39%	5%	40%	54%
Spring 2014	2%	21%	77%	3%	38%	59%	22%	29%	49%	4%	24%	73%
Fall 2014	9%	35%	56%	19%	49%	33%	17%	41%	41%	7%	24%	68%
Spring 2015	5%	27%	68%	22%	43%	35%	20%	43%	37%	3%	25%	72%
Fall 2015	3%	14%	81%	13%	47%	37%	24%	41%	32%	0%	14%	83%

Table 2, Respondent Responses—Continued

	Total Farm Loans			Farm Real Estate			Intermediate			Operating		
	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher
Spring 2016	0%	33%	67%	16%	29%	55%	20%	43%	37%	7%	23%	70%
Long Term												
Spring 2013	9%	25%	65%	15%	29%	55%	19%	30%	48%	5%	28%	65%
Fall 2013	2%	36%	63%	8%	42%	49%	5%	47%	47%	4%	33%	63%
Spring 2014	0%	21%	79%	7%	29%	64%	7%	39%	54%	0%	29%	71%
Fall 2014	5%	23%	72%	14%	19%	67%	15%	30%	56%	17%	17%	76%
Spring 2015	3%	27%	70%	11%	35%	54%	8%	28%	64%	0%	28%	72%
Fall 2015	8%	19%	70%	18%	21%	58%	14%	43%	41%	3%	11%	83%
Spring 2016	0%	23%	77%	16%	29%	55%	10%	30%	60%	3%	20%	77%

on-Performing Loan by Loan Type

	Total Farm Loans			Farm Real Estate			Intermediate			Operating			Ag Land Values		
	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher	Lower	Same	Higher
Past Three Months															
Spring 2013	28%	58%	0%	27%	63%	0%	27%	61%	0%	24%	63%	3%			
Fall 2013	31%	67%	2%	24%	74%	2%	29%	69%	2%	27%	69%	4%	0%	61%	39%
Spring 2014	27%	71%	2%	28%	68%	4%	20%	78%	2%	20%	76%	4%	14%	50%	36%
Fall 2014	32%	68%	0%	29%	68%	3%	29%	71%	0%	26%	66%	9%	14%	69%	17%
Spring 2015	3%	91%	6%	3%	97%	0%	3%	91%	6%	3%	88%	9%	35%	57%	8%
Fall 2015	0%	85%	12%	3%	86%	9%	0%	85%	12%	0%	81%	16%	58%	37%	3%
Spring 2016	0%	57%	43%	0%	74%	26%	0%	67%	33%	0%	47%	53%	48%	45%	0%
Short Term															
Spring 2013	28%	58%	3%	30%	64%	3%	26%	65%	3%	30%	61%	7%			
Fall 2013	18%	70%	13%	15%	80%	5%	17%	74%	9%	13%	72%	15%	17%	61%	22%
Spring 2014	9%	69%	22%	9%	71%	20%	9%	74%	17%	8%	63%	29%	33%	52%	16%
Fall 2014	5%	49%	46%	5%	68%	27%	5%	67%	28%	5%	38%	56%	48%	45%	7%
Spring 2015	3%	49%	49%	3%	68%	30%	3%	57%	40%	3%	47%	50%	59%	41%	0%
Fall 2015	3%	41%	53%	3%	57%	37%	3%	47%	47%	3%	24%	71%	71%	24%	3%
Spring 2016	0%	23%	77%	6%	39%	55%	3%	33%	63%	0%	13%	87%	84%	16%	0%
Long Term															
Spring 2013	19%	56%	20%	21%	62%	17%	16%	65%	18%	16%	63%	19%			
Fall 2013	14%	46%	40%	12%	49%	39%	11%	53%	36%	11%	45%	45%	46%	44%	10%
Spring 2014	7%	40%	53%	7%	41%	52%	6%	48%	46%	4%	42%	54%	59%	29%	12%
Fall 2014	10%	33%	57%	10%	45%	45%	12%	44%	44%	13%	33%	55%	64%	26%	10%
Spring 2015	3%	35%	62%	3%	49%	49%	3%	42%	56%	3%	27%	70%	65%	32%	3%
Fall 2015	6%	29%	63%	6%	31%	61%	6%	26%	66%	6%	20%	71%	66%	24%	8%
Spring 2016	10%	27%	63%	16%	32%	52%	10%	27%	63%	10%	27%	63%	68%	26%	6%

The CHAIRMAN. Mr. Nelson.

STATEMENT OF RANDY NELSON, PRESIDENT, CHS CAPITAL LLC, INVER GROVE HEIGHTS, MN

Mr. NELSON. Chairman Scott, Ranking Member Scott, and Members of the Committee, thank you for inviting me to testify today. My name is Randy Nelson, President of CHS Capital, and I appreciate this opportunity to share with you what we are seeing in credit demand among our farmer and cooperative owners.

CHS Capital is a wholly owned subsidiary of CHS, the largest nationwide farmer-owned cooperative. Headquartered near St. Paul, Minnesota, CHS is a highly diversified Fortune 100 company that supplies crop nutrients, grain marketing services, food and food ingredients, and energy products. We also provide a range of business solutions, including insurance and hedging, as well as financial services through CHS Capital.

CHS Capital provides operating and term loans directly to cooperatives and individual producers who farm anywhere from 100 acres to over 100,000 acres. In our view, the decrease in crop prices has had a major impact on the financial strength of farmers. Low prices, combined with high rent costs, have caused nearly all farm projections for 2016 to reflect a shortfall in farmers' ability to meet their current obligations.

We have seen some common trends among many of our producers. While some have had their 2014 crop contracted at profitable prices, few farmers had their 2015 crop contracted, and we have seen limited corn and soybeans contracted for 2016. We have seen many farmers who were unable to cash flow their operations in 2015, despite record yields across parts of the Dakotas and Wisconsin, and most of Minnesota.

However, thanks to several good years in farming, many farmers have built up significant equity in their real estate. This provides them with the option to refinance their land and inject working capital. While this fixes the working capital issue, prices still need to rise in order to service the added debt. It is this farm real estate equity that will allow many to farm again this year. However, the current outlook at the end of 2016: some will reduce their equity to a level that is not sufficient to continue farming.

CHS Capital has received a number of requests to finance a number of customers whose primary lender does not want to continue to finance their farming operation. CHS Capital is able to help some of these customers, but we are also taking a closer look at projections and how their equity can support future losses. CHS Capital completed term loans totaling $55.5 million in the first 3 months of 2015, compared with $226.5 million in loans that have been completed so far in 2016. Nearly all of the term loans were written to refinance existing real estate *versus* new real estate purchases. We expect the number of term loans to continue to increase if commodity prices remain low.

CHS Capital has seen a significant increase in past due loans and requests to extend the prior year's operating loan. The low commodity prices have resulted in more customers holding on to their inventory in hopes of higher prices, and an increasing number have had to liquidate assets in order to repay their loan. We have

also seen a higher number of customers who have not been able to obtain the operating funding for the upcoming year.

With the current stockpiles of grain and the number of acres projected to be planted, the outlook through 2016 and into 2017 is for crop prices to remain depressed. CHS Capital estimates a breakeven cash price for many growers to be in the range of $3.90 to $4.25 per bushel for corn. If prices remain low throughout 2016, and the outlook is not positive, CHS Capital believes that many farmers will choose to preserve their equity and rent out their farmland or liquidate assets. We believe that this will be especially true for farmers who are at or near retirement with no family succession plan. We feel that if significant acres of farmland are put on the market and farmers are willing to walk away from expensive rented ground, rental prices will decline and real estate values will devalue. We also believe some young farmers will leave or work off the farm, and we believe that continued low prices will cause banks to pull away from financing agriculture.

Thank you again for the opportunity to share our views on the state of credit in farm country. I look forward to answering your questions.

[The prepared statement of Mr. Nelson follows:]

PREPARED STATEMENT OF RANDY NELSON, PRESIDENT, CHS CAPITAL LLC, INVER GROVE HEIGHTS, MN

Chairman Scott, Ranking Member Scott, and Members of the Committee, thank you for inviting me to testify today. My name is Randy Nelson, President of CHS Capital, and I appreciate this opportunity to share with you what CHS Capital does, who we serve, and what we are seeing right now in credit demand among our farmer and cooperative owners.

About CHS Capital

CHS Capital is a wholly-owned financing subsidiary of CHS Inc., the nation's largest farmer-owned cooperative. Headquartered in Inver Grove Heights, Minnesota, CHS Inc. is owned by more than 600,000 producers and 1,100 member cooperatives from around the United States, including 77,000 direct producer-owners and approximately 20,000 preferred stock holders. CHS is governed by a 17 member board of directors elected by our producer and member co-op stockholders. Our directors are all active farmers and ranchers with a broad range of experience in agribusiness, as well as other business sectors.

As a cooperative, CHS also returns cash to our owners every year, based on the company's performance and the amount of business an owner conducts with CHS during the year. During its Fiscal Year 2016, CHS will distribute about $519 million to farmers, ranchers and cooperatives across the country. Between fiscal 2012 and 2016 CHS has distributed a total of $2.7 billion in cash, a $544 million annual average.

CHS is a highly diversified Fortune 100 company that supplies crop nutrients, grain marketing services, animal feed, and food and food ingredients. We also operate petroleum refineries and pipelines and manufacture, market and distribute refined fuels, lubricants, propane and renewable energy products. Additionally, we provide a range of business solutions including insurance and hedging, as well as financial services through CHS Capital.

CHS Capital was established in 2005 and provides operating and term loans directly to cooperatives and producers. We work with a wide range of producers who farm anywhere from 100 acres to over 100,000 acres. We work with these producers through CHS-owned locations and independent member-owned cooperatives that sell inputs, feed, fuel and other supplies to the producer. The loans are offered to help facilitate the sale of inputs. The operating loans may be set up to only finance the inputs sold by the retailer or they may finance all the farmer's operating needs.

CHS Capital also provides loans for the purchase of market livestock, and loans for margin calls that provide pre-qualified customers access to additional capital for hedging without affecting current operating lines of credit.

Current Financing Trends

In our view, the decrease in crop prices has had a major impact on the financial strength of farmers. The low prices combined with high rent costs have caused nearly all farm projections for 2016 to reflect a shortfall in their ability to meet their current obligations. Some customers are looking for innovative options to increase profitability, such as growing specialty crops or purchasing beef heifers to feed, rather than selling their grain.

We have seen some common trends among many of our producers. While some farmers had their 2014 crop contracted at profitable prices, few farmers had their 2015 crop contracted, and we have seen limited corn and soybeans contracted for 2016. We have seen many farmers who were unable to cash flow their operation in 2015, despite record yields, across parts of the Dakotas and Wisconsin and most of Minnesota.

The challenges I have mentioned, are now evident in the negative working capital on the farmer's balance sheet. However, through the benefit of several good years in farming, many have built up significant equity in their real estate. This provides them with the option to refinance their land to inject working capital. While this fixes the working capital issue, prices still need to rise in order to service the added debt. It is this real estate equity that will allow many to farm again this year. However, with the current outlook, at the end of 2016 some will reduce their equity to a level that is not sufficient to continue farming.

CHS Capital has received requests to finance a number of customers whose primary lender does not want to continue to finance the farming operation. CHS Capital is able to help some of these customers, but at the same time, we are also taking a close look at the projections to understand the possible shortfall at the end of 2016, and how their equity can support these losses.

In anticipation of the working capital shortfalls, CHS Capital began offering term loans to utilize customers' real estate equity to improve working capital and finance losses. The chart below provides an overview of the number of real estate loans we have processed by year:

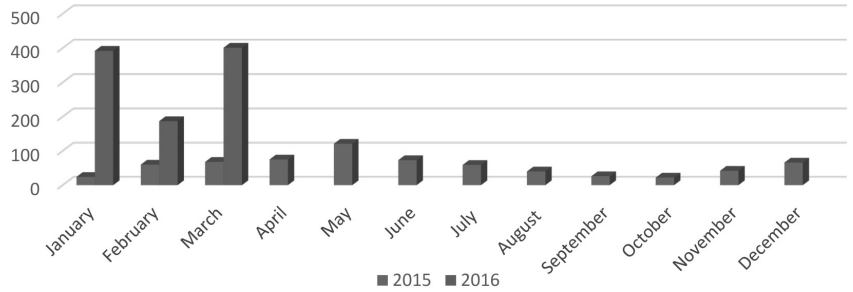
2012	2013	2014	2015	YTD 3/2016
1	0	6	16	7

CHS Capital completed term loans totaling $55.5 million in the first 3 months of 2015, compared with $226.5 million in loans that we have been completed so far in 2016. Nearly all of the term loans were written to refinance existing real estate *versus* new real estate purchases. We expect the number of term loans to continue to increase if commodity prices remain low.

CHS Capital has seen a significant increase in past-due loans and requests to extend the prior year's operating loan. The low commodity prices have resulted in more customers holding their inventory in hopes of higher prices, and an increasing number have had to liquidate assets in order to repay their loan. We are also seeing a higher number of customers who have not been able to obtain the operating funding for the upcoming crop year

The chart below reflects the year over year change in past-due customers (customers with a past-due balance in excess of $1,000).

Number of Customers with a Past-Due Balance over $1,000



The majority of CHS Capital's loans mature in the first quarter so an increase in past-due loans during that timeframe is not unusual. However, the number of past-due loans is significantly higher than a year ago

Looking Ahead

With the current stockpiles of grain and number of acres projected to be planted, the outlook through 2016 and into 2017 is for crop prices to remain depressed. A weather issue in one of the major growing regions could positively impact prices. CHS Capital estimates the breakeven cash price for many growers to be in the range of $3.90–$4.25/bu. for corn. If prices remain low throughout 2016 and the outlook is not positive, CHS Capital believes that many farmers will choose to preserve their equity and will rent out their farmland or liquidate assets.

We believe this will be especially true for farmers who are at or near retirement with no family succession plan. We believe there is also a segment of farmers who will have to liquidate due to high debt levels and a lack of equity. We feel that if significant acres of farmland are put on the market, and farmers are willing to walk away from expensive rented ground, the result will be a decline in rental prices and an increased devaluation rate of farm real estate.

We also believe some of the younger generation of farmers who came back to the farm during times of strong prices will leave, or at a minimum look for work off the farm. We believe that continued low prices will cause banks to pull away from financing production agriculture and look for a more stable industry to which they can lend.

Whether it is through CHS Capital or other segments of our enterprise, CHS recognizes the importance of maintaining a safety net for agricultural producers. As you and your colleagues on the Agriculture Committee examine the current state of the farm economy in anticipation of future legislative initiatives, we urge you to craft farm policy that covers multi- and single-year losses and strengthens risk management tools.

Thank you again for the opportunity to share our views on the state of credit in farm country. I look forward to answering your questions.

ATTACHMENT

Commercial Financing



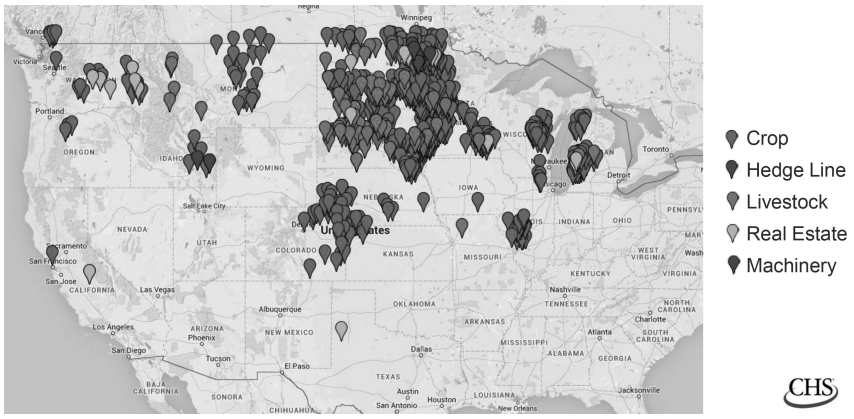
Loan Breakdown		Grand Total on Commitments
Ag Supply: 119	Seasonal: 87	$1,127,600,000
Ethanol: 1	Special Term: 30	
Grain: 56	Amortized: 59	

Producer Local Financing



Loan Breakdown		Grand Total on Commitments
Crop: 660	Hedge Line: 34	$222,991,000
Livestock: 62	Machinery: 20	
Real Estate: 4		

Producer Country Operations Financing



Loan Breakdown		Grand Total on Commitments
Crop: 3,030	Hedge Line: 6	$748,221,000
Livestock: 125	Machinery: 7	
Real Estate: 32		

The CHAIRMAN. Thank you, gentlemen. The chair would like to remind Members that they will be recognized for questioning in order of seniority for Members who were here at the start of the hearing. After that, Members will be recognized in order of arrival. I appreciate Members' understanding.

Gentlemen, the most recent farm crisis occurred in the 1980s, and many of those families in that crisis never recovered. What are the similarities of the situation in the 1980s and today, and what are the differences that you see in what happened in the 1980s and today?

Mr. Buzby, we will start with you and just kind of go down.

Mr. BUZBY. One of the major differences between the 1980s and now is interest rates. The level of interest rates has been at current levels for roughly 5 or 6 years. A dramatic increase in interest rates would cause the situation to be much more similar to that of the 1980s. A lot was learned in the 1980s. Lenders, in particular, take a very historical view when they look at the opportunities to finance farmers. I think that is very important. It is definitely very instrumental to see lenders who were around and lending in the 1980s. There are many farmers and young lenders who were not around then, we do see them learning from the history and from their colleagues who were around then.

It is important, not only this year, as agriculture has come under stress, but as we progress into the next 2 years, I think that will be very challenging, in particular, if commodity prices stay where they are.

Dr. FEATHERSTONE. I would concur with Mr. Buzby. Probably one of the other differences that I would say is the opportunity to use fixed rates products. A number of producers have used fixed rate products to lock in interest rates on land loans, and so roughly 50 percent of their debt is at under fixed rates. The other 50 percent is roughly under operating that would be subject to changes in interest rates.

In terms of the land value build up, it is very similar to what we saw in the 1970 to 1980 run up when you look at inflation-adjusted terms. We are about 30 percent higher in places of the Midwest than we were during the peaks. Other places around the country did not see a run up, and so it is very different. But certainly in the Midwest and the Great Plains region, there was quite a run up in land values, which is somewhat similar to the 1970–1980 period.

Mr. NELSON. As I look back at the 1980s, I saw that as really a high debt crisis situation, so farmers had leveraged their balance sheets significantly. Obviously, as mentioned here, the interest rates were much higher than they are today.

As we look at where we are today, though, lenders and farmers have been much more cautious about leveraging their balance sheet, giving more opportunity to try and get through the downturn and the cash positions that they are seeing today.

The CHAIRMAN. Dr. Featherstone, you said something that stands out in your written testimony with regard to the farm economy, that the averages will not drive a bust, but the lower tail of the distribution can. What is being done to track this? How can we track what is happening on these farms at the lower tail of the distribution, and is there anything that can be done on these farms to help prevent the lower tail of the distribution from driving a bust?

Dr. FEATHERSTONE. I think there are a couple issues that are important to realize. The worst time in the 1970s that you were able

to lend was kind of that 1977 to 1980 period. I had the opportunity at the beginning of my career to look at how those loans performed for a nationwide lender, and roughly about 85 to 90 percent of the loans they made in the worst time did make it through eventually, although it was very stressful.

The big thing is there is a need to focus on the downside of the distribution and really understand that the agricultural land market is a pretty thin market. In a lot of places, you are looking at two to three percent of land trading a year, so four to five percent, which doesn't seem like a big change really can affect price. The other thing is identifying those farmers and working with them in terms of restructuring their operations and for some of them, it may be working with them to figure out whether or not farming is in their future.

The CHAIRMAN. Mr. Scott.

Mr. DAVID SCOTT of Georgia. Thank you, Mr. Chairman.

This has been a good panel, and I would like to ask Mr. Buzby, Dr. Featherstone, and Mr. Nelson, because each of you touched on this in your testimony.

Let's suppose I have two graduating seniors, and which is the case. I gave the commencement address at University of Georgia's School of Agriculture last year, and I also had a group of young students who want to be farmers from Ft. Valley State in my office last week. And this issue came up. How are we going to really address this issue of getting the financing? You have young people who want to go into farming, but they are hitting a brick wall on two fronts.

First of all, the high cost of land, the high cost of equipment. What is being done to get some help there? And then second, many of these graduating students have student loan debt, so it is not like if you graduate and you get a degree in finance, you go work for a bank, then you get a big salary, but in agriculture, you have to seriously go to work. You have to get land, you have to get equipment, you have to get property. How are we addressing this for this young person that wants to go into farming and is faced with college debt, with all the other debt?

And I would like to know just what the land price would be for an acre.

Mr. BUZBY. Well certainly for a young beginning farmer, entering into farming is an uphill battle. Without the support of a family structure and perhaps an older farmer within the family who is exiting the business, it is very difficult to get started. Certainly where we see an environment where interest rates are low for the purchase of land that is helpful, but we also still see land values at relatively close to historic highs. You also see expensive rental rates if a farmer were to enter and begin renting, and the availability of equipment financing as well can be challenging.

With all that said, there is a push amongst lenders, particularly in the Farm Credit System and in the banking communities to focus on young beginning and small farmers. It will continue to be a challenge for many years, and if the farming conditions and the farming economy struggle for the next several years, I think that will persist and be very difficult to enter into farming for beginners, particularly those coming right out from school.

The existence of other debts related to education or other things will also only add to that burden. Many years ago, looking back to the 1980s, as many people saw struggling on the farms, people didn't want to get into agriculture and they kind of fled to the coast, got away from agriculture and went into different areas, maybe related to ag finance but not in agriculture in particular. Over the past decade or so, as farmers have done very well, there has been a push for people who grew up on the farm, went away to college, and then want to come back to the farm, I think that has returned and it has really just happened in this last year or so where that is not looking as favorable as it has for the last decade.

Mr. DAVID SCOTT of Georgia. Well let me just ask you, don't you all think it would be helpful—some of us here in Congress really feel the pinch on this—and I believe it will be helpful if we could develop some financing help here that would take care of loan forgiveness for a certain number of students. It doesn't have to be everybody, but at least we can start that with those who will go into farming, and to give scholarship aid to those. So when they come out, at least they will not have that hanging over them going in, but it would be interesting to know what would you say is the total operating cost of the average farm?

Dr. Featherstone?

Dr. FEATHERSTONE. For the farms that——

Mr. DAVID SCOTT of Georgia. And what would be the average size farm?

Dr. FEATHERSTONE. Yes, the average size farm, there would, probably, in Kansas be about 800 to 1,000 acres. The average expenses would be about $500,000. One of the things that may be a possibility, and I know the Department of Defense is working with transitioning some of the soldiers into farming operations where they are trying to match soldiers that have a desire to farm with individuals that may be nearing retirement, and so perhaps something like that might be a possibility to also look for college students.

Mr. DAVID SCOTT of Georgia. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Conaway?

Mr. CONAWAY. Thank you, Mr. Chairman, and thank you, gentlemen, for being here.

I would like to understand mechanically what is happening, and make sure we get that in the record. With high land prices and the risk of those prices dropping, when we look at the lending side, what is the normal or what would be the typical ratio of collateral value to loan value in most of these organizations?

Mr. Buzby?

Mr. BUZBY. At Farmer Mac, what we see generally industry-wide is a maximum loan to value ratio of 70 percent.

Mr. CONAWAY. All right, so if we had a 30 percent drop in the value of land, the bank will be about even with its debt at that point in time, so the drop in land prices has to be greater than that in order to have a real dramatic impact on lending or on those loans.

Mr. BUZBY. Correct.

Mr. CONAWAY. Dr. Featherstone, you mentioned farm income. Does that include any kind of compensation to the farm family itself? Let's say you have the typical family farmer: is he taking a salary out of that number? What is that number?

Dr. FEATHERSTONE. Yes, the net farm income that I mentioned would not include any other income that they may have.

Mr. CONAWAY. So, if it went from $111,000 to $11,000, that $11,000 would mean farmers make about $1,000 a month to pay his own medical costs and other, normal things that a family would have to pay for?

Dr. FEATHERSTONE. Yes, in this situation if all the income from the family was from the farm.

Mr. CONAWAY. Well that $11,000 is just farming income.

Dr. FEATHERSTONE. It is just the farm income, and so therefore, if there were off-farm incomes and that is going to be pretty important with regards to the rural economy, making sure that that is strong, to provide those job opportunities.

Mr. CONAWAY. All right. Mr. Nelson or Mr. Buzby, there are a lot of challenges with respect to lending. Obviously, it has to be safe and sound. The bank has to be confident that it is getting its money back. Are there regulatory burdens associated with farming that are exacerbating lending decisions, either the regulations to operating a farm or regulations as to how you lend to a farmer?

Mr. Nelson, you were nodding your head. We will let you go first.

Mr. NELSON. Yes, I will make a comment as that pertains to CHS Capital. We are regulated in a different way than banks are, so it allows us a little bit more flexibility to create innovative programs to help out farmers. At the same time, we need to make sound decisions around the credit viewpoint and what it looks like into 2016. But we do have some innovative programs that we have put out here recently to help farmers get——

Mr. CONAWAY. Right. I guess I am looking for the regulations that are preventing you from doing that.

Mr. Buzby, do you have comments about specific regulations that farmers are dealing with that don't really help bankers make sound decisions?

Mr. BUZBY. Well, there are a wide spectrum of regulations that impact farmers, varying from those that impact the lenders and the financial institutions that serve them, but also environmental and water laws as well. While many of those laws may be from a social accountability standpoint, they may be well intended. There can certainly be adverse consequences which can adversely affect farming, the value of land that is available, and then ultimately the lending decisions that we may make.

Mr. CONAWAY. Dr. Featherstone, you mentioned that a potential leading indicator would be debt-to-earnings before interest, taxes, depreciation and improvisation, or the ever popular EBITDA. What is that leading indicator telling you now?

Dr. FEATHERSTONE. Essentially, that is beginning to move up. I have done some work with this at the university.

Mr. CONAWAY. Up good or up bad?

Dr. FEATHERSTONE. It is moving up quite a bit.

Mr. CONAWAY. I know. Is up good, or is up bad?

Dr. FEATHERSTONE. Oh, sorry. Moving up is bad in terms of the lower that ratio is, the better off you are. For example, in north central Kansas, I haven't calculated those numbers yet, but they will be negative for this coming year simply because you have to look at principle repayment and family living when you begin looking at that.

Mr. CONAWAY. Okay, but I thought you said it was earnings before interest and taxes——

Dr. FEATHERSTONE. Earnings before interest, taxes, depreciation——

Mr. CONAWAY. Those don't include the farmer's expenses?

Dr. FEATHERSTONE. I misspoke there. It won't be negative.

Mr. CONAWAY. But that would be really——

Dr. FEATHERSTONE. Right. I am thinking——

Mr. CONAWAY. You said down was good.

Dr. FEATHERSTONE. I am thinking of the capital repayment capacity ratio, which will end up going negative for that region.

Mr. CONAWAY. All right, so as a leading indicator——

Dr. FEATHERSTONE. It is a leading indicator of cash flow and just the ability to repay loans.

Mr. CONAWAY. Which indicated to you that things are going to get worse before they get better at this stage?

Dr. FEATHERSTONE. Unless that changes, yes.

Mr. CONAWAY. Okay.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Mr. Aguilar.

Mr. AGUILAR. Thank you, Mr. Chairman.

Mr. Buzby, you talked a little bit about younger farmers in response to the Ranking Member. In California, beginning farmers tend to be slightly younger than the national average, but the number of beginning farmers has dropped 29 percent between 2007 and 2012. What role does the high real estate market play in these declining numbers of young farmers entering the market? What other factors are discouraging young people from managing a farm? And to pick up where the Ranking Member left off, what can Congress do to foster some of these policies to support young farmers' strengths to combat their weaknesses?

Mr. BUZBY. Certainly with respect to land values, the situation in California is very different than from what you see in the Midwest. USDA, in some ways, in the products that they offer can be instrumental in helping young and beginning farmers as well. The flexibility that can be offered to farmers that can't, whether beginning or seasoned, access credit in the traditional markets do see vehicles through USDA that can be helpful. Congress's oversight of financial institutions, the Farm Credit System, and elsewhere promoting the lending to young beginning and small farmers is critical; as well in California, in particular, as you see very diverse agriculture there that is very capital intensive. There are specific challenges in that state alone that are much more difficult to address than throughout the Midwest.

Mr. AGUILAR. Thank you.

Dr. Featherstone, you mentioned a program for returning soldiers. Can you elaborate on what that program looks like, and

where we might be able to take that from a Congressional perspective, moving forward?

Dr. FEATHERSTONE. Yes, essentially there is a grant program that allows organizations to work with retiring soldiers, and the way that it is working in Kansas is Farm Bureau, in conjunction with Kansas State University and Fort Riley, which is located very close to the campus, were trying to match up individuals, teach them basic agriculture skills, try to match them up with individuals that could mentor them into the process and maybe at some point transition the operation from a generation that does not have heirs to the individual that has built that human capital.

Mr. AGUILAR. Great, thanks. I think that is a worthy program that we should discuss. Some of us are on the Armed Services Committee as well, and there could be a connection there. I appreciate that answer.

Dr. Featherstone, and for Mr. Nelson, in recent years in the community I am from, a number of farmers in my district—and you have alluded to this in your testimony—are finding that their children don't want to continue the family business. These farmers resort to selling their land to fund their children's college education or to help finance their own future. For many family farmers, it is important to keep the business with a trusted source when selling.

What types of tools are available for those who are evaluating what the outlook of their farm is as they are selling it, and what factors should be taken into consideration so they can find the right time for them to sell, if that is the choice that they are making?

Dr. FEATHERSTONE. Until this year, essentially at least in Kansas where I am from, there was a strong desire for college graduates to go into agriculture. And so as of yet, I am not sure we have seen the graduates catch up with reality. I will be doing exit interviews the next couple weeks, so I will have a better picture of that in a couple weeks. But, the big thing is timing, and the big thing is providing some mentorship opportunities for those individuals, but certainly timing is critical in terms of now is probably not a time that they are going to find it very easy to move into the production agriculture sector.

Mr. NELSON. As has already been mentioned here today, for the next generation of farmers, it is going to be very, very difficult to get into agriculture. Just yesterday I was speaking to a customer of ours from Texas, a cotton farmer in Texas. He farms 6,000 acres. He has been in farming 38 years. And his comment was I don't know who is going to farm my land when I retire, because again, he said young people will not have the opportunity to come in and purchase land and begin farming in this environment.

We continually need to look at ways to help young farmers enter into farming. We are looking at programs today, CHS Capital, to help finance and provide operating funding for young farmers. But certainly, it will be a challenge in the future.

It is important that farmers also look at succession planning, and they need to start that immediately. I think that industry could do a much better job in planning ahead so that the next generation can come in and continue the operation.

Mr. AGUILAR. Thank you, gentlemen. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Kelly.

Mr. KELLY. First of all, and this is to Mr. Buzby, thank you, Mr. Chairman, and thank you, witnesses on the panel, for being here. I really appreciate it.

Mr. Buzby, what effect can government regulations such as *Waters of the U.S.,* what are they having on our farming right now?

Mr. BUZBY. Well certainly there are regulations as, what you mentioned, that can have adverse impacts on a farmer and his operation, as that also may have a dramatic direct increase on the farm itself and the land, certainly making it very difficult to provide financing to land that is adversely affected by such laws, and also preventing, in some cases, that farmer from being able to liquidate his land and sell. I think that can be quite a challenge.

Mr. KELLY. And just following up, what specifically does it do to farmland values?

Mr. BUZBY. Dramatic reductions.

Mr. KELLY. And either of the other two witnesses are welcome to comment if you would like.

Mr. NELSON. Yes, I think that was covered well.

Mr. KELLY. And Dr. Featherstone, farmers rely on crop insurance, you mentioned important points in your written testimony about how when the price of commodities decrease, farmers with crop insurance take an additional risk because their insurance covers less of their variable costs. What are the implications of this reduction in risk coverage for farmers?

Dr. FEATHERSTONE. The key implication is farmers are assuming more of the risk than they did just 2 or 3 years ago. Using some numbers that were in the testimony, comparing it to 2013, which admittedly is the high, they are taking on between 30 and 40 percent more risk, simply because that guarantee decreased. There is the opportunity for them to buy up additional higher coverage levels, but certainly with the prices decreasing, there is more risk and less of the revenue is protected on those revenue products.

Mr. KELLY. And Mr. Buzby, in your testimony you indicated that crop insurance and the other components of farm safety net, including ARC and PLC, are extremely important to agricultural leaders. Can you elaborate a little bit on this?

Mr. BUZBY. As we have seen in recent times and times of drought and other adverse weather conditions, crop insurance becomes a safety net, and certainly allows farmers to continue their operation where they otherwise may not be able to in a particular year. I think for the long-term health and safety and risk management of those farmers, those crop insurance programs are critical.

Mr. KELLY. Any of you other witnesses have any comments?

Mr. NELSON. As a lender, I look at the crop insurance program and the government payments as a critical component in any kind of credit analysis. So as we look in the future, obviously we have seen crop prices drop, which does impact the level of coverage from the insurance standpoint and will adversely affect potential decisions around credit extension in the future.

Mr. KELLY. And then finally, and this is to anyone on the panel who wants to answer, farmland values are the potential bubble in the farm real estate, would you give some brief examples of if you think the bottom may fall out, and can you compare in any way

to the 2008–2009 housing crisis? Do you see that as a potential with farmland values?

Mr. NELSON. We have seen over the past year a slight drop in farmland values, but nothing real significant. I think there is still an optimism in the market around what farming will be in the future and a need for farmland, of course, in that equation, so I don't see the bottom falling out of this. I certainly see a softening of the prices as we go into 2017, if the prices stay as they are today.

Mr. KELLY. Mr. Buzby, do you have a comment on that?

Mr. BUZBY. I would just say that over the years, many farmers for decades have been farming and have done well, and have very solid balance sheets. The softening in land prices that we have seen does present opportunities for some of those farmers to purchase additional land, so I think that provides a bit of support that should prevent a similar crisis to what we saw in housing.

Mr. KELLY. I thank the witnesses again, and Mr. Chairman, I yield back.

The CHAIRMAN. Thank you.

I now recognize the gentlelady from Arizona, Mrs. Kirkpatrick.

Mrs. KIRKPATRICK. Thank you, Mr. Chairman, Ranking Member Scott.

I want to follow up on my colleague's comments about the veterans for farming. I visited, Dr. Featherstone, one of those programs in Arizona where the veterans come, they live on the farm, they learn to grow a certain crop, and then presumably go out and farm. But in talking with them, they are not from wealthy families. They come back from the wars with no assets, no home. Some of them don't even own a car. And so my question is not just for you, Dr. Featherstone, but the entire panel. Are you aware of any programs specific for veterans that would lend them money to buy a farm and operating capital when they have no assets?

Let's start with you, Mr. Buzby, and we will just go down the line.

Mr. BUZBY. Well I think that is challenging. I did allude earlier to the USDA and some of the programs that they have for beginning farmers; however, they continue to be under financial pressure and staffing pressure. I have recently visited a number of states where you see the administration of the FSA and other USDA programs throughout the country, and in certain states, that functions better than it does in other states. So, from a service perspective, the funding of those USDA programs, the staffing of those programs, and a focus on making them successful is critical.

Mrs. KIRKPATRICK. Dr. Featherstone?

Dr. FEATHERSTONE. In some respects it is very hard for the asset acquisition, and in some respects that is where the match of who the mentor is in terms of whether or not they can set up some type of sharing-type process through that mentorship. But it is probably going to be a long process, which isn't all that unusual for individuals that are in a family farm. Many years they work for their parents, who hopefully are their mentors, and at some point take over. And so typically, it has been a long process in agriculture to acquire those assets to begin to take the lead and manage them.

Mrs. KIRKPATRICK. Mr. Nelson?

Mr. NELSON. Yes, obviously a difficult situation when we start looking at lending to the next generation, but I do think there are creative ways to accomplish that as you look at staging and potentially lending to young farmers or next generation farmers, by relying on the equity and support of the family, and so there are definitely ways to accomplish that task.

Mrs. KIRKPATRICK. Yes, I am really concerned about this and maybe the Committee can look into it more. Because in talking to these young people, they definitely have the desire to farm, and evidently, according to your answers, it really would be almost impossible for them to purchase land.

But let's assume then that they find something they can lease. Do you approve leases before you consider lending operating capital? And again, just go down the line. I am just curious about how that works.

Mr. BUZBY. At Farmer Mac we lend money to owner operators, those who buy a farm and operate it themselves. We also lend money to farmers that lease their land out. Generally, we have not seen to date challenges with getting land leased. As land values have come down, and the profitability for farmers who are leasing land comes under pressure, there will be demand by those operators for the rental lease payments to come down, which adversely affects the landlord who we have lent money to. So there is a balance there that needs to be struck, and as multi-year leases that are 2 or 3 year leases come due, there will be pressure on those landlords to reduce rents to the operators.

Mrs. KIRKPATRICK. Let me just follow up. Would it be possible, say, for a first time veteran farmer then to get operating capital on a lease through your company?

Mr. BUZBY. Not through Farmer Mac, no. We lend just on real estate.

Mrs. KIRKPATRICK. Dr. Featherstone?

Dr. FEATHERSTONE. I work for a university, so we don't lend.

Mrs. KIRKPATRICK. Oh, that is right. Mr. Nelson, you are in the private-sector?

Mr. NELSON. From CHS Capital's standpoint, we do offer coverage for lease payments, so it is an option certainly in an operating line to finance those kinds of expenses.

Mrs. KIRKPATRICK. I am really concerned. We train them, they have the desire, but then the door closes because they can't get the capital to buy a farm or to operate. That concerns me, Mr. Chairman and Ranking Member.

My time is running out, but I just want to ask if any of you, who typically buys farmland that is up for sale, and do any of you have a concern that we might run into a deficit in this country in terms of having farmland that is actually being farmed?

Why don't we start with you, Mr. Nelson, and we will go down the row the opposite way.

Mr. NELSON. Yes, surprisingly, we just typically don't see a lot of farmland go on the market, even with the situation we are in today. A lot of times it is neighboring farmers that look to expand their farm that are taking advantage of those opportunities. We have had a lot of farmland come into production during the good times when we had $7 corn, so there are significantly increased

acres being farmed today. So I don't see that as a concern or shortage, going forward, to meet the demand.

Mrs. KIRKPATRICK. As my time has run out, does anyone differ with that answer?

Okay, thank you, Mr. Chairman. I yield back.

The CHAIRMAN. I now recognize the gentleman from Texas, Mr. Neugebauer, for 5 minutes.

Mr. NEUGEBAUER. I thank you, Mr. Chairman.

Recently, I have had conversations with some of the bankers in my district and some of the farmers, and one of the things that we are hearing, and it is unfortunate that some of those farmers are not being able to renew their loans at the bank. And so they are being referred to FSA to see if they can arrange their financing.

The question I have is what kind of trends are you seeing in that direction, and also what are the long-term consequences of people being forced to move out of traditional financing availability?

Mr. BUZBY. The example you give is a very good one, and something that we hear quite often here very recently is that an operating lender is unwilling to renew an operating loan. The farmer is unwilling to pay it back, and what often happens is they then refinance their land, their mortgage on their real estate to include the operating loan. Hopefully in those cases, lock in a long-term fixed rate where rates are now, but oftentimes because of the qualifications and credit underwriting standards, they are not able to be served in the traditional markets and do turn to USDA, sometimes with hybrid financing through a private lender and USDA, and sometimes just with an FSA loan.

Mr. NEUGEBAUER. Anybody else want to comment on that?

Mr. NELSON. I will just comment on what we are seeing in CHS Capital. It is mid-April, well past the day when we should be seeing applications for operating lines, and we are seeing many come in today that have been turned down by other financial institutions. So it is definitely a concern, and there are farmers that are looking for ways still to finance their operation for 2016.

Mr. NEUGEBAUER. The issue that we have been kind of talking about, particularly with the land and something that you mentioned, your customer that farms 36,000 acres in Texas, most likely could be in my district. And that very important question, who is going to farm this land in the future? And what we have seen in agriculture, particularly in my part of the world, is consolidation. My wife grew up on a cotton farm in west Texas, and that family farmed a ½ section, ¼ section, and they made a living doing that. And those days are over, so the farms are bigger, the risks are larger, the capital requirements are larger, and some people are renting. I don't know that 36,000 acres, if he owns all that land or he probably owns some, and leasing some.

But the question is in the future, who is going to have the ability to absorb that? Because we have seen quite a bit of consolidation, and as the gentleman from Georgia pointed out, the 59, 60 year old farmers, at some point in time, they finally say, "I am not going to do that anymore."

Mr. NELSON. Yes, I would like to continue with my example with the Texas farmer. He had mentioned that he took on 2,000 more acres a couple years ago because the farmer couldn't continue, but

at the same time, what he is saying about 2016, he said we are set up for failure. Right now with average prices and average yields, we will not be able to pay back our operating loan in 2016.

So the question becomes if things continue as they are, what does happen to the extra farmland that comes up for lease or purchase? There is definitely going to be a reduction in rent values or a reduction in some real estate values to actually make that work out in the future farm.

Mr. NEUGEBAUER. Yes, some of the farmers, just like the one in your example, have told me, "You know what, Randy? This year I am going to turn back some acres." He said I just can't make the numbers work.

One of the interesting things, and I was in the banking business from 1975 to 1983, and we were in a different regulatory environment back then, and our bank was a pretty large agricultural lender. We carried over farmers from year to year and sometimes probably when we shouldn't have, but we knew those people. Today's environment is such that with the regulatory environment, those days are over if you can't show the cash flow and you can't show the equity, just from a regulatory perspective, those lenders can't continue to do that. And, as we see folks move to FSA at some point in time, if the numbers don't work for the conventional lender, it is going to be difficult for the FSA to continue with some of those.

So the crop insurance piece is an important piece of it, and one of the problems we have in west Texas with cotton is that there really is no price protection built into crop insurance. And so it doesn't matter whether you can make a crop or not. If you make it and you can't make any money doing it, then the crop insurance has not really done you a whole lot of good.

With that, Mr. Chairman, I yield back.

The CHAIRMAN. I now recognize the gentleman from Arkansas, Mr. Crawford, for 5 minutes.

Mr. CRAWFORD. Thank you, Mr. Chairman. I appreciate you allowing me to sit in today.

I want to talk about crop insurance, and I know that that is important from the standpoint of lenders, analyses in preparing crop loans and things of that nature. I will put my parochial lenses on here and talk about my district for just a little bit. My district is home to about ½ of the U.S. rice crop, and crop insurance is really kind of a tough sell. We are pretty heavily irrigated, as you would know, from rice production, and so they spend that money in investing and irrigation, and rice is an expensive crop to produce. And then another issue that is sort of problematic for rice producers with respect to how they secure or provide a little risk management is that price discovery is difficult. The rice market is very thinly traded, and it makes it expensive to try and hedge for the average farmer. So using those types of risk management tools are difficult.

Mr. Nelson, I will start with you. If you might have some suggestions on where they should go, and your crop insurance products, the actuary base for rice is somewhere around $3 million. That makes it cost prohibitive to a large degree. But what would you recommend as maybe a new approach?

Mr. NELSON. There is no question that crop insurance adds a critical benefit to both farmers and to lenders, but it doesn't for the widespread crops. It is not covering all crops, as you mentioned on rice. There are certainly issues, what I am hearing from a cotton perspective as well. So, as we look at the new farm bill, we need to look at how that program can be enhanced to create a greater safety net for our producers. And some of that has to be not so much price driven potentially in the future. Obviously as we see prices drop, the level of coverage in that safety net has declined as well. So, we need to look at creative ideas beyond just price and expand the coverage so it reaches more crops as well.

Mr. CRAWFORD. Mr. Buzby, any thoughts?

Mr. BUZBY. I would say research and hearing from producers themselves, what protections they are looking for. As lenders, we look through a slightly different lens. We are looking for the ultimate ability for that farmer to be able to pay back their loans. The farmers themselves are looking for ways to fund their operations, finance the capital needs for their operation, but also to sustain their family's sustenance.

So, they may look at it slightly differently, so I would encourage hearing from farmers themselves and producers, as opposed to just lenders and others.

Mr. CRAWFORD. Dr. Featherstone, you are an economist, correct?

Dr. FEATHERSTONE. That is true.

Mr. CRAWFORD. Let's hear your economist perspective.

Dr. FEATHERSTONE. The key thing with crop insurance is to allow producers to have choice and to have different types of products, and experiment a little bit.

One of the things that some other countries are working with is some weather type insurance contracts where they will end up basing the payments out based on rainfall or other types of weather-type phenomena. With the increased technology that we have to measure sunlight, rainfall, those types of things, those might be something to look at down the road.

Mr. CRAWFORD. I am concerned, in the broad sense, that we are looking at crop insurance as sort of the panacea for agriculture, and if we tweak it enough, we will be able to come up with something that works. I think that we may be going down a road where we think we can just insure ourselves into prosperity for the ag economy.

Mr. Nelson, your thoughts on that?

Mr. NELSON. I agree. We look at crop insurance strictly as that worst case situation as a lender, and it provides us with some assurance that the downside number risk is going to be "X" amount using insurance. So it is not going to solve the problems.

Mr. CRAWFORD. My other concern, quite frankly, is we talk about some of the policy, amendments to the farm bill that were introduced that address the AGI and that also address active engagement, that in effect what we are really creating is a dynamic that almost forces consolidation.

As an economist, Dr. Featherstone, do you see that?

Dr. FEATHERSTONE. Certainly, there can be those concerns. The key thing that we have to get back with insurance is it prevents downside risks or helps manage that. We have gotten into a situa-

tion where it is a profitability or an income enhancement, and I didn't collect my life insurance last year, and I am very glad that I did not.

Mr. CRAWFORD. Exactly. Exactly, and that is why I think we need to rethink our approach to that. I appreciate you being here, and I yield back.

The CHAIRMAN. I will now recognize the former Chairman of the Committee, Mr. Lucas, for 5 minutes.

Mr. LUCAS. Thank you, Mr. Chairman, and I appreciate that, and no one has described me as having a key role in this mess, so I appreciate the kindness of my colleagues.

Dr. Featherstone, I will turn to you first. Of course, your colleagues at the table can comment if they care to. I apologize for being slightly late. There has been discussion about how commodity prices have affected land prices, and it is impacting people's ability to sell.

But just as important as it is for primarily our older farmers to be able to harvest that lifetime of equity, which is, in many cases, the equity in their most recent capital asset, their farms. There is also the issue about producers, both beginning and established and senior, not being able to tap that perceived equity to operate their businesses. Because after all, every banker smiles if your farm is paid for or mostly paid for, or a high percentage paid for.

Let's discuss for a moment about how commodity prices have affected land prices and how that is affecting day-to-day operations on producers who use that as their piggy bank, so to speak?

Dr. FEATHERSTONE. Yes, certainly essentially with the run up in land values, I think there are a couple of important aspects. First, is that it increases the barrier of people wanting to enter the farming profession. And so from that perspective, there are always two sides to a coin in terms of whether or not you are buying or whether or not you are selling.

The other thing, and it will be interesting to see over the next couple of years in terms of just what costs are out there than can be pulled out of the sector. One of the things we have seen in Kansas is essentially a 20 to 25 percent increase in variable costs. Some of that is normal economics. When prices are high, you are going to spend more to get that last bushel out. When prices are low, there are going to be adjustments made and over the next couple of years, we are really going to see just what that cost structure is in terms of my brother-in-law's farm. And what they ended up doing is they ended up paying for someone to spray to get it timed more correctly. However, in this environment they may decide we are going to do it ourselves, or maybe we are not going to go for quite that yield level, given the price outlook.

Mr. LUCAS. Well put, Professor.

I represent, of course, a district that has a huge amount of state border with the great State of Kansas, and I always remind the folks who are not from our region of the country that Mr. Steinbeck's book about the 1930s was not an agricultural economics text. It was a social statement. With that said, in the lifetime of myself, my parents, and my grandparents, we have had a number of great catastrophes in the South Plains: the Depression of the 1930s and the great drought of the 1950s, the economic meltdown

of the early 1980s, and now hopefully it is broken, the drought in my own area from 2011 through 2014.

Some of those things we cannot help. Mother Nature is Mother Nature, the weather is the weather. But the other issues, such as the 1980s and the 1930s, were bad Federal policy almost destroyed entire generations of farmers. That is something we can do things about.

We have talked here today about the challenge in commodity prices. We have discussed the nature of the safety net that insurance is supposed to provide, either through yield issues or price issues, depending on which commodity you are grouped in, and it is not all universal. But isn't it fair to say, doctor, that a little bit of the challenge we face is the combination of things that this Committee doesn't control? For instance, the requirements for ethanol, renewable fuels, which perhaps drove the consumption of certain feedgrains, perhaps at a steeper pace than should, now looking back, have been appropriate. Then combine that with God awful weather events, the 2012 failure in the Midwest of the corn crop that led to $7 corn, which then drove the decisions as acres were coming up for renewal in CRP. We are dealing with things here that are not just the farm bill, isn't a fair statement, doctor, the weather, policy decisions and other committees, international trade issues. The cotton folks are suffering from a WTO case that perhaps was not in their best interest, but all those factors together created the situation we are in now.

Dr. FEATHERSTONE. I would concur, and one of the things that concerns me most is not within the agricultural sector. It is just the value of the dollar, and the macroeconomic effect.

Simply to give a little bit of indication, if you were in Brazil, based on the value of the real, you could consume as if you were producing about $14, $15 beans, where in the U.S. we are looking at $7, $8 beans. So certainly a lot of what is going on here is outside the agricultural policy realm that this Committee focuses on.

Mr. LUCAS. Yet there are things that we have to deal with on the Committee, you as a policy developer have to try to address, and ultimately, our constituents in Oklahoma and Kansas put their very capital and life on the line.

Humor me just one more moment, Mr. Chairman. The old adage amongst the country economists, the folks at the feed store is the answer to price is price. Seven dollar corn drove planting decisions that have now reduced corn by essentially ½. But again, the answer to price is price. As you noted earlier on inputs and the over exuberance to spend on investing in the crop, we will now see that drop, so we will go through a rebalancing at some point. I would just note to the esteemed Chairmen of this Committee and Subcommittee that perhaps we have to take a look at those CRP authorized acres again over the course of the next couple years. We don't want to waste resources, and soil is our most valuable resource.

That said, Mr. Chairman, I yield back, and thank you for the hearing today.

The CHAIRMAN. Thank you, Mr. Chairman.

I have one final question. I want to go back to the fact that while we are talking a lot about the farmer, it is not just the farmer. It

is the whole rural economy. It is the person who sells the seed and the fertilizer. In cotton country, it is the gins. Tractor dealers certainly are directly impacted by it. Local car dealers are impacted by it. Local banks are impacted by it. Local restaurants are impacted by it. Certainly if things are good on the farm, then things are good with regard to the rural economy in this country, and if things are bad on the farm, things are tough for the whole rural economy.

Mr. Nelson, one of the things that people outside of agriculture may not fully understand is that if you can't obtain your operating loan, what that actually means to farmers, and therefore, that rural economy. Can you explain the end result if a farmer is unable to obtain an operating loan?

Mr. NELSON. There is no question of the negative impact to the community. This is a far reaching problem that goes beyond just a farmer that is having trouble financing his operation. And we are already seeing the impact. We are seeing the impact with local cooperatives who are struggling or the margins are being compressed. We are seeing, as you mentioned, with the machinery dealerships who are not selling new equipment. And so this is a far-reaching problem that goes down Main Street in the rural communities. And obviously, the operating lines are the key for farmers to get in the field, to finance the crop inputs, finance planting, finance the harvest of the crops. And farmers, as I mentioned before, are having difficulty finding operating lending in 2016, and that will have a far-reaching impact through rural communities.

The CHAIRMAN. Most of the cotton pickers that run in Georgia are made in Iowa, and even though you don't grow any cotton in Iowa, certainly that means that they are directly tied to the cotton economy.

With that said, I would yield to Mr. Scott from Georgia for any closing statements or final questions he may have.

Mr. DAVID SCOTT of Georgia. Yes, thank you, Mr. Chairman. This has been, perhaps, the most important hearing that we have had this year, because finally we are touching on what is the real crisis facing agriculture and farming. And Mr. Nelson, Dr. Featherstone, Mr. Buzby, each of you I congratulate you on the depth and knowledge that you have of the crisis that our farmers are facing with this terrible collapse of the net income of farming and the rising categories of debt that they have. At what point, and no wonder, as some of the other Members of the Committee have pointed out, family members have no choice. They can't even go on and continue the family farm.

The greater tragedy of this is the American people's only familiarity with farming and agriculture is Publix or Kroger's. We go there and that is about as close as we get to farming. And, Chairman Scott, I commend you on pulling this hearing together because, hopefully, we are hearing what I call a Paul Revere moment. He went around and said, "The British are coming, the British are coming!" Well we are saying right here that trouble is coming to our nation if we don't address these critical issues of agriculture and farming in our country, beginning farmers, the cost of it, the inability to keep up with it, and woe to this country if we don't ad-

dress it and become more and more dependent on foreign nations for our food. Man, if we ever get to that point, we are truly done.

So Mr. Chairman, thank you and I just want to say that when our farmers have had trouble before in this country, particularly going through the 1920s and then into the Depression, the Congress and the Federal Government rose to the occasion and helped our farmers. Whether it was for the boll weevil or what the farmer was facing, and this is our challenge at this crisis to rise to the occasion. It is not just the finances. You have that enough on the farm. But as Mr. Kelly pointed out, you have over-regulation like the WOTUS rule coming at them. We have to address these issues, Mr. Chairman. I thank you for this hearing, and I thank the panel members.

The CHAIRMAN. I certainly agree with my colleague from Georgia. Americans have never been dependent on a foreign country to produce our food supply, and I hope that we never are. I think that one of the charges of the Agriculture Committee is to make sure that we are able to keep good farmers, good families on the farm out there producing the food supply that we as Americans need and are dependent on, and I just pray that we are never dependent on any foreign source for our food supply in this country.

And with that, under the Rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional materials and supplemental written responses from the witnesses to any question posed by a Member.

This hearing of the Subcommittee on Commodity Exchanges, Energy, and Credit is adjourned.

[Whereupon, at 11:17 a.m., the Subcommittee was adjourned.]

FOCUS ON THE FARM ECONOMY
(FACTORS IMPACTING THE COST OF PRODUCTION)

WEDNESDAY, APRIL 27, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON BIOTECHNOLOGY, HORTICULTURE, AND RESEARCH,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:33 a.m., in Room 1300 of the Longworth House Office Building, Hon. Rodney Davis [Chairman of the Subcommittee] presiding.

Members present: Representatives Davis, Thompson, Yoho, Moolenaar, Newhouse, Conaway (*ex officio*), DelBene, McGovern, Kuster, and Peterson (*ex officio*).

Staff present: Haley Graves, John Goldberg, Mykel Wedig, Stephanie Addison, Faisal Siddiqui, John Konya, Keith Jones, Liz Friedlander, Matthew MacKenzie, Mike Stranz, Nicole Scott, and Carly Reedholm.

OPENING STATEMENT OF HON. RODNEY DAVIS, A REPRESENTATIVE IN CONGRESS FROM ILLINOIS

The CHAIRMAN. This hearing of the Committee on Agriculture entitled, *Focus on the Farm Economy: Factors Impacting Costs of Production,* will come to order. And good morning to everyone. Thank you to all the witnesses. Some I am very familiar with; others I am not. I look forward to hearing your testimony.

Two weeks ago, the Agriculture Committee commenced a series of hearings focused on the farm economy. Each Subcommittee has been tasked with highlighting issues within their respective jurisdictions that impact the economic well-being of rural America.

In the Biotechnology, Horticulture, and Research Subcommittee, we have spent considerable time discussing programs and policies that impact specialty crop producers. We have highlighted research, education, and extension programs that contribute both to the safety and security of our food supply, as well as benefit farmers by increasing efficiency, productivity and profitability. We have promoted the development of local and niche markets for farm products, and considered the opportunities and challenges for direct marketing. We have drawn the relationship between ag security and our national security through an examination of our defenses against the introduction of foreign pests and diseases.

We have also engaged the next generation of leaders participating in the nation's largest youth development program, 4–H, in

an ongoing dialogue to enhance relationships between rural and urban communities. These youth leaders, 18 of our nation's best and brightest, most recently visited with the Subcommittee to provide their insights into how we might improve the outlook for agriculture through education and outreach.

While much of the work we have done as a Subcommittee has brought positive attention to the role of government programs and policies which assist rural America, we have also spent some time investigating policies that negatively impact producers.

In a hearing more than 2 months ago with EPA Administrator McCarthy, Members engaged in extensive questioning regarding actions her agency has taken which impose considerable costs with questionable, if any benefits. Following this hearing, the Committee submitted additional questions for the record. In fact, Committee Members, both Republican and Democrat submitted approximately 36 pages of questions to the Agency for which we have yet to receive a single response. I wish I could say the Agency's apparent lack of regard for American agriculture is an anomaly, but history tells us otherwise.

I had an amendment in the 2014 Farm Bill which would establish a permanent subcommittee of the EPA Science Advisory Board to ensure the voice of agriculture was represented in the Agency's decision-making process. Not surprisingly, more than 2 years later, the EPA leadership has yet to appoint even a single member to this Committee. The result of this disregard for the law is a continuing flood of decisions and actions contrary to the needs and desires of America's farmers and ranchers.

Unfortunately, it is not just the policies of the EPA that add unreasonable production costs. The implementation of the Food Safety Modernization Act will pose enormous challenges for producers and processors with little evidence that some requirements will offer quantifiable food safety benefits. We have often spoken about the threat of the ill-conceived Vermont law governing agricultural biotechnology, yet we are also concerned about what many observers believe is unnecessary regulatory hurdles researchers must go through to bring new applications of biotechnology to the market. As anyone can plainly see, the list of overly burdensome regulations threatening the farm economy is apparently endless.

Today, the Subcommittee will focus more broadly on many of the factors that contribute positively and negatively to the cost of production for our nation's farmers and ranchers. While the farm safety net helps somewhat mitigate the impact of chronically low prices, our nation's farmers continue to operate on very thin, and in some cases, as I hear from my constituents, negative margins. Going forward, their ability to contain costs will be key to their survival, particularly if low prices exist and persist.

We have invited a distinguished panel of leaders from industry and state government to provide their insights into the challenges facing our producers along with actions that can be taken to enhance the rural economic outlook. The record that is created today will be extremely beneficial in directing future oversight as well as development of the next farm bill. Thank you again, each of you, for being here today.

I do want to say something very briefly too. I am very proud to serve with my Ranking Member, Ms. DelBene. She has been a great partner in all of these Subcommittee hearings that we just talked about, and really, it has been a pleasure to work in conjunction. While we may not agree on every issue, it is part of the Agriculture Committee's history that we are just not disagreeable.

[The prepared statement of Mr. Davis follows:]

PREPARED STATEMENT OF HON. RODNEY DAVIS, A REPRESENTATIVE IN CONGRESS FROM ILLINOIS

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I now yield to the distinguished Ranking Member, Rep. DelBene for any comments she wishes to make.

The CHAIRMAN. Now, I am going to turn it over to my Ranking Member, Ms. DelBene, for her opening statement.

OPENING STATEMENT OF HON. SUZAN K. DELBENE, A REPRESENTATIVE IN CONGRESS FROM WASHINGTON

Ms. DELBENE. Thank you, Mr. Chairman, and it has been a pleasure to work with you as well. I want to thank all our witnesses for being here with us today, and I want to thank the Chairman for holding today's hearing on the farm economy.

It is critical that we continue to identify the challenges that are facing farmers and ranchers today, especially as the Committee begins to consider the next farm bill.

I am honored to represent a district very rich in agriculture. The farmers I meet are proud of what they do, and they should be.

When I first came to Congress and in the time leading up to the 2014 Farm Bill, I often heard a familiar refrain from farmers in my district. They said they need two things: get a farm bill done and pass comprehensive immigration reform. Passing the 2014 Farm Bill itself was a huge accomplishment, but it was also, in my view, one of the best farm bills we have ever had for specialty crop growers, which make up a sizable percentage of the producers in my district. The investments made in programs like the Specialty Crop Research Initiative, Specialty Crop Block Grants, and the Organic Research and Extension Initiative were unprecedented and they have a huge impact in the real world. This is a prime example of how Congress should be investing in programs that give us a great return on our investment while saving money in the long run.

Recently, Chairman Davis and I wrote a bipartisan letter in support of the National Institute of Food and Agriculture. Unfortunately, Congress hasn't appropriated funding at the levels authorized in the farm bill, and in the last 4 years the Agriculture and Food Research Initiative review process identified $3.85 billion in grants worthy of funding. However, due to budgetary constraints, the program awarded only ¼ of the projects that were deemed worthy. This research is a critical unmet need that vastly assists producers with pests, emerging diseases, and food safety; and ultimately lowers the cost of production, which brings me to the second thing that farmers I represent said they needed most: comprehensive immigration reform.

Our immigration system is broken and badly in need of repair. Last Congress, I was one of the lead sponsors of a bipartisan comprehensive immigration reform bill similar to the one that passed in the Senate, and I believe this bill would have passed if it was just allowed a vote, and while the President's executive actions could provide relief to some, it does nothing to solve the problem of the unworkable H–2A program. For too long, Congress has failed to take meaningful action to address our broken immigration sys-

tem, and as a result, we have a deeply flawed system that is not working for our farmers, for businesses, for immigrants, or for families.

I see it all across our state and particularly in my district. Farmers can't get the seasonal agricultural workers they need to support one of our state's largest industries. Students face uncertain futures in the only country they have ever really known. Technology businesses still don't have the access they need to the global talent pool that could help create the next major innovation, and families are being torn apart.

So despite these setbacks, I remain committed to passing comprehensive immigration reform, and I will keep working with my colleagues on the Agriculture and the House Judiciary Committees to get this done. Passing enforcement-only mechanisms like border security only or e-verify only would do nothing to solve the problem and may make things even worse.

That being said, producers face a wide variety of challenges today, especially in the current agriculture economy. Today's panel of witnesses spans a variety of perspectives including Northwest horticulture from Washington State, so I look forward to hearing all of your testimony. Thank you again for being here today, and I yield back.

The CHAIRMAN. I would like to welcome again our witnesses to the table to give their opening statement. I would remind Members that they will be recognized in order of seniority for Members who were here at the start of the hearing, and after that, Members will be recognized in order of their arrival for a 5 minute time period, and I would appreciate too that the oral statements, since we have so many witnesses, to remain within that time window too. You'll hear me tap if we start to go a little over that.

Let's start down here at this end. The Honorable Charles Conner, President and CEO, National Council of Farmer Cooperatives here in Washington, D.C. Mr. Conner, please proceed with your testimony.

STATEMENT OF HON. CHARLES F. CONNER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL COUNCIL OF FARMER COOPERATIVES, WASHINGTON, D.C.

Mr. CONNER. Chairman Davis, Ranking Member DelBene, and Members of the Subcommittee, thank you for holding today's hearing. I am honored to be here on behalf of America's nearly 3,000 farmer-owned cooperatives and their nearly two million producer owners. I applaud the Subcommittee, and the Committee as a whole, for taking a deeper dive into the broad range of factors impacting the farm economy. This fact-finding will enhance, I believe, prospects for completing a new farm bill in the future.

The focus on factors influencing the cost of production is especially timely. As we work our way through the bottom of a price cycle, producers are looking to improve their margins in any way possible. In today's ag economy, the difference between making small profits or big losses is controlling your costs down to every penny. Producers know that many of these costs are beyond their control. Some are driven by markets, others by Mother Nature.

But some costs are also driven by public policy. These policies can act either as investments that help lower costs or as regulatory hammers that raise them. I would like to touch briefly on both.

Investing in research and fostering innovation falls in the former category. The improved efficiencies producers have captured in the last 30 years are based on strong research. These advances have helped to increase productivity and reduce the cost of production. With the support of this Subcommittee, vital research initiatives have provided essential knowledge and innovation to combat pests, address food safety, comply with environmental regulations, and enhance nutritional value. NCFC strongly believes research is key to providing long-term solutions to agriculture's challenges.

One important advance of the past few decades warrants special mention today: agricultural biotechnology. The United States has been a leader in enhancing sound public policy and a rational science-based regulatory structure to promote the development and use of biotech crops. We hope that our country will continue this leadership as new advanced plant-breeding techniques look to enter the marketplace. They hold enormous promise and are uniquely accessible to public and commercial breeders. They also can be used on almost all crops, including specialty crops.

As these new innovations move forward, all of us in agriculture must also develop a thoughtful approach for bring these technologies to the marketplace and talking to consumers about them. Getting things right could mean cost savings across a broad swath of agriculture and better future food production. But a range of Federal regulatory actions could artificially raise costs as well. These regulations deal with the environment, immigration, labor, and food safety. They create an uncertainty that holds back investment and growth across agriculture. These also hit small family farms and small agribusinesses the hardest. My written testimony contains a long but by no means complete list of regulations impacting farmers and their co-ops. In the interest of time, I will not go into each one of them now but will be happy to take any questions specific to our recommendations.

At the same time, agriculture is not automatically against regulation. There are many examples of regulatory agencies working together with stakeholders to develop targeted, sensible programs to address common goals. Such a process, however, oftentimes requires more resources than simply imposing top-down regulations, and it certainly depends upon public confidence in our regulatory agencies.

Finally, it should also be noted that farmers and ranchers and cooperatives face regulation imposed upon them by others beyond government. We commonly refer to what is called regulation by retail. Many food companies and retailers are asking much more of our farmers and co-ops in terms of sustainability, animal welfare, and other issues.

Agriculture has a great story to tell. USDA and the Subcommittee have played an important role in public education about agriculture, and we certainly hope, Mr. Chairman, this work continues.

In conclusion, at a time when producers across the country are facing the lowest commodity prices in over a decade, we must find

ways for producers to grow and to proper. Research and innovation are key to doing this, but we also must reduce any unnecessary regulations and uncertainty that will hold back investment and growth.

Thank you for the opportunity to testify today, Mr. Chairman, and I look forward to your questions.

[The prepared statement of Mr. Conner follows:]

PREPARED STATEMENT OF HON. CHARLES F. CONNER, PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL COUNCIL OF FARMER COOPERATIVES, WASHINGTON, D.C.

Chairman Davis, Ranking Member DelBene, and Members of the Subcommittee, thank you for holding today's hearing on the farm economy and factors impacting cost of production.

I am Chuck Conner, President and Chief Executive Officer of the National Council of Farmer Cooperatives (NCFC). NCFC represents the interests of America's farmer cooperatives. There are nearly 3,000 farmer cooperatives across the United States whose members include a majority of our nation's more than two million farmers. NCFC members also include 22 state and regional councils of cooperatives.

Farmer-owned cooperatives are central to America's abundant, safe, and affordable food, feed, fiber, and fuel supply. Through their cooperatives, farmers are able to improve their income from the marketplace, manage risk, and strengthen their bargaining power, allowing individual producers to compete globally in a way that would be impossible to replicate as individual producers.

By pooling the buying power of hundreds or thousands of individual producers, farmer cooperatives are able to supply their members—at a competitive price—with nearly every input necessary to run a successful farming operation, including access to a dependable source of credit. Furthermore, farmer cooperative members also are able to capitalize on new marketplace opportunities, including value-added processing to meet changing consumer demand.

On behalf of my members, I thank this Subcommittee for ensuring public policy continues to protect and strengthen the ability of farmers and ranchers to join together in cooperative efforts in order to maintain and promote the economic well-being of farmers, ensure access to competitive markets, and help capitalize on market opportunities.

I also applaud this Subcommittee and the Committee as a whole for taking a deeper dive into the factors influencing the farm economy. This early action and educational focus by the House Agriculture Committee will enhance prospects for completing new farm bill legislation when the time comes. Even though every farm bill takes its own unique path to final enactment, one fact of the process remains the same: it has to start somewhere and the sooner the educational process starts, the better.

As this work begins, it is imperative that Federal policies provided by the farm bill promote an economically healthy and competitive U.S. agriculture sector. These programs serve a variety of purposes, including: meeting the food, fuel, and fiber needs of consumers worldwide; strengthening farm income; improving our balance of trade; promoting rural development; and creating needed jobs here at home.

In examining the dynamics of the farm economy, we are reminded that numerous influences—some of which are out of our control—come into play. Extremely volatile weather and global markets result in equally volatile farm gate prices, yields, and costs of production. Today's margins for most agricultural commodities are tight, and farm income has retreated significantly from its highs just a few years ago. Our common, ultimate goal—and at the heart of the farm bill—is to preserve the productive capacity of our farms by maintaining a responsive and equitable safety net, combined with adequate funding, for all regions and commodities, as well as comprehensive risk management tools, such as a strong crop insurance program.

On behalf of my members, I also appreciate this Subcommittee's support and investment to keep U.S. specialty crop production strong, including research to enhance competitiveness and further document health benefits, and in the prevention and treatment of plant pests and diseases that could harm domestic production and international trade.

Today, I wish to highlight the positive role this Subcommittee can have on the farm economy in several areas, including a focus on research and fostering innovation, oversight on regulatory issues impacting the cost of production along the value chain, and a renewed commitment to market promotion and accessibility.

The Value of Research

American agriculture has long been at the forefront of meeting the world's ever expanding needs for food, feed, fuel, and fiber. Many factors have contributed to the unparalleled success of American agriculture, but one of undeniable importance has been the expansion of food production enabled in large part by science-based advances in food and agriculture. Improved efficiencies begin with a foundation based on strong research.

With the support of this Subcommittee, vital research initiatives have provided essential knowledge and innovation to combat pests and diseases, address food safety and security issues, comply with environmental regulations, and enhance the nutritional value of certain crops. According to the National Coalition for Food and Agriculture Research, of which I currently serve as chair, this tremendous pay-off of public investments in agricultural research and education over the past 50 years amounts to $3,400 of savings on the average American family's food bill. Additionally, the beneficial impact of the vital funding that effective agricultural research can deliver has been identified as a 30 to 1 return on investment for the American taxpayer.

Thanks to the contributions of agricultural research, we have a more affordable, healthier, safer, and more sustainable food, feed, fuel, and fiber supply. NCFC strongly believes an important ingredient in providing longer-term solutions to American agriculture's challenges is increased support for food and agricultural research, and we look forward to working with Members of the Subcommittee to build greater opportunities for advancements through research in the years to come.

Specialty Crop Research Initiative

Of specific interest to this Subcommittee is the Specialty Crop Research Initiative (SCRI), a program supported broadly within the sector. The SCRI program was established to meet the unique needs of the specialty crop industry by supplying grants to support research and extension. In particular, the SCRI Citrus Disease Research and Extension Program (CDRE), which was authorized by the 2014 Farm Bill, awards funds to conduct research, extension activities, and technical assistance to fight citrus diseases and pests, such as Huanglongbing (HLB), commonly referred to as citrus greening.

This research is vitally important as citrus greening is responsible for devastating losses in the citrus industry, threatening its future viability. A solution is desperately needed as it has already destroyed millions of citrus acres across the U.S. Once a tree is infected, there is no cure; research must get out ahead of this disease before it is too late. This is just one of the many examples of the importance of agricultural research programs and its integral relationship to the success of the industry.

Fostering Innovation & Next Generation Technologies

Inextricably tied to advancements made with research, agricultural innovation is important to all Americans because it enables plant and animal producers to increase productivity of healthful food using less land, while conserving soil and water and reducing on-farm energy consumption. These benefits are passed on to consumers in the form of an affordable and nutritious food supply, a healthy environment, and a strengthened rural economy.

Growers across the country are using new equipment and information systems to improve efficiency and increase profits. Today, advanced technologies help ensure the most efficient use of fertilizers and chemicals, while modern tractors and combines use of state-of-the-art propulsion systems that more efficiently use diesel fuel. Agricultural biotechnology also is an important part of this mix.

In the U.S., biotech crops are ubiquitous and, in fact, represent "conventional" production agriculture as more than 90 percent of corn, cotton, canola, soybeans, and sugar beets grown contain at least one biotechnology-derived trait. Farmers are also choosing biotechnology to grow crops, such as alfalfa, papaya, apples, potatoes, and squash. The traits in all of these crops help farmers manage potentially devastating insects, weeds, diseases, and weather conditions.

Biotech crops contribute substantially to the rural economy by enabling farmers to produce more food in a more time efficient way while using fewer inputs. Globally, farmers growing biotech crops saw net economic benefits at the farm level amounting to more than $20 billion in 2013, the most recent year for which there is data, and more than $133 billion in the thirty years since biotech crops were first introduced. Of the total farm income benefit, 60 percent is due to yield gains.

Gains in productivity associated with biotech crops also have been essential in bolstering American agricultural trade, which totaled more than $130 billion in 2015.

Additionally, USDA's Economic Research Service (ERS) has published reports noting how the adoption of biotech crops by farm families is associated with higher off-farm household income. Two ERS studies, which I would like to submit for the record, highlight how biotech crops allow farmers to save time, which is then used to generate income from off-farm employment. One report highlights that a ten percent increase in the use of herbicide tolerant soybeans is associated with a 16 percent increase in off-farm household income. These statistics illustrate how more efficient farming practices, including the use of biotechnology, generate greater economic activity in rural communities.

Looking beyond what we think of as biotechnology today, advanced plant breeding techniques hold enormous promise for improving the productivity and environmental sustainability of food, feed, fiber, and biofuels. By applying newer methods, plant breeders can be more efficient and precise at making the same desired changes that can be made over a much longer period of time through earlier breeding methods. Because these new methods are efficient and economical, they are accessible to public and commercial breeders and can be used across all agriculturally important crops, including specialty crops.

As adoption of these new technologies spreads, the U.S. has an opportunity to be a leader in the global discussion over their regulation, just as it has, in many ways over the past thirty years with respect to enabling the research, development, and widespread commercialization of beneficial crops developed using agricultural biotechnology.

Given economic benefit related to the current set of biotech crops and the significant potential for the commercialization of crops derived from other innovative plant breeding techniques, it is essential that Congress consistently promotes policies that encourage innovation and ensure that Executive Branch actions—regulatory and otherwise—foster the growth of a strong 21st Century farming economy. We urge you to consistently monitor pre-market regulatory programs at USDA, EPA, and FDA to ensure that they are transparent, predictable, and science-based. This is particularly important as USDA reexamines its pre-market regulatory framework for biotechnology—a process that is ongoing and with which NCFC and a large group of stakeholders are actively engaged. We will want to keep in close contact with you to ensure new pre-market biotechnology regulations at USDA foster innovation and create an environment in which farmers of all stripes have access to the best seeds.

NCFC also thanks the full Committee for its work to establish national biotech food labeling standards, shepherding a labeling uniformity bill through the House of Representatives—a bill that gained overwhelming bipartisan support. We appreciate your work and will be back to see you soon once the Senate passes their version of labeling uniformity. On a similar note related to biotech crop detractors causing problems at the city, county, and state levels of government (as they have done with labeling), we would like to note our concern about local government bans on biotech crop cultivation and restrictions on the sale of biotechnology-derived seeds. This issue is another one we are monitoring carefully and may need to revisit with you at a later date.

Regulatory Impacts on Cost of Production—Issues Beyond Farm Policy

Beyond an investment in research and ensuring access to technology, we must also ensure that our public policy does not hurt the economic viability of farm and ranch families across the country. Often these issues are outside traditional farm policy and come from corners of the Federal Government that may not understand production agriculture. Yet a broad range of regulatory actions—those pending at Federal agencies or in the pipeline and coming soon to a farm near you—have the potential to increase the costs and reduce the margins of cooperatives and their farmer and rancher member-owners. Whether the regulations deal with the environment, immigration and labor, food safety, or financial reform, they can create an uncertainty that threatens to hold back investment and growth across the agricultural sector.

Over 20 million jobs across the country are directly or indirectly dependent on agriculture, and account for nearly $1 trillion or 13 percent of gross national product. If our agricultural sector can preserve its competitiveness in the global marketplace, we can grow this number and be a strong contributor to a growing economy.

Congress must ensure that the marketplace, not the Federal Government, determines the cost of production for America's farmers and ranchers. If our farms, ranches, and cooperatives are weighed down with costs imposed by either regulatory actions or delays in the regulatory process, farm income will decrease and market share will be lost to our competitors.

The U.S. Environmental Protection Agency (EPA) is often thought of first as the main culprit when it comes to regulatory actions impacting agriculture, and they have rightfully earned that dubious honor. From the expansion of the definitions of the '*waters of the U.S.*' rulemaking to outright circumventing the legal requirements under the Administrative Procedures Act (APA) when it comes to registration of crop protection products, the cumulative weight of their actions is cited by my members as a serious impediment to future investment in their operations and businesses.

Specific to crop protection, Federal laws dictate that the U.S. Department of Agriculture (USDA) serve as an important advisor to EPA in the regulation of pesticides. Historically, USDA's expertise and advice have been evident in the actions EPA has taken to evaluate pesticides and their uses. USDA's perspective and knowledge of production agriculture is critical since we know that crop protection products can increase farm yields as much as 40 percent to even 70 percent depending on the crop.

It should concern this Subcommittee to hear the farm community expressing increasingly urgent concerns about the lack of seriousness with which EPA takes and incorporates USDA expertise, advice, and opinions, especially during formal interagency review. In particular, it is unclear to what extent USDA expertise was valued and included in recent actions, such as Endangered Species consultations, the revised Worker Protection Rule, and the recent benefits analysis for seed treatments on soybeans. If EPA fails to adequately calculate and/or consider the economic costs of these impacts—and beneficial uses—in its regulatory proposals, the consequences could be devastating.

The U.S. has the world's most rigorous pesticide registration and review processes. When registering a pesticide, EPA reviews voluminous data to ensure that the product is protective of people, wildlife, pets, and the environment. Furthermore, under the law, all chemicals must be reevaluated every 15 years. Pesticides are regulated by assessing 'risk' to determine whether and how a product can be used safely. In evaluating risk, 'hazard' (whether something can cause harm) and 'exposure' (whether you will be exposed to harm) are balanced against the benefit of using a product, such as protection of the public health from disease-carrying pests, protection of our nation's buildings and infrastructure, protection of the food supply, *etc.* This is something EPA should be confident in and proud to defend. As a matter of fact, EPA does a great job defending the merits of our risk-based system when commenting on the EU's precaution-based regulatory scheme. However, recently when EPA regulatory decisions are challenged in the U.S., the Agency seems reluctant to defend, or even more troubling, is unable to properly provide evidence of its scientific decisions.

Some recent EPA activities appear to focus only on the hazard aspect and ignore factors, such as exposure and benefits. EPA's proposed mitigation measures for pesticides that are acutely toxic to bees are one such example. Should this trend continue, EPA runs the risk of encouraging public mistrust surrounding the products that are used to protect public health, our infrastructure, and the food supply.

I anticipate my fellow panelists will cover a variety of EPA-related issues more fully, and I echo their concerns across the board. At this time, I wish to turn attention to several other regulatory issues which could have potential impacts on the farm economy.

Regulatory Scope for Innovative New Breeding Techniques

Just last week, NCFC and several other members of the agriculture community had the opportunity to comment on the USDA Animal and Plant Health Inspection Service's (APHIS) notice of intent to prepare an environmental impact statement on the introduction of the products of biotechnology with possible revisions to its biotechnology regulations (7 CFR part 340). A prominent theme throughout our comments focused on the reducing the regulatory burdens of bringing the latest, most precise breeding techniques to market. Embracing modern agriculture is the right thing to do for our country, which has a rich history of nurturing science, research, and innovation in all areas of the economy. The United States is strong and prosperous because American leaders embrace the responsible use of technology and set forth public policies to move the nation forward in this regard.

Breeding technologies have rapidly evolved over the last half century, enabling plant breeders to be more precise and efficient at making the same desired changes that can be made over a much longer period of time through earlier breeding methods. In light of the fact that no plant pests or noxious weeds have been identified in 30 years of regulatory oversight of transgenic plants, including every transgenic plant on the market today, the expansion of regulatory scope cannot be justified by APHIS from either a scientific or risk perspective. Nor is this proposal consistent

with the Coordinated Framework principle that the focus of regulatory oversight should be on the characteristics of the product rather than the process by which it was produced.

Plant varieties developed through the latest breeding methods should not be differentially regulated if they are similar or indistinguishable from varieties that could have been produced through earlier breeding methods. Therefore, the definition of 'biotechnology product' should only include plants that contain genetic material that has been modified through in vitro recombinant deoxyribonucleic acid (DNA) techniques for which the modification could not otherwise be obtained through conventional breeding.

Under this definition, new plant varieties should be subject to little or no pre-market regulatory review if there is no insertion and stable transmission to subsequent generations of genetic material that encodes an expressed protein. Additionally, based on over 30 years of regulatory experience, if there is insertion and stable transmission of genetic material, new plant varieties would also not be subject to a pre-market regulatory review if the inserted genetic material is from a sexually compatible plant. This regulatory scope would allow plant breeders to quickly and efficiently deliver targeted genetic improvements that would be possible, but with much greater difficulty, using earlier breeding methods. It would also facilitate the use of these newer breeding methods in a wide range of crops, including specialty crops, and by a wide range of both public and commercial plant breeders without modifying current proven and well-established standards of safety.

It is imperative that the U.S. agriculture industry continues to lead the way with innovation, research, and product development, but also do a better job communicating with the consuming public on the benefits and value of such innovation. It is incumbent on all of us in agriculture—from the policymaker to the producer—to find opportunities that better tell the good story of American agriculture that we have worked so hard to achieve. Developing a thoughtful approach to how these new technologies are brought to the marketplace will be very important and could dramatically impact the cost of production in either direction.

Immigration Reform & Capacity Restraints on H–2A

Farmers and ranchers continue to face a significant challenge in finding an adequate, dependable, and flexible workforce. While the ultimate solution to these problems is legislative, aspects of how Federal agencies run the H–2A seasonal temporary worker program pose hurdles to its usage.

This program is the sole legal visa program available to production agriculture; however, it is limited to labor of a 'temporary or seasonal nature.' Employment of H–2A workers has nearly tripled in the past 5 years; yet, it still only accounts for less than ten percent of all seasonal farm workers. This growth has occurred despite the program's extreme regulatory hurdles, government inefficiencies, and high costs.

Capacity and infrastructure issues at the Departments of State (DOS), Homeland Security (DHS), and Labor (DOL) are leading to greater processing delays than ever before. This means bureaucratic red tape and interruptions in the program are seriously impacting the viability and profitability of farmers and ranchers as workers show up at the farm well after the date they were needed, and millions of dollars in agricultural production is lost in the interim.

As part of the Agriculture Workforce Coalition (AWC) Steering Committee, NCFC has long advocated for immigration reform that meets both the short- and long-term workforce requirements of all of agriculture. Our primary objective remains legislation that fully addresses agriculture's workforce crisis. Congress must come together to find a solution. Yet understanding that in the best of scenarios such reforms may not come to fruition in the near term and it could be years before new programs are up and running, we have sought any and all relief possible in order to survive in the meantime.

We believe there are significant policy measures that the DOS, DHS, and DOL could, and should, put into place that do not require legislation or even a regulatory change. There are improvements to the program that can be made within the agencies' existing authorities that will help curtail processing delays and allow for the flexibility required to ensure that farmers and ranchers receive the workers they so critically need within an appropriate timeframe. Doing so could significantly improve the situation for growers and ranchers while the agencies continue to fulfill their duties to respect the rights of domestic workers and provide homeland security.

For example, DOL's Office of Foreign Labor Certification (OFLC) has a policy that is not supported by the regulations which requires all workers requested in any single petition be brought onto the job on the start date of the petition. Under the current delays experienced by growers at both the OFLC and U.S. Citizenship and Im-

migration Services (USCIS), there is no opportunity to receive these workers by the date they are needed. Growers must be given the opportunity to provide a start date that is earlier than the actual anticipated start date as a 'grace period' in an effort to better manage the delays that are being forced upon them.

Additionally, the Validation Instrument for Business Enterprises (VIBE) program is inappropriate for agriculture. Consequently, it should not be utilized in verifying employers in the H–2A program.

A number of employers have been receiving Notices of Deficiencies (issued by DOL) or Requests for Further Evidence (issued by USCIS) related to proving that agriculture is seasonal in nature. These notices create an unnecessary and untimely delay in the process. It should be recognized that much of production agriculture is inevitably seasonal and analysts in both agencies should be instructed not to delay the process for that reason, especially during the current crisis.

In view of this crisis, we urge that the three agencies err on the side of expediency in processing agricultural employers' H–2A applications where possible. The livelihoods of farmers and ranchers depend upon timely application processing and visa issuance in advance of farmers' dates of need.

While American agriculture desperately waits for immigration reform, NCFC and the AWC will make every effort necessary to try to ease the regulatory burdens of the H–2A program so that farmers and ranchers have the chance to survive until the broader issue is addressed through a legislative fix to our broken immigration system.

Overtime Rule

Another example of a well-intentioned but detrimental regulation is the Overtime Exemption rule. On June 30, 2015, the DOL proposed changes to the exemptions for executive, administrative, and professional employees under the Fair Labor Standard Act's overtime pay requirements. The Department is proposing to double the salary threshold from the 20th percentile to the 40th percentile. This vast increase from $23,660 to $50,440 will substantially increase labor costs, significantly driving up the overall cost of doing business.

NCFC believes that the Department should maintain the salary threshold at the 20th percentile. Maintaining this threshold using updated figures would achieve the desired outcome of increasing the effectiveness of the salary test, as well as bringing the salary level above the poverty line.

However, if an increase is made, it should not be as severe as escalating the threshold to the 40th percentile. A jump to the 40th percentile is far too steep and would have grave consequences for businesses. In particular, small businesses, like the farmer-owned cooperatives NCFC proudly represents, would have a very hard time adjusting to such an unnecessarily high surge in the salary threshold percentage.

If the proposed rule were implemented without change, NCFC fears numerous unintended consequences would ensue. The reclassification of employees could lead to the loss of benefits, flexibility, and incentive compensation options. Reclassification for certain positions will require employers to track overtime for these jobs, leading employers to limit flexible work options which greatly benefit employees and their families. Additionally, many employees highly value the status that accompanies a salaried, exempt position. Employees would be reluctant to give up the professional status of these positions. Furthermore, employees may experience fewer opportunities for upward mobility as businesses struggle to respond to the severe increase in labor costs.

NCFC has encouraged the Department to refrain from drastically increasing the salary threshold and we seek your help in promoting policies which support allowing the market to dictate an employee's compensation based on the individual's role, skill-set, and experience.

Occupational Safety and Health Administration—Process Safety Management

Farmers rely on their local cooperatives to supply the inputs needed to grow crops safely and efficiently. One of the many inputs farmers rely on to return nutrients to the soil is anhydrous ammonia, a safe and cost-effective fertilizer with low environmental impact. As is the case with most commercially sold chemicals, these facilities already comply with extensive storage, handling, and security regulations for anhydrous ammonia under the direction of the EPA as well as the DHS and DOL's Occupational Safety and Health Administration (OSHA), helping to ensure a safe and secure work environment for employees and the local community.

However, on July 22, 2015, OSHA issued a revised policy for the retail facility exclusion under the Process Safety Management (PSM) Standard (29 CFR 1910.119). Since 1992, OSHA's policy has been that an establishment was exempt

from PSM coverage if it "derived more than 50 percent of its income from direct sales of highly hazardous chemicals to the end-user." The new policy states: "Only facilities, or the portions of facilities, engaged in retail trade as defined by the current and any future updates to sectors 44 and 45 of the NAICS Manual may be afforded the retail exemption at 29 CFR 1910.119(a)(2)(i)." Therefore, unless a facility is in NAICS 44 or 45 and holds threshold quantities of highly hazardous chemicals (NH3—10,000 lbs, aqua ammonia—15,000 lbs), they are now subject to PSM.

These unexpected changes will place a significant time and cost burden on agricultural retailers—approximately 3,800 will be subject to new PSM standards. OSHA estimated the cost of compliance with PSM standards at $2,100 per facility. However, industry estimates costs will be approximately $30,000 for initial compliance, $12,000 for annual compliance, $18,000 for 3 year audit, making OSHA's initial estimate way off by several factors. These estimates do not include the cost of potential upgrades which could easily exceed $70,000 per facility if the facility needs to replace one anhydrous ammonia storage tank.

Until OSHA issued its Process Safety Management (PSM) retail exemption enforcement memo, farm supply retailers were always exempt from the PSM regulations. The PSM standards are intended for chemical manufacturers, not agricultural retailers and other retail businesses that sell directly to end-users. OSHA's memo is contrary to over 2 decades of their own enforcement. As a result, many farm supply retailers, including our member cooperatives, are either consolidating facilities or exiting the anhydrous ammonia business altogether. These outcomes could reduce the supply of fertilizer and its delivery logistics, drive up the price of food, and ultimately hurt American agriculture's ability to produce an abundant food supply.

Congress sent OSHA a clear message to withdraw the memo in the *Consolidated Appropriations Act of 2016* with the inclusion of an explanatory statement that prohibited OSHA from using funds to implement the retail exemption memo unless it goes through the formal rulemaking process and the Census Bureau creates a new North American Industry Classification System (NAICS) code under either Sector 44 or 45 for farm supply retailers. In response to the Congressional directive, OSHA indicated that they are unwilling to follow the will of Congress and withdraw the memo. Therefore, we have requested that the Appropriations Subcommittee on Labor, Health, and Human Services, Education, and Related Agencies include the following directives in the statutory text (not just the explanatory statement or report language) of their appropriations bill:

(1) OSHA should withdraw the July 22 memo and submit the proposed rule change for full notice and comment rulemaking to allow for adequate stakeholder input.

(2) OSHA should submit the rule change for an independent third-party cost analysis.

(3) Congress should include similar language in the actual text of the FY 2017 Labor HHS Appropriations bill.

Food Safety Modernization Act Implementation

NCFC is very supportive of science- and risk-based enhancements to our nation's food safety system and have been actively engaged as the Food and Drug Administration (FDA) implements the Food Safety Modernization Act (FSMA). Our association and members appreciate FDA's outreach to the agricultural community as it elicited feedback, evaluated public comments, and updated regulations to make them more appropriate for diverse operations.

Many of our farmer cooperatives were able to modify their operations as the regulatory processes played out and get out head of the changes the regulations would mandate. However, given the sheer size of FSMA and the multitude of regulations needed to implement the law, producers and farmer-owned cooperatives have had to, and will continue to make, significant adjustments to the way they do business; these changes are not without significant costs.

While many improvements were made through FSMA, there are still parts of the regulation that remain overly burdensome, duplicative, and many of which do not actually result in a safer food supply. We continue to encourage FDA to consider the additional costs, staff time, and record-keeping as operations adapt the way they do business and retain records. FDA must ensure that any increase in regulation is justified by measurable food safety benefits and that there is flexibility to ensure that entities can continue to stay profitable while addressing actual risks that are present.

Specific to the Feed Rule, there have been ongoing discussions regarding the use of current Good Manufacturing Practices (CGMPs) *in lieu of* preventive controls to mitigate animal feed manufacturing risks and hazards wherever applicable. Use of

CGMPs to mitigate these risks and hazards would not mean a CGMP is a preventive control. NCFC strongly supports this approach and urges FDA to issue a formal written concurrence to ensure that stakeholders and FDA staff have a clear understanding of this important issue.

For some of our cooperatives, the Preventive Controls Rule has necessitated a rewrite of their Food Safety Plans and a change in focus from critical control points to preventive controls for all risks. However, a majority do not believe that this has necessarily changed any assessment or analysis of the risks inherent in their business, but rather just the written plans for addressing those risks, which clearly required significant staff time and resources.

The FDA's enforcement of the Preventative Controls Rule and others will be the telling factor. We hope FDA will approach industry with a sense of a cooperative effort to ensure food safety for the public, a common goal shared with FDA by NCFC and our cooperatives. Additionally, precipitous use of the administrative detention or mandatory recall could cause market disruption, economic harm, and consumer confusion. We encourage FDA to act thoughtfully and in consultation with the operations affected in these situations.

Last, we have remaining trepidations concerning the Sanitary Transportation Rule. We are apprehensive that the rule may be detrimental to the use of byproducts for cattle feed. Currently, some of our members are working with third party dairies or ranchers and have a workable program for cattle feed or soil amendments. Some of the restrictions in the Sanitary Transportation Rule may cause our members to cease using these outlets and turn to landfills instead. Many industries have developed a sustainable and cost-effective way to manage byproducts of processing facilities and NCFC does not wish to see the new requirements hinder a process that has ample benefits and has been working successfully for many years.

The regulatory hurdles faced by producers and their cooperatives outlined above are certainly not all inclusive; there are dozens of more minor issues whose costs, on their own, may not seem to be unreasonable but, when taken as a whole, impose real increases in the cost of production. It should be noted, however, that agriculture is not reflexively against any regulation. There are many examples of sensible regulations that address real needs, are science-based, and whose benefits outweigh costs; further, there are many examples of regulatory agencies working collaboratively with stakeholders to develop targeted, sensible programs to address common goals. Such a process, however, often requires more resources than simply imposing top-down regulatory requirements and depends on public confidence in regulatory agencies.

Finally, it should also be noted that farmers, ranchers, and cooperatives face regulations beyond those imposed by government. Increasingly, we are seeing what we call "regulation by retail." Many food companies and retailers, responding to what they see as consumer demands, are asking much more of our farmers and cooperatives in terms of sustainability, animal welfare, and other issues. Agriculture has great stories to tell in many of these areas; however, much work remains in helping to bridge the gap between farmers and manufacturers or retailers. While much of this work will be done by the private-sector, USDA has been playing an important role in public education about agriculture and we hope to see this work continue in the future.

Market Promotion & Accessibility

Trade is vital to the continued prosperity of cooperatives and their farmer and rancher members. With over 95 percent of the world's population living outside of the United States, our agricultural producers need foreign markets to grow demand and programs that serve as catalysts to increased market access.

I encourage this Subcommittee to continue its strong support of export programs that are vital to maintaining and expanding U.S. agricultural exports, counter subsidized foreign competition, meet humanitarian needs, protect American jobs, and strengthen farm income.

Market Access Program

The Market Access Program is of particular importance, both because it is a vital tool used by producers and their cooperatives to market products overseas, and because it represents such a good investment of taxpayer dollars with a 35 to 1 return on every dollar spent under the program.

Many specialty crop producers view MAP, above all other programs, as their 'farm safety net' program. The ability of cooperatives to use MAP helps give individual farmers the ability to market their products overseas, which they otherwise would not be able to do on their own.

Accessibility

Additionally, NCFC strongly supports provisions that improve accessibility and bring neutrality of form to the Fruit & Vegetable Snack Program. Allowing dried, canned, frozen, and fresh fruits and vegetables to be offered through the Snack Program will give schools more choice in what they offer, and as a result more children to benefit from the program. Doing so ultimately also is an efficient use of taxpayer dollars as often dried, canned, and frozen fruits and vegetables are more the more affordable option. All of these efforts work to increase the consumption of healthy, nutrient-rich fruits, vegetables, and nuts. NCFC has long advocated that eligibility in nutrition programs should be based on the nutritional and health properties of food, which are not distinguishable between fresh, frozen, canned, or dried forms of fruits, vegetables, and nuts.

The American Institute for Cancer Research supports the consumption of all forms stating, "Canned and frozen fruits not only offer great nutrition, but they are inexpensive and convenient ways to make sure we maximize the variety and number of fruit servings needed to protect our health." Not only is expanding the program in line with sound science and the *Dietary Guidelines,* but it also empowers local school districts to decide which forms best fit the needs of their students from a nutritional and economic perspective.

Specialty Crop Block Grants

Since 2006, the Specialty Crop Block Grant Program (SCBGP) has served to improve the competitiveness of specialty crops. While specialty crops have access to research and Federal marketing programs, the industry has not had the benefit of a farm bill direct aid program. To make up for the lack of such a program, the SCBGP has offered additional Federal assistance to specialty crops. The program delivers grants to State Departments of Agriculture for projects dealing with many of the issues touched on in my testimony—education, research, food safety, pest and plant health, and marketing and promotion—as they relate to the specialty crop industry. In Fiscal Year 2015, 755 grants were awarded to fund integral specialty crop projects. One example of the important projects funded by the program is a project that included a partnership with the University of Arizona to improve food safety by increasing the speed, accuracy, and affordability at which *E. coli* can be detected. As food safety continues to be a focus of regulators and consumers, this research plays an imperative role in protecting consumers and increasing consumer confidence.

In conclusion, I realize that this testimony covers a lot of ground, some of which may be outside the jurisdiction of the Subcommittee, but these issues are no less important and impactful to the cost of production and overall farm economy, and are worthy of your oversight. Especially at a time when producers across the country are facing tight margins, we must identify ways for our agriculture sector to prosper, and reduce the burden and uncertainty that threatens to hold back investment and growth across the agricultural sector.

Thank you again for the opportunity to testify today and I look forward to your questions.

The CHAIRMAN. Thank you, Mr. Conner, and you were a perfect 5 minutes. That was great.

We will see if you can do the same, Mr. Secretary. The next witness, the Honorable Jeff Witte, Secretary/Director, New Mexico Department of Agriculture in Las Cruces, New Mexico, on behalf of the National Association of State Departments of Agriculture.

STATEMENT OF HON. JEFF M. WITTE, SECRETARY/DIRECTOR, NEW MEXICO DEPARTMENT OF AGRICULTURE; MEMBER, BOARD OF DIRECTORS, NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE, LAS CRUCES, NM

Mr. WITTE. Thank you, Mr. Chairman. That is a hard act to follow.

Chairman Davis, Ranking Member DelBene, and Members of the Subcommittee, good morning, and thank you for the opportunity to testify today on the farm economy and factors impacting the costs of production.

I am going to provide an abbreviated version of my full testimony, which will be submitted and has been submitted for the record.

As the Chairman said, my name is Jeff Witte and I serve as New Mexico's Secretary of Agriculture and a Member of the Board of Directors of the National Association of State Departments of Agriculture. I also had the opportunity to serve on the EPA Local Government Advisory Committee. My department is responsible for a wide range of regulatory programs including pesticide use under the Federal Insecticide, Fungicide, and Rodenticide Act. In my various roles, I protect consumers, promote agriculture, and oversee producers through a host of regulatory programs. I sit before you today to discuss the successes, challenges and solutions around several Federal regulatory actions impacting our rural economies.

One key success to highlight is the State Managed Pollinator Protection Plan, or the MP3 program. These plans facilitate collaborative relationships between beekeepers and growers. They are a proven success in many states, and we appreciate EPA's support to date in using MP3s as a non-regulatory risk mitigation vehicle. We see this model as a possible tool in other areas including biotech coexistence.

However, there are a number of challenges impacting agriculture producers and state agencies across the country. I want to highlight two provisions from EPA's final Worker Protection Standard Rule from last fall that illustrates some regulatory burdens on agriculture that could have been avoided: the Application Exclusion Zone, and the designated representative provision. The AEZ creates a 100′ buffer, prohibiting appropriate pest mitigation facilities around the application, within 100′ of the application equipment. Even though EPA is working on interpretive guidance, stating that the AEZ goes beyond the Agency's intent, the guidance does not carry the authority of a codified Federal regulation and is subject to interpretation. And EPA's designated representative provision requires providing 2 years of pesticide application records to anyone who claims to represent a worker who has been on an operation over the past 2 years. We feel these initiatives were implemented in violation of the Agency's obligations under FIFRA, the Administrative Procedures Act, and various Executive Orders. Neither provision provides any enhanced regulatory benefits but both place additional economic burdens on producers. We have expressed our strong concern that EPA did not included the designated representative provision in the final rule it provided to this Committee as required under FIFRA, and we appreciate Chairman Conaway and Ranking Member Peterson for their engagement on this matter.

Another challenge is EPA's proposed Certification of Pesticide Applicators Rule, which will significantly impact states by requiring significant overhauls to the state programs. We feel EPA greatly understated the impacts to the states and the regulated community, and this will be one unnecessary burden on the states and our producers. Furthermore, states conduct robust investigations of alleged pesticide exposure incidents and have provided EPA with volumes of data showing overwhelming compliance by the regulated

community. It is disheartening to see that EPA does not incorporate that provision into the regulatory decisions.

Another regulatory challenge that producers face involves the implementation of the Food Safety Modernization Act, which dramatically changes the approach to food safety and will require a long-term commitment to continuing education from all of us. The full cost to farmers to implement FSMA is still unknown, but depending upon the size, estimates have reached up to $100,000 a year. State Departments of Agriculture are working with the FDA to bring expertise to the new framework, but we estimate the need of at least $100 million annually to state programs to implement this. Further, NASDA is working with the FDA to find a balance on water policy and its Produce Safety Rule.

States have long been partners with the Federal agencies to serve as co-regulators for many of the regulations imposed by the Federal agencies. Regulatory initiatives often lack consultation with state regulatory agency partners and are implemented with a lack of compliance with controlling statutes. This causes regulatory confusion not only to the intended recipient of the regulation but to the partner who has on-the-ground responsibility. Federal agencies must do better to consult in a robust and meaningful way with state regulatory partners. Further, our Federal partners must comply with the Administrative Procedures Act and other controlling statutes to develop scientifically sound and consistent regulations that allow agricultural producers to continue to do their jobs.

I appreciate the opportunity to testify before you today and welcome any questions.

[The prepared statement of Mr. Witte follows:]

PREPARED STATEMENT OF HON. JEFF M. WITTE, SECRETARY/DIRECTOR, NEW MEXICO DEPARTMENT OF AGRICULTURE; MEMBER, BOARD OF DIRECTORS, NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE, LAS CRUCES, NM

Introduction

Chairman Davis, Ranking Member DelBene, and distinguished Members of the Subcommittee on Biotechnology, Horticulture, and Research: good morning and thank you for the invitation to testify on the important subject of the farm economy and factors impacting the cost of production. I appreciate the opportunity to share a state agency perspective on this important topic.

My name is Jeff Witte, and I proudly serve as New Mexico's Secretary of Agriculture and as a Member of the Board of Directors for the National Association of State Departments of Agriculture (NASDA). NASDA represents the commissioners, secretaries, and directors of the State Departments of Agriculture in all fifty states and four territories. State Departments of Agriculture are responsible for a wide range of programs including food safety, combating the introduction and spread of plant and animal diseases, and fostering the economic vitality of our rural communities. Environmental protection and conservation are also among our chief responsibilities.

In forty-three states and Puerto Rico, the state department of agriculture is the lead state agency responsible for the regulation of pesticide use under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA).[1]

In New Mexico, my department is responsible for a wide range of regulatory and licensing programs including: apiary registration; commercial feed registration; dairy permitting; egg dealer licenses & registration; fertilizer & soil conditioner registration; nursery licenses; pesticides; weighmaster licenses; and weights & measures licensing & registration.

I am intimately familiar with the regulatory process and the impact and challenges regulations have on the producers in my state. For those who may not be

[1] 7 U.S.C. § 136, *et. seq.*

overly familiar with New Mexico, I invite you all to visit and experience the rich diversity of our specialty crop industries, which include: chiles (our signature crop); pecans; onions; greenhouse & nursery production; an emerging aquaponics industry; and countless other innovative and growing agricultural sectors.

I also serve on EPA's Local Government Advisory Committee (LGAC), which is a formal advisory committee, chartered under the Federal Advisory Committee Act [2] and has been in existence since 1993. The Committee is composed primarily of elected and appointed local officials, along with several state representatives, environmental interest groups, and labor interests from across the country. The LGAC provides advice and recommendations that assist the EPA in developing a stronger partnership with local governments through building state and local capacity to deliver environmental services and programs.

In my various roles, I protect consumers, promote agriculture, and oversee producers through a host of regulatory programs.

Successes, Challenges & Solutions

I sit before you today to discuss some of the Federal partnerships and initiatives that are working well, highlight a few areas where the regulatory process—or lack thereof—has resulted in significant negative economic impacts to our producers. And finally, I will offer some solutions to ensure our growers, ranchers, and other agricultural stakeholders are able to continue to produce our nation's food, fiber, and fuel in a productive and collaborative manner while ensuring we have the safest food supply in the world.

Successes

One on-going success story that epitomizes the strength and value of the U.S. agricultural community is known as the State Managed Pollinator Protection Plan, commonly referred to as an "MP3."

The State Departments of Agriculture, individually and collectively, have been actively engaged in identifying the various challenges surrounding bee health, and more importantly, developing partnerships on the state level to bring forward solutions so beekeepers, growers, applicators, and other agricultural stakeholders are able to continue to produce our nation's food, fiber, and fuel in a collaborative and productive manner.

There are numerous and complex factors associated with bee health, including: parasites and diseases, lack of genetic diversity, need for improved forage and nutrition, need for increased collaboration and information sharing, and a need for additional research on the potential impacts certain pesticides may have on honey bee health. The multitude of these stressors do not lend themselves to a single, uniform solution that will successfully address all of these variables across the diverse and robust agricultural community in all fifty states and four territories. However, the MP3 model utilizing the State Departments of Agriculture as the vehicle to unify, discuss, and develop best management plans has resulted in improved pollinator health and a more productive and synergetic relationship between beekeepers, growers, applicators, and other agricultural stakeholders. In fact, this model is already a proven formula in a number of states (California,[3] Colorado,[4] Florida,[5] Mississippi,[6] and North Dakota [7]).

MP3s are built on robust communication efforts, Best Management Plans (BMP), and Integrated Pest Management (IPM) programs specifically crafted to serve and support local agricultural practices and to ensure informed and workable solutions are developed and implemented through public-private partnerships at the state level to achieve sound policy initiatives. We appreciate the support and partnership we have received from our partners at EPA, to date, in identifying MP3s as a successful, non-regulatory vehicle to achieve risk mitigation and enhance collaboration across the agricultural stakeholder community, and we note the White House's *Na-*

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[2] 5 U.S.C. Appendix 2 (1972).

[3] California Department of Food and Agriculture. 2014. *Bee and Beehive Information. http://www.cdfa.ca.gov/plant/pollinators/index.html*.

[4] Colorado Environmental Pesticide Education Program. *Pollinator Protection 2013. http://www.cepep.colostate.edu/Pollinator%20Protection/index.html*.

[5] Florida Department of Agriculture and Consumer Services. 2014. *Florida Bee Protection. http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Environmental-Services/Consumer-Resources/Florida-Bee-Protection*.

[6] Mississippi Honeybee Stewardship Program. 2014, *http://www.msfb.org/public_policy/Resource%20pdfs/Bee%20Brochure.pdf*.

[7] North Dakota Department of Agriculture. 2014. *North Dakota Pollinator Plant.* A North Dakota Department of Agriculture Publication. *http://www.nd.gov/ndda/files/resource/NorthDakotaPollinatorPlan2014.pdf*.

tional Strategy to Promote the Health of Honey Bees and Other Pollinators[8] recognizes the MP3 as a model for success.

At the same time, we do have significant concerns with a current policy proposal EPA published for public comment that is currently under review. In this policy proposal, EPA identified 76 active ingredients that will impact over 3,500 crop protection tools as potentially "acutely toxic to honeybees" and subject these tools and uses to enhanced label restrictions. We are concerned with both the process and the substance of this proposal, neither of which are FIFRA compliant or based on a sound, science-based risk assessment approach. So we ask this Subcommittee to help ensure EPA's regulatory proposals are compliant with their obligations under FIFRA and consistent with their role as regulatory partners with the State Departments of Agriculture. We feel it is equally as important to allow the MP3s to continue to succeed before proceeding with any further regulatory action.

We see great value and applicability with the MP3 model as a tool to drive solutions for other challenge areas within the farm gate, and we are encouraged with USDA's Federal "Advisory Committee on Biotechnology & 21st Century Agriculture" (AC21) interest in evaluating the MP3 model as a possible vehicle to address some of the challenges around coexistence issues.

From the state perspective, we see the MP3 model as a means to cultivate public-private partnerships, and facilitate informed, science-based solutions that will address the various challenges around pollinator health, coexistence issues, and other complex matters. We stand ready to continue to work with EPA, USDA, and all of our Federal partners in applying a model of collaboration and communication to every challenge we face.

Continuing the theme of "Success" and as we begin to look towards the next farm bill, there are two programs I want bring to your attention today that have seen great success and effectiveness in carrying out their respective missions. The first is known as the "Section 10007" Program and the other is the Specialty Crop Block Grants.

First, I want to commend this Subcommittee, the full Committee, APHIS and the grower groups involved with the "Section 10007" program under the 2014 Farm Bill. As you all well know, this program provides funding for Federal, state, Tribal, and nongovernmental efforts to protect U.S. plant health across the country. This program brings a broad range of stakeholders together to proactively identify and achieve plant health protection goals through the Plant Pest and Disease Management & Disaster Prevention Program and the National Clean Plant Network. This model facilitates cooperation and collaboration between Federal, state, and impacted partners, and we feel this model has great promise and applicability to address some of the animal health and disease challenges on the livestock side.

Second, I want to note the significant value of USDA's Specialty Crop Block Grant program (SCBGP), which is another critical area of collaboration between the State Departments of Agriculture, the specialty crop industry, and USDA. Since 2009, the State Departments of Agriculture have distributed nearly $393 million dollars in grants to 5,400 project partners that have enhanced the competitiveness of specialty crops in the United States. These projects are not just increasing consumer access to safe and healthy food but are expanding economic opportunities across rural America.

While we highlight this program as a success and are pleased with both the expanded funding and the establishment of the Specialty Crop Multi-State Program (SCMP) in the 2014 Farm Bill, we have growing concerns that the flexibility the SCBG program was built upon is eroding due to increased and unnecessary bureaucratic processes. This is especially evident in the establishment of certain performance measures for the program. While we all want to ensure the wise use of tax dollars, we are concerned these bureaucratic requirements—especially new sales reporting requirements for marketing projects—are simply not feasible for many of the kinds of projects that have made this program so successful, and we ask this Subcommittee to take these concerns into consideration as we work towards the next farm bill.

Challenges

Unfortunately, there are a number of challenges impacting, complicating, and frustrating agricultural production across the county and the state agencies tasked with conducting on the ground compliance and enforcement activities. Those challenges include, but are not limited to: EPA's Agricultural Worker Protection Stand-

[8] White House. (2015). *National Strategy to Promote the Health of Honey Bees and Other Pollinators.* Retrieved from: *https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator%20Health%20Strategy%202015.pdf.*

ards (WPS); EPA's proposed Certification of Pesticide Applicator Rule; EPA's *Waters of the U.S.* rule (WOTUS); EPA's National Pollutant Discharge Elimination System (NPDES) duplicative regulatory framework; EPA's proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products; implementation of the Food Safety Modernization Act (FSMA); the Department of Labor's H2–A program; and numerous other regulatory initiatives or proposals currently pending in the *Federal Register.*

I recognize WOTUS and the NPDES issues are not necessarily the focus of today's hearing, but I would be remiss not to mention the potential devastating impact these regulatory initiatives hold for agriculture across the country, and I refer this Subcommittee to my testimony last March in front of the House Agriculture Subcommittee on Conservation and Forestry for more information on those issues.

Worker Protection Standards

Last fall, EPA promulgated its final Worker Protection Standard rule that included numerous regulatory compliance and record keeping burdens with no definable regulatory benefits. We were especially disappointed with EPA's lack of compliance with its own obligations and requirements under: FIFRA; the Administrative Procedures Act (APA);[9] the Unfunded Mandates Reform Act (UMRA);[10] the Regulatory Flexibility Act (RFA);[11] and Executive Orders 13132[12] and 13563.[13]

I want to elaborate briefly on two specific provisions included the final WPS rule that illustrate the negative consequences of a lack of adherence to the rulemaking process. First is the final changes to the Application Exclusion Zone (AEZ) and the second is the "designated representative" provision, which essentially allows anyone to arrive at a farming operation and demand an accounting of records related to pesticide applications over the past 2 years.

EPA's insertion and final articulation of the AEZ provision goes far beyond the Agency's stated intent and creates a 100′ buffer surrounding the application equipment that, according to the regulations now in place, extends beyond the agricultural establishment. This provision effectively constitutes a "taking" of the grower's land and prohibits appropriate pest mitigation activities if there is any kind of structure, permanent or otherwise, inhabited or vacant within 100′ of the agricultural establishment. Furthermore, any individual standing or a passing vehicle within 100′ of the property can effectively cease the grower's application activity.

I should point out that EPA's Office of General Counsel (OGC) is working to issue interpretive guidance stating these unintended consequences go beyond the Agency's intent. However, I must also emphasize that such guidance does not carry the weight and authority of a codified Federal regulation, and courts may have a different interpretation from EPA's OGC on this matter. Unless and until EPA corrects and amends the regulation, this provision will continue to impose unreasonable regulatory and economic burdens for producers and subject state lead agencies to enforce unworkable regulations.

In addition to the AEZ, EPA included the "designated representative" provision which places an extraordinary burden on growers to produce a full accounting of 2 years of application records to anyone who arrives on their farm with a piece of paper claiming to represent a worker who may have been on that establishment at some point over the past 2 years. If the agricultural employer does not produce these records they subject themselves to enforcement actions. If the agricultural employer does produce these records, the individual requesting them is free to use them for any purpose, propaganda, anti-marketing, litigious or otherwise that he or she sees fit.

The most frustrating part of the AEZ and "designated representative" provisions is that these oversights and misguided initiatives were implemented outside of the Federal rulemaking process, in conflict with the information and input from EPA's state regulatory partners and the regulated community, and in violation of the Agency's obligations under FIFRA, the APA, and various Executive Orders. Perhaps worst of all, neither provision provides any enhanced regulatory protections or benefits. These realities, however, do not mitigate the economic burdens and liability our producers will be forced to absorb under this final Federal regulation.

We know EPA did not include the "designated representative" provision in the final rule it provided to this Committee, as the Agency is required to do so under FIFRA. We have expressed our strong concern and disappointment with EPA's lack

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[9] 5 U.S.C. § 500, *et. seq.*
[10] 2 U.S.C. § 1501.
[11] 5 U.S.C. § 601, *et. seq.*
[12] Executive Order No. 13132, *Federalism,* 64 FR 43255 (1999).
[13] Executive Order No. 13563, *Improving Regulation and Regulatory Review,* 76 FR 3821 (2011).

of consultation with their state regulatory partners, and we want to thank Chairman Conaway and Ranking Member Peterson for their attention and on-going engagement on this matter.

These rulemaking and process decisions have consequences. According to EPA, the WPS rule will impact an estimated 300,000 or more small farms, nurseries, and greenhouses, plus many hundred small commercial entities such as aerial and ground applicators contracted to control pests. EPA stated in its own economic analysis it could not quantify the complete economic impact of the rule. We agree with that conclusion, and we feel EPA's economic analysis significantly underestimated both the number of impacted operations and the true cost this rulemaking will have on the regulated community and the state regulatory agencies.

The new regulations will also require significant staff time to provide outreach to workers, handlers, applicators, agricultural employers, trainers and other stakeholders. For example, trainers will now require retraining, and, according to EPA's implementation timeline, this retraining must take place during the same period the state agencies are expected to conduct outreach and education to the producers in their states. In addition, the average actual on-site inspection under the former WPS rule averaged 3 hours in duration, but under the new rule these same inspections are anticipated to require approximately 50% more time due to the enhanced record keeping and site information requirements.

Equally concerning is that EPA is implementing the WPS rule with all of these enhanced regulatory burdens and record keeping requirements, but it has yet to provide educational resources or training materials to assist their state partners or the regulated community to understand the new requirements or how to comply with them. This approach to regulatory activity is in direct conflict with the fundamental principle of "educating before you regulate."

Without a sound and transparent regulatory framework and the resources necessary to educate the regulated community on how to comply, all EPA has created is another economic burden on the men and women who produce our nation's food, fiber, and fuel. It is absolutely essential for EPA to correct the oversights in the WPS rule and provide their state partners and the regulated community the time and educational resources necessary to "educate before we regulate."

Certification of Pesticide Applicators

Similar to the Worker Protection Standards rule mentioned above, states have significant concerns with EPA's Certification of Pesticide Applicators pending rule changes.

As written, the proposed rule will significantly and uniquely affect small governments and the state lead agencies charged with implementing the proposed changes. In the vast majority of states, the proposed rule will require comprehensive regulatory changes and/or new state legislative authorities, additional training, staff time, and resources for both the state regulatory agency and regulated community that go far beyond EPA's Economic Analysis (EA) estimates in order to develop, implement, and comply with the proposed changes.

If EPA promulgates a final rule as written, without fundamentally and comprehensively changing substantial portions of its proposal, the end result will require a significant number of state lead agencies to terminate administration of their certification programs and revert this responsibility and cost back to EPA. In short, EPA's proposed rule incentivizes both the state regulatory agencies and the regulated community to respond to the implementation and compliance requirements in a manner that is in direct conflict with the stated objectives for publishing this proposed rulemaking.

This is not a trivial matter as EPA estimated the proposed rule will impact over 800,000 small farms and over 400,000 commercial applicators, and unfortunately, EPA's EA did not fully and accurately account for the costs associated with implementing, complying, and enforcing the proposed changes. As a result, the states conducted our own economic analysis of the proposed rule using the Texas A&M AgriLife Extension Service, Agricultural Economics, Agricultural & Environmental Safety's economic model, which found the actual estimated cost to state programs will increase by multiple factors of ten above what EPA estimated. Applying the Texas A&M economic model to all fifty states and four territories clearly demonstrates EPA did not satisfy the requirements under UMRA.[14]

EPA claims the primary economic benefits are monetized benefits from avoided acute pesticide incidents, qualitative benefits that include reduced latent effects of avoided acute pesticide exposures, and reduced chronic effects from lower chronic pesticide exposures (chronic diseases). To support this claim, EPA cites estimates of

[14] 2 U.S.C. § 1501.

poorly reported data and anecdotal evidence from poison control centers. At the same time, EPA acknowledges the lack of economic integrity in these numbers, and subsequently notes it is "not able to quantify the benefits expected to accrue from the proposed changes."

It is inappropriate for EPA to indicate or imply a causal association between these incomplete data sources to any estimated benefits, and as the Secretary of a state agency, I consider it highly inappropriate to estimate benefits of a proposed rulemaking on possible associations when there is no scientific evidence supporting such causal connections.

Furthermore, EPA is intimately familiar with the routine and robust investigations state lead agencies conduct in response to alleged pesticide exposure incidents, and we are disappointed EPA has drawn various conclusions through unknown and unsubstantiated data to support the EA's estimated benefits associated with this proposed rule. I want to contrast this dynamic with the reality that states provide EPA with volumes of data showing overwhelming compliance by the regulated community, and it is disheartening, at best, to see EPA does not discuss or incorporate that information into its regulatory decisions.

In addition to the understated costs to the state lead agencies, EPA failed to account for a number of factors impacting the regulated community. For example, the Small Business Administration's Advocacy Review (SBAR) Panel (hereinafter "Panel") reviewed this proposed rule and found "the rule will impose unnecessary and unjustified burdens on [small businesses] and that alternatives exist that would reduce the economic impact of the rule on small entities while still accomplishing the agency's objectives."[15] The Panel noted "EPA did not estimate travel expenses for applicators to obtain training or take exams for certification or recertification," which will ". . . impose excessive costs in operating their businesses as a result of increased time away from the job, travel expenses to attend recertification trainings, and the class fee for attending the CEUs."[16] The Panel further determined "EPA's proposal will result in decreased training and education rather than the agency's goal of increased training and education."[17]

The Texas A&M Economic Model and the SBA Panel's findings are greatly concerning and further demonstrate EPA's significant inaccuracies in the actual estimated costs and alleged benefits of the proposed rule. We should all be concerned with the lack of thoroughness around EPA's economic analysis. We have asked EPA to specifically address and respond to the Panel's written comments and recommendations, as required under the Small Business Jobs Act of 2010,[18] before taking any further actions with this rulemaking, and I ask this Subcommittee to continue its oversight of EPA's actions in this process to ensure this proposed rulemaking does not become one more unfunded mandate on the states and one more unnecessary regulatory burden and cost to our producers.

In addition to understating the economic impact to state agencies and the regulated community and incentivizing actions contrary to the proposal's stated objectives, we are troubled by EPA's lack of compliance with its requirements under: FIFRA; Regulatory Flexibility Act (RFA);[19] and Executive Orders 13132[20] and 13563.[21]

EPA claimed to have "identified the potential for harmonized minimum requirements to enhance state-to-state reciprocity of applicator certifications . . ."[22] The Agency cited this claim as justification for mandating enhanced national minimum requirements across all fifty states and territories. In essence, EPA proposed to require all state, tribal, and territorial authorities to develop and implement a certification program equivalent to the most robust and comprehensive framework currently in existence. As a result, the proposed rule would place significant undue hardships and enhanced requirements on the vast majority of state certification pro-

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[15] Panel Report of the Small Business Advocacy Review Panel on EPA Planned Revisions to Two Related Rules: *Worker Protection Standards for Agriculture and Certification of Pesticide Applicators.*

[16] Panel Report of the Small Business Advocacy Review Panel on EPA Planned Revisions to Two Related Rules: *Worker Protection Standards for Agriculture and Certification of Pesticide Applicators.*

[17] *Id.*

[18] Pub L. No. 111–240 § 124 Stat. 2504 (2010)

[19] 5 U.S.C. § 601, *et. seq.*

[20] Executive Order No. 13132, *Federalism,* 64 FR 43255 (1999).

[21] Executive Order No. 13563, *Improving Regulation and Regulatory Review,* 76 FR 3821 (2011).

[22] 80 FR 51369.

grams, which do not have the staff, resources, or administrative capabilities to absorb these proposed changes under the proposed implementation timeline.

EPA further stated the proposed action does not contain any federalism implications and would not have substantial direct effects on the states or the relationship between the Federal Government and the states. However, the proposal has significant federalism implications and is in direct conflict with Executive Order 13132, which requires "[a]ny regulatory preemption of state law shall be restricted to the minimum level necessary to achieve the objectives of the statute pursuant to which the regulations are promulgated."[23]

The states conducted our own in-depth review of the proposal's implications on state regulatory agencies and identified several potential federalism issues where a significant number of states will be required to amend their state regulations and/or legislative authority to comply with the proposed rule changes. We ask this Subcommittee to continue your work and oversight to ensure EPA complies with both the spirit and intent of Executive Order 13132 and work with their state regulatory partners to further review and resolve all potential federalism issues prior to any final rulemaking.

EPA noted this proposed rule[24] is part of its retrospective review plan; however, EPA did not include specific plans or identify specific measures needed to effectively evaluate the stated objectives of the proposed rule as required under Executive Order 13563[25] and the retrospective review for ex post evaluation.

The *ex post* evaluation under the retrospective review is essential to gauge whether the proposed rule was "designed and written in ways that facilitate evaluation of their consequences and thus promote retrospective analyses and measurement of 'actual results.'"[26] So we ask this Subcommittee to continue your work and oversight to ensure EPA identifies, articulates, and publishes the specific criteria it will use to analyze and measure the success of the proposed rule before taking any further action with this rulemaking.

In the preamble,[27] EPA also referenced Executive Order 12866,[28] which requires "[e]ach Agency shall identify the problem it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem."[29] EPA made several references to the time period that has elapsed since this rule was codified; however, a time interval, in and of itself, is not a sound justification for a proposed rulemaking and is not in compliance with the requirements laid out in any of the above referenced Executive Orders or the Agency's retrospective review standards. So we ask this Subcommittee to continue its work in ensuring EPA provides further explanation and specific information on the problem the Agency intends to address, as required under E.O. 12866.

Biotech NOI Proposal

Another area in need of greater review and discussion is USDA's Animal & Plant Health Inspection Service's (APHIS) Notice of Intent (NOI) to update Section 340 of the Plant Protection Act, published in conjunction with EPA and the U.S. Food and Drug Administration (FDA) this past February.

This NOI outlined alternatives that could change how the agencies regulate new breeding techniques and genetic material. The alternatives considered could vastly expand regulatory authority, giving APHIS the ability to more intensively regulate all but the most traditional of breeding techniques—both cutting edge techniques as well as generally accepted technologies used for decades.

States support our Federal agency partners' willingness to revisit, revise, and improve Federal regulations to better reflect modern technologies and to facilitate an informed and efficient regulatory framework that enables producers and other agricultural stakeholders to continue to produce our nation's food, fiber, and fuel in a collaborative and productive manner. And we appreciate USDA recognizing the need to improve the current 7 CFR part 340 regulations. However, there are concerns the potential impacts, benefits, and/or unintended consequences of several alternatives put forward under the current NOI have not been adequately reviewed or explored by the state regulatory agencies or the agricultural community.

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[23] 64 FR 43257.
[24] 80 FR 51368.
[25] EO No. 13563, *Improving Regulation and Regulatory Review,* 76 FR 3821 (2011).
[26] United States. Office of Management and Budget. Office of Information and Regulatory Affairs. MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES: *Retrospective Analysis of Existing Significant Regulations.* By Cass Sunstein. April 25, 2011.
[27] 80 FR 51399.
[28] 58 FR 51735.
[29] *Id.*

One unclear aspect is how the proposal will distinguish between a new variety produced from different breeding techniques with the same end result. For example, traditional cross breeding and newer breeding techniques like gene editing can achieve identical results for disease resistance, drought tolerance, *etc.* The resulting new varieties from each process could be indistinguishable from one another with no possible test to identify which variety was produced using which process, requiring regulatory authorities to rely instead on breeder disclosure. Yet, under the proposed framework, one of these breeding techniques—gene editing—would be regulated while the other—traditional cross breeding—would not.

We are concerned with any proposed revisions to Part 340 that may be inconsistent with the spirit and intent of the Coordinated Framework or the long-standing, scientific-sound advances demonstrated by more over than a century of developing improved and safe adapted plant varieties. One such departure from this long-standing framework and body of work is the proposed working definition for "biotechnology" in the NOI that goes far beyond the current regulations and focuses on the "process" by which a new plant variety is developed. If applied to Part 340, the proposed definition would require pre-market regulatory review of many modifications that could be achieved through conventional breeding, and this possible regulatory expansion would go beyond the scope and authority of the Coordinated Framework, APHIS's regulatory authority, and the science-based risk perspective.

Furthermore, any future proposed rule should ensure a risk-based, transparent, and predictable regulatory framework, and APHIS's regulatory oversight must be limited to transgenic products that pose a plant pest risk. Plant breeding techniques that do not introduce genes from other species—techniques such as gene editing and cisgenics—should not be regulated under APHIS's regulatory framework.

Given the regulatory complexity and the potential implications the proposed alternatives may raise throughout domestic and international markets, I caution against embarking upon any comprehensive program changes that have not been adequately explored or vetted. An enhanced consultation process will enable APHIS to improve its pre-market agricultural biotechnology regulatory system by identifying strategic and actionable solutions to address specific challenges and process improvements.

We want this Subcommittee to be aware that the states are encouraging USDA to undertake a more thorough and robust review, in conjunction and consultation with partner agencies responsible for regulating products of biotechnology and the agricultural community, to enhance continued alignment, agency roles and responsibilities, and improve communication between the Federal, state, and agricultural stakeholders.

While the current regulatory process is not perfect, it has operated successfully for decades without adverse plant health impacts to U.S. agriculture. So, prior to publication of a proposed rule, we are requesting USDA continue to work with the State Departments of Agriculture, growers, producers, scientific experts, and the regulated community to execute a more robust review of the alternatives considered under the current NOI and identify specific modifications to enhance or supplement the proposed alternatives through improving clarity, transparency, regulatory predictability, and ease of implementation.

We see a clear and identifiable need for the agencies involved to conduct a thorough economic impact analysis and comprehensive cost-benefit analysis to better understand the potential impacts these proposed alternatives may have on the rural economy and our producers before proceeding further in this process. I believe an enhanced review process with the state regulatory agencies and the agricultural stakeholder community will result in greater understanding of the proposed changes, enhance communication and collaboration among partners, and facilitate greater support for future implementation proposals.

Ag Labor & H–2A Program

Due to New Mexico's geographic and demographic composition, our producers are not actively involved with the Department of Labor's (DOL) H–2A program, but I hear from a number of my colleagues across the country that there are significant processing delays with the H–2A program. As the Secretary of Agriculture in New Mexico, I have engaged with the NASDA membership to discuss these concerns with DOL, and we continue to work with the producers across the country to identify solutions to these challenges.

The H–2A Temporary Agricultural Program is run through DOL and includes processing components from the U.S. Citizenship and Immigration Services (USCIS) and the Department of State. DOL has a statutory obligation (8 U.S.C. 1188(b)) to certify applications for workers no later than 30 days prior to the date of need, and if the application fails to meet certification requirements (if there is missing data)

an employer must be notified within 7 days of the date of filing. January through March is the peak time for DOL to receive applications for the H–2A program. In this peak time in 2016, DOL has received a 12% increase in applications over last year. Overall, the program has seen an 85% increase in requests over the last 5 years.

Currently, farmers and ranchers across the country are reporting delays between 20 to 40 days from the point they needed to receive their workers. Depending on the geographical location and crop production activity, producers may have a very short harvest window when they need H–2A labor. If these workers arrive late due to processing issues from DOL or USCIS, the grower is left with a reduced crop or no crop at all.

DOL says these delays result from a lack of resources or processing issues from USCIS and State. These agencies need to work together to streamline their resources, solve this backlog and communicate the status of their review to growers in a timely and transparent manner. Without a solution to the Federal processing activities, farmers continue to face a pending crisis and a lack of ability to bring their crops to market.

Farmers and ranchers across the country deserve better, and the consumers across the world will endure serious economic hardship as the cost of their food will continue to rise. We ask this Subcommittee to continue your critical engagement on this matter, and we stand ready to assist our Federal partners in reducing the economic hardship and uncertainty the current H–2A administrative process creates.

Food Safety Modernization Act

The Food Safety Modernization Act (FSMA), which was passed by Congress in 2010, is a massive overhaul of food safety authority which gives the U.S. Food and Drug Administration (FDA) authority to regulate growers and animal food producers for the first time. It also requires foreign producers to meet the same standards, codifies additional practices regarding processed foods, and establishes transportation and intentional adulteration rules. While NASDA has long maintained support for the concepts of FSMA, we have concurrently maintained the need for FDA to get the rules right and the need for Congress to fund the implementation—especially the need for support for state partnerships.

NASDA has a robust and collaborative relationship with our partners at FDA and we appreciate the intense engagement FDA has undertaken with NASDA and state agencies. This change from reacting to contaminants to a preventative approach will require a significant cultural change at FDA and is not without its challenges. If the rules are too restrictive or the administration of the programs lack an understanding of farming, we risk upsetting the delicate balance between food security and food safety, as well as losing access to nutritious, high-quality fruits and vegetables.

NASDA continues to work with FDA regarding the right balance on water policy. We do not believe the consequences of FDA's policy have yet been fully realized by FDA and this remains a problem area that needs to be resolved. NASDA will continue to engage with FDA to find alternate means to achieve the same level of public health protection as provided by the published criteria.

While FDA has significant experience with regulating manufactured food facilities, State Departments of Agriculture bring additional needed expertise to the new regulatory framework under FSMA. Farms are not factories, and an understanding of farming will help to assure we have high-quality, wholesome food available that is safe. For example, FDA uses the development of guidance as a means to further explain/describe the requirements of rules. If farmers are going to know what to do in order to comply, they will need to understand the nuances of guidance and what is expected of them. If this is to work, the states must have a seat at the table assisting in the development of guidance—another area NASDA is working hard to assure.

NASDA continues to stress that in order for prevention—as a policy—to be achieved we must approach FSMA via an "educate before and while you regulate" strategy. This will require a long-term commitment to continuing education as the backbone of the nation's food safety program.

NASDA believes the most effective way to achieve compliance—and reach food safety goals more quickly—is the On-Farm Readiness Reviews (OFRR) program. This program is being developed to be provided voluntarily, after interested farmers have attended an education program. It is intended to be non-regulatory, instructional and systematic. While FDA is supportive of this concept and program, OFRR must be a long-term goal of the program and funded long-term.

NASDA appreciates the investment in food safety Congress made in the FY16 omnibus bill by increasing funding for FSMA by $104.5 million. While this is a sub-

stantial down payment, more will be needed in the long run. For example, FDA recently announced $19 million in base funding for state programs for the Produce Safety rule implementation. However, if all 50 states apply for this base funding, over $28 million will be needed just for this initial program development. Further, NASDA estimates full funding—including a base to operate a program and additional funds to fund education, inspections, compliance actions, laboratory activities, *etc.*—will cost at least $40M per year. With the expanded involvement by states in the implementation of all three major FSMA rules (Produce, Human Food, and Animal Food Safety) we estimate a total of $100M annually for the state program needs.

No testimony on FSMA is complete without mentioning the need for concurrent implementation of the same requirements for imported food. NASDA requests that Congress ensure FDA is meeting the requirements outlined by the legislation regarding imported foods and achieving a balanced approach to regulating imported and domestic food.

While the actual costs to farmers to implement FSMA are still very much unknown, they will be significant. Some estimates put the cost to comply between $4,700 (for farms with sales from $25,000 up to $250,000) and $30,500 (for farms with sales above $500,000) per year. Though, these costs could go much higher. For example, estimates by some farmers on the costs for them to comply with the produce safety rule's water quality standards could reach as high as $65,000 per year for some farms in North Carolina and over $100,000 in Florida.

This uncertainty and estimated cost of compliance has already directly impacted producers, and I am familiar with a number of producers in New Mexico, who previously grew crops specifically for direct sales to consumers, that have since shifted their production to other, non-FSMA crops. The true economic impact on rural America is difficult, if not impossible, to quantify. But we know the consequences of this rulemaking will be far greater than the direct cost of compliance to our producers and will impact the availability of locally grown, fresh vegetables and produce across the county.

Finally, this Committee should begin examining potential opportunities in the next farm bill to provide agriculture producers with programs to help meet FSMA's goals. While it is still early in the process, low-cost loan guarantee programs, rural development programs—perhaps aimed at infrastructure—and other Farm Service Agency or Risk Management Agency programs could be helpful options to consider.

The good news is there are solutions to all of these challenges.

Solutions

All of these uninformed or misguided regulatory initiatives place undue burdens on our agricultural producers, and all of these challenges stem from: (1) the lack of consultation with state regulatory agency partners; and (2) a lack of compliance with controlling statutes, such as FIFRA and the APA.

State Departments of Agriculture are co-regulators with EPA, USDA, FDA, and other Federal agencies over significant aspects of the U.S. agricultural industry, and we are partners on numerous Federal programs, such as the SCBG program. We have a particular interest in our Federal partners' efforts related to reducing regulatory burdens, especially with respect to increased flexibility to state regulatory partners.

Last year, NASDA participated in a series of meetings with other associations representing state and local government hosted by Shaun Donovan, Director of the White House Office of Management and Budget (OMB) and Howard Shelanksi, Administrator of OMB's Office of Information and Regulatory Affairs. These discussions focused on the Administration's efforts around improving regulatory processes and improving retrospective regulatory review.

As we articulated in those discussions, there are several specific and actionable deliverables our Federal agency partners and the Administration should consider that will result in a more informed, applicable, and consistent regulatory framework that both provides the necessary regulatory protections and minimizes the impact and regulatory burden on both state governments and our agricultural producers.

Those recommendations include:

1. *Enhance Federalism Consultations:* Federal agencies should conduct robust federalism consultations early in the regulatory process, and include participation of a wide range of state regulatory agencies, including State Departments of Agriculture. These consultations should occur prior to publication of a proposed rule. Throughout this process, it is important to emphasize state regulatory agencies are not simply stakeholders, but are instead partners with Federal agencies in the implementation of a host of programs. States can—and should—be used more as resources for Federal agencies. Often

states have a wealth of data, experience, and expertise that would help Federal agencies better develop and implement regulatory programs.

2. *Improve economic analyses that more realistically account for economic costs to states:* Federal agencies should engage state regulatory agencies and stakeholders to evaluate proposed regulations, availability of required resources, and whether expected outcomes merit those expenditures.
3. *Enhance public participation and greater transparency of the regulatory process:* Federal agencies should improve public participation and increase transparency of the regulatory process.
4. *Incorporate flexibility in regulatory programs:* Federal agencies should engage state regulatory partners in creating programs that may provide local and state flexibility. We continue to encourage our Federal partners to look for ways to engage state agencies in creating programs to provide additional flexibility—especially when the alternative may be an undue regulatory burden on the regulated community. Such consultation and robust outreach will facilitate recognition of state equivalency regulatory programs and prevent duplicative regulatory layers.
5. *Renew focus on utilization of best available science:* Regulations must be based on the best available, sound, validated, and peer-reviewed science and rely on science-based risk assessments. Moreover, regulatory agencies must ensure policymakers do not misuse or inappropriately apply invalidated or unrelated scientific findings to policy determinations. We especially appreciate the work the Office of Pest Management Policy (OPMP) executes to ensure policy or regulatory initiatives are based on scientifically sound positions. OPMP is an invaluable resource and advocate for including sound science in the development of regulatory actions impacting agriculture, and we encourage increased support for OPMP's activities, as well as ensuring OPMP's perspectives are advanced in the interagency review process.
6. *Improve stakeholder outreach, especially to rural communities:* Federal agencies should enhance educational and outreach efforts to rural communities and provide teleconference access for oral comments, which can be submitted in the docket and become part of the official record.

Conclusion

State Departments of Agriculture play a critical role in carrying out the regulatory programs impacting our agricultural producers. We serve as both enforcement agents and ambassadors to our agricultural producers, and at a minimum, we have a responsibility and an obligation to fulfill the spirit and intent of the statutes, programs, and Executive Orders controlling and directing that regulatory development process.

It is essential for our Federal partners to utilize the expertise of the states and the producers in those states to inform, develop, and implement a scientifically sound, consistent, and transparent regulatory framework to ensure our producers are able to continue to produce the food, fiber, and fuel our country and much of the world depends upon.

Before I conclude my remarks, I want to offer a solution and point out a constant theme all of my colleagues as Secretaries, Directors and Commissioner of State Departments of Agriculture discuss throughout the country and that is the need to "Educate before you Regulate." We have renewed opportunity to ensure true Federal-state partnerships. The 70th anniversary of the Administrative Procedure Act on June 11th is an opportunity to re-educate our Federal partners on both their statutory obligations under the APA as well as the "spirit and intent" of the Federal-state partnership.

I appreciate the opportunity to testify before you today, and I welcome any questions you may have.

The CHAIRMAN. You even had 21 seconds left. It is great. Please make sure you harass my Secretary of Agriculture, Secretary Poe from Illinois, any chance you can. He is a good friend and doing a great job.

Our next witness is Ms. Maureen Torrey, Vice President of Torrey Farms, Incorporated, Elba, New York, on behalf of the United Fresh Produce Association. Ms. Torrey, please proceed.

STATEMENT OF MAUREEN J. TORREY, VICE PRESIDENT, TORREY FARMS, INC., ELBA, NY; ON BEHALF OF UNITED FRESH PRODUCE ASSOCIATION

Ms. TORREY. Thank you, Subcommittee Chairman Davis and Ranking Member DelBene, for the opportunity to testify before the Committee today. I appreciate being able to provide my perspective as a fresh produce provider.

While the list of factors that can make the difference between a profit and loss is long, I will only share a few.

First, a little information about Torrey Farms and my background. I am an 11th generation farmer in this country. Our farm is located in Elba, New York. My brothers, longtime farm employees, and I have grown the farm from about 200 acres in the late 1970s to a 15,000 acre diverse farm operation from fresh market vegetables, processing vegetables, grain, and dairy, including a trucking company. We also feel very fortunate that the 12th generation and many young people have elected to return to our family farm and we are able to provide much-needed jobs in our rural community. Our main vegetable commodities that we grow and pack year round include cabbage, potatoes and onions. We have a summer season of cucumbers, squash, green beans, carrots, just to name a few.

I am also speaking to you as a member of the United Fresh Produce Association. As you know, United Fresh is the only trade association that represents all segments of the fresh fruit and vegetable production chain across the United States. I served as Chairman of the Board of Directors in 2006 and continue to work on the Government Relations and other committees.

As a member of the specialty crop industry, and as a participant in the Federal Government agriculture guest worker H–2A program, any summary of the factors impacting the cost of production must include an examination of labor issues, as labor is our No. 1 cost in our specialty crops and No. 2 in our dairy operation. I know that immigration issues are not under the parliamentary jurisdiction of this Committee. However, America's farmers are greatly affected by the fact that our immigration process, including the H–2A program, is badly in need of repair, if not complete reform. However, Congress has refused to act on much-needed immigration reform that could help growers meet their labor needs. So growers are turning increasingly to the H–2A program, and recent estimates indicate that nearly 8,000 individual employers will hire H–2A workers and this number will double, probably within the next 2 to 5 years. These are not only farms needing many H–2A workers, but in the case in New York State, the majority of the farms applying for H–2A are only two to four workers. We also need our workers for 12 months a year on our farms.

But the H–2A system barely works for the current level. There have been delays in processing the required paperwork at key government agencies. The Department of Labor national processing center in Chicago and the staff at USCIS have reported to Congressional staff that their visa processing is taking about 30 days instead of the previous 10 to 15 days. As you know, we need our help when we need it in our specialty crops. You know we only have a certain amount of time to make our crop. Currently at our farm,

we were 28 days late in getting our workers to plant our onions, which need to be finished by May 15th to make our crop for this year.

This is why United Fresh and counterpart agriculture organizations in the Agriculture Workforce Coalition are working together to identify and advocate for improvements to the H–2A program. I strongly urge the Members of this Committee to work with your colleagues to achieve sensible regulatory relief.

Food safety is a crucial issue to the fruit and vegetable produce industry too, and we have been working closely with the FDA on the Food Safety Modernization Act and will continue to work with them as we help with some of the dilemmas and some of the interpretations. United Fresh is also the coordinating body of the Specialty Farm Alliance Bill, a coalition of over 120 specialty crop organizations who worked with this Committee in the 2014 Farm Bill and were able to produce a lot of things that helped our industry greatly, and we look forward to working with this Committee again in the coming year.

I offer support for the efforts of my fellow witnesses and colleagues in agriculture to raise awareness with the troubling direction the Environmental Protection Agency seems to be taking in respect to regulating crop production products. These products are essential to the safe and efficient production of food and fiber crops and to Integrated Pest Management programs regularly used in sustainable farming practices.

Last, increasing regulations and reporting in all areas of farming has taken us away from what we do best: farming, to hours and days of constant interpretation of new regulations, paperwork and audits.

I have just given you a few examples of the things that are impacting the cost of production, and I appreciate what all the Members of this Committee have done to promote agriculture and defend farmers' efforts to feed America and the world. Thank you again for this opportunity, and I and United Fresh look forward to working with you, and I am happy to answer your questions.

[The prepared statement of Ms. Torrey follows:]

PREPARED STATEMENT OF MAUREEN J. TORREY, VICE PRESIDENT, TORREY FARMS, INC., ELBA, NY; ON BEHALF OF UNITED FRESH PRODUCE ASSOCIATION

Thank you, Subcommittee Chairman Davis and Ranking Member DelBene, for the opportunity to testify before the Biotechnology, Horticulture and Research Subcommittee on the topic of *Focus on the Farm Economy: Factors Impacting Cost of Production.* I appreciate being able to provide my perspective as a fresh produce provider. While the list of factors that can make the difference between a profit and a loss is long, I am happy to elaborate on a few in particular, including Federal policies that enhance specialty crop production as well as those that can be a hindrance.

First a little information about Torrey Farms. I am an 11th generation farmer in the United States with our operation located in Elba, New York. My brothers, longtime farm employees and I have grown the farm from over 200 acres in the 1970's to a 15,000 acre diverse farm operation from fresh market and processing vegetables, grain, and dairy to a trucking company. We also feel very fortunate that the 12th generation have returned to the family farm and we are able to provide much needed employment in our rural community. The vegetable commodities that we grow and pack year-round include cabbage, potatoes and onions. We have a summer season of cucumbers, squash, green beans, carrots, miniature pumpkins and winter squash.

I am also speaking to you as a member of the United Fresh Produce Association. As you may know, United Fresh is the only trade association that represents all seg-

ments of the fresh fruit and vegetable production chain across the United States. I was pleased to serve as the Chairman of the Board of Directors of United Fresh in 2006 and I continue to serve as a member of United Fresh's Government Relations Council. I am also a member of key working groups United Fresh has established to address Food Safety Modernization Act (FSMA) regulations.

As a member of the specialty crop industry and as a participant in the Federal Government's agriculture guestworker program, known as H–2A, I have to say that any summary of the factors most impacting the cost of production must include an examination of labor issues, as labor is our No. 1 cost in our specialty crops and No. 2 in our dairy operation. I know that immigration issues are not under the parliamentary jurisdiction of this Committee. However, America's farmers are greatly affected by the fact that our immigration process, including the H–2A program, is badly in need of repair, if not complete reform. However, Congress has refused to act on much-needed immigration reform that could help growers meet their labor needs. So with no real reform in sight, growers are turning increasingly to the H–2A program, which means that an already faulty system will be burdened even further. Recent estimates indicate that nearly 8,000 individual employers hire H–2A workers and there are estimates that number could double within the next 5 years, possibly sooner. These are not only farms needing many H–2A workers, but as is the case in New York State, the majority of the farms applying only need two to four workers.

They also need workers for 12 months on their farms.

But the system barely works for the current level of usage. There have been delays in the processing of required paperwork at key government agencies. For example, the Department of Labor national processing center in Chicago and staff at USCIS have reported to Congressional staff that their visa processing is taking 30 days instead of the previous 10 to 15 days. It should go without saying that because of the highly time-sensitive nature of bringing a fruit or vegetable crop to the marketplace, a delay of even a few days in getting an adequate labor force can make all the difference between a producer getting a decent return on his or her investment in that crop or taking a total loss. Specialty crops have short windows of opportunity to "make" your crop. Currently, we are 28 days late in getting our workers to plant our onions which need to be finished by May 15th to make our crop.

That is why United Fresh and counterpart agriculture organizations in the Agriculture Workforce Coalition (AWC) are working together to identify and advocate for improvements to the H–2A system. I strongly urge the Members of this Subcommittee to work with your colleagues to achieve sensible regulatory relief for producers who need this program.

For fruit and vegetable providers whose commodities go straight to consumers, food safety is a crucial issue. As the Members of the Subcommittee are aware, FDA and the fresh produce industry have been working closely on the implementation of the Food Safety Modernization Act (FSMA).

Thus far in the implementation process, FDA has shown a willingness to work with the industry and to be transparent about the agency's implementation activities. However, there are some remaining implementation issues that could have significant ramifications.

For example, one of the unintended effects of the FSMA legislation itself has created a conundrum for FDA in regulating identical facilities that pack or handle raw agricultural commodities sometimes under the Produce Safety Rule (PS) and sometimes under the Preventive Controls (PC) Rule. As FDA has struggled with trying to write science-based regulations, the Agency has formulated a strained bifurcation of facilities as either on-farm or as secondary activities farms. Although identical facilities as far as food safety risks, "on-farm" facilities fall under the PS Rule while most "off-farm" facilities fall under the PC Rule. United Fresh estimates that nearly 5,000 facilities across the country fall into this latter category, requiring a vastly different regulatory structure under the PC Rule.

Under United Fresh's coordination, 22 leading produce organizations recently wrote to FDA regarding concerns about such regulatory complications and requesting further dialogue with the agency to clarify this issue.

As Members of the Subcommittee may be aware, United Fresh is the coordinating body of the Specialty Crop Farm Bill Alliance, a coalition of over 120 specialty crop organizations. For each successive farm bill, the Alliance has provided a set of recommendations about how those programs could maximize the ability of specialty crop producers to be successful. The Alliance is grateful that in the 2014 Farm Bill this Committee acted on our recommendations, which our industry believes are sound policies that will enhance our ability to meet America's nutritional needs.

Briefly, a few highlights of the 2014 Farm Bill that enhance the work of specialty crop providers include:

- $80 million a year for the Specialty Crop Research Initiative for industry-specific research;
- $75 million a year for the Plant Pest and Disease Program to eradicate harmful pests and diseases; [and]
- $85 million per year for the Specialty Crop Block Grant program, including a multi-state program.

In many instances these programs provide services and resources that growers are not always able to get on their own. For example, since 2008, the Clean Plant Network has provided nearly $30,000,000 in support of 35 initiatives in the critical mission of providing clean planting stock which is essential to preventing highly dangerous pests and pathogens from destroying crops. Another example is the language in the 2014 Farm Bill providing for a multi-state program in the Specialty Crop Block Grant program that allows for the kind of regional response to threats such as plant disease that farmers cannot do individually.

I want to offer support for efforts of my fellow witnesses and colleagues in agriculture to raise awareness about the troubling direction the Environmental Protection Agency seems to be taking with respect to regulating crop protection products. These products are essential to the safe and efficient production of food and fiber crops and to IPM (Integrated Pest Management) programs regularly used in sustainable farming practices for successful implementation of IPM on all farms. I urge the Members of this Subcommittee to work with your colleagues to keep these resources available to producers.

Last, increasing regulations and reporting in all areas of farming has taken us away from what we do best: farming, to hours and days of constant interpretation of new regulations, paperwork and audits.

As I indicated at the beginning of my remarks, these are just a small sampling of the issues that have a significant effect on the ability of producers to stay in business and contribute to their local economies. We appreciate all that the Members of this Committee have done to promote agriculture and defend farmers' efforts to feed America and the world. Thank you again for this opportunity, I and United Fresh look forward to working with you and I am happy to answer your questions.

The CHAIRMAN. Thank you, Ms. Torrey.

I now would like to recognize my colleague from the great State of Washington, Mr. Newhouse, to introduce our next witness.

Mr. NEWHOUSE. Thank you, Chairman Davis and Ranking Member DelBene.

The CHAIRMAN. Washington.

Mr. NEWHOUSE. Go, Washington.

First of all, I would like to thank you for holding this hearing. As one of Congress's few active farmers, we don't have control of a lot of factors that impact our ability to make a living including Mother Nature and markets and those things. However, we do as Congress and as individuals have some ability to affect other factors that influence the cost of production. So I certainly appreciate delving into this subject today.

I am also delighted to be able to introduce someone that for years has been an important figure to agriculture in the State of Washington. Ms. Kate Woods, who is now the Vice President of the Northwest Horticultural Council, hails from her family's cattle ranch in Centerville, Washington, which I am sure you have all heard of, but if you haven't, it is a suburb of the large metropolis of Goldendale, Washington. For over 10 years, Kate worked as my predecessor's legislative director and handled agricultural issues for him. She now works hard to represent tree fruit farmers and packers throughout the Pacific Northwest. There are few people in our state or region who have the depth and diverse understanding of agricultural issues as Kate does, and so Ms. Woods, it is my distinct pleasure to welcome you here today. It may be your first time

on that side of the table, and we look forward to your insightful testimony.

STATEMENT OF KATE WOODS, VICE PRESIDENT, NORTHWEST HORTICULTURAL COUNCIL, YAKIMA, WA

Ms. WOODS. Well, thank you very much, Congressman. I certainly appreciate that introduction. And thank you, Chairman Davis and Ranking Member DelBene, for the opportunity to testify before the Subcommittee today on factors impacting the cost of farm production.

I work for the Northwest Horticultural Council, which represents apple, pear and cherry growers, packers, and shippers in Idaho, Oregon and Washington on Federal and international policy and regulatory issues.

Our family-owned orchards provide approximately 66 percent of the apples, 75 percent of the pears, and 80 percent of the sweet cherries grown in the United States. There is no question government regulations have had an increasingly significant impact on our members in recent years.

There are a numbers of issues I could highlight, some of which I have included in my written testimony today, but I would like to focus on a new challenge facing our industry: the implementation of the Food Safety Modernization Act. Under this law, FDA will regulate on-farm practices for the first time, and the number of prescriptive Federal mandates on produce packing houses will be increased to an unprecedented level. Six of the seven regulations implementing FSMA have been released in final form. Today I would like to address the two that will most greatly impact the tree fruit industry: the Standards for the Growing, Harvesting, Packing and Holding of Produce for Human Consumption, or the Produce Safety Rule, and the more processor-oriented Current Good Manufacturing Practices and Hazard Analysis and Risk-Based Preventive Controls for Human Food, or the Preventative Controls for Human Food Rule.

Let me begin by saying that providing a safe, high-quality and healthful product to consumers is the highest priority for our members. Not only do their businesses depend on it but our growers themselves and their families eat the harvested fruit of their orchards. However, these rules coming in at 801 pages and 930 pages, respectively, are daunting and confusing. For example, while orchards clearly fall under the Produce Safety Rule, packing houses and storage facilities must either follow the Produce Safety Rule or the Preventive Controls for Human Food Rule, which is written for processing facilities. This is dependent on a vague *farm* definition based on ownership structure and location, not risk. FDA has acknowledged industry's concerns with requiring facilities that perform the same operations to follow one of two very different rules, and as indicated, intends to enforce the Preventive Control for Human Foods Rule on these facilities in a way that is consistent as possible as what will be required under the Produce Safety Rule.

However, with less than 5 months before the Preventive Controls for Human Food Rule is implemented in September, the guidance promised by FDA on what packing houses will actually be required to do has yet to be released. Curriculum developed to comply with

training requirements in the rule does not address the reality of packing house operations, and individuals with decades of food safety experience within the industry and who therefore would be the most likely to be able to explain how the rule should be implemented. Produce packing operations are being turned away as trainers because they do not have a degree in education or science. Questions submitted to FDA's Technical Assistance Network on issues as basic as which rule a facility falls under is being answered months later with a non-answer of, "Your question will be addressed in guidance." If you think this sounds confusing, imagine how packing house operators are currently feeling.

Confusion also abounds regarding the Produce Safety Rule. For example, the rule requires growers to conduct a certain number of tests for each water source but fails to define what "each water source" means or where within the water system growers are expected to collect a sample. While this rule will not begin taking effect until 2018, guidance and training is needed as soon as possible for several reasons. First of all, the rule requires the growers to establish a microbial water quality profile prior to the rule's enforcement date by conducting 20 tests at or near harvest over a period of 2 to 4 years. Should growers wish to take advantage of the full 2 to 4 year period to take these tests, they would need to start testing in 2016. In the case of cherries, these tests would need to begin only a few weeks from now.

Second, many private food safety audit schemes our growers and packers must comply with as required by retailers are already beginning to incorporate the Produce Safety Rule requirements into their programs. Essentially, this rule is now considered by the private marketplace to be the baseline food safety standard for produce and growers and packers will be required by their customers to comply long before the dates outlined in the rule.

Third, the rule is long and complex. Our growers and packers will need time to understand its requirements and make the necessary changes to their operations. The bottom line is that our growers and packers need guidance, education and answers as soon as possible in order to have any chance of complying with these costly and confusing regulations, which are currently the law of the land in the timeline provided.

Once again, thank you for the opportunity to testify today, and I'll be happy to answer any questions you have.

[The prepared statement of Ms. Woods follows:]

PREPARED STATEMENT OF KATE WOODS, VICE PRESIDENT, NORTHWEST HORTICULTURAL COUNCIL, YAKIMA, WA

Thank you Chairman Davis and Ranking Member DelBene for the opportunity to testify before the Subcommittee today on factors impacting the cost of farm production. I work for the Northwest Horticultural Council, which represents apple, pear, and cherry growers, packers, and shippers in Idaho, Oregon, and Washington, on Federal and international policy and regulatory issues.

Our family-owned orchards provide approximately 66 percent of the apples, 75 percent of the pears, and 80 percent of the sweet cherries grown in the United States. Export markets are critical to our growers, with approximately ⅓ of the crop exported each year.

There is no question that government policies and regulations have had an increasingly significant impact on our growers and packers in recent years. On the positive side, USDA's Market Access Program has played an invaluable role in

leveraging grower dollars to increase access to foreign markets for all three of the crops we represent. The Agricultural Research Service and grants provided through the Specialty Crop Research Initiative and Specialty Crop Block Grant program are key to addressing production challenges ranging from pest and disease management to enhancing food safety.

On the negative side, it is becoming more and more difficult to find the workers necessary to grow, harvest, and pack the crop. The continued delays in processing H–2A visa applications by the U.S. Department of Labor are disastrous for perishable tree fruit, where every day can mean a significant drop in fruit quality. This burdensome program is not meeting the needs of our growers and packers—we need a guestworker program that is affordable, reliable, and reasonable, and that provides a pathway to legal status for the current workforce so that this expertise is not lost.

The continued decline in access to crop protection tools needed for pest and disease control is also having a significant adverse impact on our growers, which I'm sure will also be discussed by the other witnesses testifying before you today.

I would like to focus my testimony on a new set of challenges that is facing our industry: the implementation of the Food Safety Modernization Act (FSMA). Under this law, FDA will regulate on-farm practices for the first time, and the number of prescriptive Federal mandates on produce packinghouses will be increased to an unprecedented level.

Six of the seven regulations implementing FSMA have been released in final form. Today, I would like to address the two rules that will most greatly impact the tree fruit industry—the "Standards for the Growing, Harvesting, Packing, and Holding of Produce for Human Consumption," (Produce Safety Rule), and the more processor-oriented "Current Good Manufacturing Practices and Hazard Analysis and Risk-Based Preventive Controls for Human Food" (Preventive Controls for Human Food rule).

Let me begin by saying that providing a safe, high-quality, and healthful product to consumers is the highest priority for our members. Not only does their business depend on it, but our growers themselves and their families eat the harvested fruit of their orchards. However, these rules—coming in at 801 pages and 930 pages respectively—are daunting and confusing.

For example, while orchards clearly fall under the Produce Safety rule, packinghouses and storage facilities must either follow the Produce Safety rule or the very different Preventive Controls for Human Food rule written for processing facilities. This is dependent on a vague farm definition based on ownership structure and location—not risk. FDA has acknowledged industry's concern with requiring facilities that perform the same operations to follow one of two different rules, and has indicated that it intends to enforce the Preventive Controls for Human Food rule on these facilities in a way that is as consistent as possible with what will be required under the Produce Safety rule.

However, with less than 5 months before the Preventive Controls for Human Food rule is implemented in September, the guidance promised by FDA on what packinghouses will actually be required to do has yet to be released. Curriculum developed to comply with training requirements in the rule does not address the realities of packinghouse operations, and individuals with decades of food safety experience within the industry—and therefore who would be most likely to be able to explain how the rule should be implemented in produce packing operations—are being turned away as trainers because they do not have a degree in education or science. Questions submitted to FDA's "Technical Assistance Network" on issues as basic as which rule a facility falls under are being answered months later with the non-answer of "your question will be addressed in guidance."

If you think this sounds confusing, imagine how packinghouse operators are currently feeling.

Confusion also abounds regarding the Produce Safety rule. For example, the rule requires growers to conduct a certain number of tests for each water source, but fails to define what "each water source" means, or where within the water system growers are expected to collect the sample.

While this rule will not begin taking effect until 2018, guidance and training is needed as soon as possible for several reasons: first of all, the rule requires that growers establish a Microbial Water Quality Profile prior to the rule's enforcement date by conducting 20 tests at or near harvest over a period of 2 to 4 years. Should growers wish to take advantage of spreading these costly tests over the full 4 years, they would need to start testing in 2016. In the case of cherries, these tests would need to begin only a few weeks from now.

Second, many private food safety audit schemes our growers and packers must comply with (as required by retailers) are already beginning to incorporate the

Produce Safety rule requirements into their programs. Essentially, this rule is now considered by the private marketplace to be the baseline food safety standard for produce, and growers and packers will be required by their customers to comply long before the dates outlined in the rule.

Third, the rule is long and complex, and growers and packers will need time to understand its requirements and make the necessary changes to their operations.

The bottom line is that our growers and packers need guidance, education, and answers as soon as possible, in order to have any chance of complying with these costly and confusing regulations—which are now the law of the land—in the timeline provided.

Once again, thank you for the opportunity to come before you today. I am happy to answer any questions the Subcommittee may have.

The CHAIRMAN. Thank you, Ms. Woods. Now, you are a former staffer, right?

Ms. WOODS. Yes, I am.

The CHAIRMAN. Is this your first time testifying in front of this——

Ms. WOODS. Yes, it is.

The CHAIRMAN. How does it feel on the other side?

Ms. WOODS. It is a very different view.

The CHAIRMAN. You can tell Doc Hastings he can still show his face around here once in a while. We miss seeing him.

Ms. WOODS. I will let him know that, sir.

The CHAIRMAN. Not enough for him to come back. Welcome, and thank you for your testimony.

Ms. WOODS. Thank you very much.

The CHAIRMAN. Up next, a gentleman, he and I have been on the same schedule—we were together yesterday and over the last few weeks—my good friend, the President of the Illinois Farm Bureau, Mr. Rich Guebert. Rich, go ahead and give your testimony.

STATEMENT OF RICHARD L. GUEBERT, JR., PRESIDENT, ILLINOIS FARM BUREAU; MEMBER, BOARD OF DIRECTORS, AMERICAN FARM BUREAU FEDERATION, BLOOMINGTON, IL

Mr. GUEBERT. Thank you, Chairman Davis, Ranking Member DelBene, and the Members of the Subcommittee. Thank you for the opportunity to provide testimony to you here today.

I am President of the Illinois Farm Bureau and pleased to testify on behalf of both the Illinois Farm Bureau and the American Farm Bureau Federation. My wife, Nancy, and I along with our son, Kyle, operate a corn, soybeans and wheat farm in Randolph County.

As we got down to planting corn last week and the week before, a number of thoughts came to mind, including the fact that we are planting a crop that will most likely return a price below the cost of production. I recently went back through our records, and a few things jumped out at me. In 1985, it cost $110 in inputs for an acre of corn, not counting land costs. This year I estimate that could well be around $475 per acre. Our seed costs averaged $72 for a bag of seed corn in 1985, and this year it will average a little over $340 per bag. Nitrogen has increased from $150 to $625 a ton. While some things are better like interest rates and fuel prices, Illinois Farm Bureau farm management reports that over the past 4 years, farm income has dropped six percent per year while costs have fallen at ½ that rate. In fact, indexed to inflation, the eco-

nomic return for Illinois farmers after family expenses is currently at its lowest level since 1972.

One thing hasn't changed: farming is still a risky business. To give you a personal example, we farm in the Mississippi River bottoms about 50 miles south of St. Louis, and in 1993, our family planted 1,750 acres of corn, soybeans and wheat, and later that year the devastating foods devastated our crops and we harvested only 17 acres that fall.

It is tough to recover from something like that but frankly, programs like Federal crop insurance, commodity programs that are there to assist to recover from weather-related issues and disasters and multiple-year price declines, I can't imagine what farming, food production or food prices would be like in the absence of these essential programs.

But I want to touch more broadly on the subject of the hearing and the factors of cost of production. Some of these are positive such as changes Congress has enacted affecting covered farm vehicles, improvements to our waterway systems, helpful improvements that will affect agriculture drivers and shippers. Others are works in progress like the new Food Safety Modernization Act regulation where we are hopeful Federal regulators would take into account agricultural needs. We also hope EPA will move forward with its pending proposal to extend Dicamba and Dicamba-tolerant soybeans and cotton, and we welcome EPA's support to state-managed pollinator protection plans like the one we are developing in Illinois which utilizes DriftWatch to help beekeepers and farmers communicate and cooperate more efficiently.

Unfortunately, the list of things that increase our costs are even longer but there are a few at the top of the list that are most important and most urgent. After all the good work that this Committee did to past the Safe and Accurate Food Labeling Act, the Senate has refused to pass the bill. Farmers across the country and others are increasingly anxious about the impact of mandated Federal labeling of GMO foods. We hope you will talk to your Senate colleagues and urge them to pass this bill.

The H–2A program is increasingly important to fruit and vegetable growers but it is an economic and bureaucratic nightmare for growers. Both the U.S. Department of Labor and the U.S. Citizenship and Immigration Services are causing unnecessary processing delays, and both agencies could make the program more efficient. They could start improving it now.

Come this January, a new EPA rule will grant legal rights to anyone showing up at a farmgate claiming to be a designated representative of a worker from that farm. We thank the Members of the Committee for leading support of H.R. 897, a bill that would assure farmers that when they lawfully apply pesticides, they are not subject to Clean Water Act permit. Unfortunately, the Senate has failed to pass this bill but we are still looking for opportunities to enact it this year.

EPA's new spill prevention rules will undoubtedly impose new costs on farmers and ranchers as they comply with the regulation containment and prevention requirements, and there are other issues as well. The Department of the Interior's Sage-Grouse Plan will undoubtedly affect farming and ranching operations out West,

particularly for those ranchers with grazing allotments on public land.

Mr. Chairman and Members of the Committee, I appreciate this opportunity to testify and to share with you some of the most pressing issues today facing farmers, and I am pleased to answer your questions. Thank you.

[The prepared statement of Mr. Guebert follows:]

PREPARED STATEMENT OF RICHARD L. GUEBERT, JR., PRESIDENT, ILLINOIS FARM BUREAU; MEMBER, BOARD OF DIRECTORS, AMERICAN FARM BUREAU FEDERATION, BLOOMINGTON, IL

Chairman Davis, Ranking Member DelBene, and Members of the Subcommittee, thank you for this opportunity to provide testimony to the Subcommittee as you focus on the costs of agricultural production and factors that have an impact on those costs. My name is Richard Guebert, and I am President of the Illinois Farm Bureau. I am pleased to testify this morning on behalf of both Illinois Farm Bureau and the American Farm Bureau Federation.

My wife, Nancy, and I with our son, Kyle, operate a corn, soybean and wheat farm in Randolph County. As we got down to planting corn last week, naturally lots of thoughts raced through my head, including the stark fact that we are planting a crop that will most likely return a price below our costs of production. Just in case, like any farmer I check the markets—regularly. At times when I'm ready to sell, I may check the markets 15 or 20 times a day.

We're not alone. My neighbors and other farmers I represent across the state are faced with the same reality. Last year was a great production year in Illinois, but the dollar has been strong. Exports are down, and competitors in Brazil and Argentina seem lately to have the upper hand.

As I reflect on changes in farming I've seen over the years, commodity prices used to be more predictable. They were primarily influenced by regional and national factors. It is a world market today with much greater volatility. Just in the past 2 weeks we've seen a $1.30 a bushel increase in soybean prices because of rain during harvest in Brazil. And then overnight on April 22 a drop of 22¢ a bushel. Farmers and ranchers are price takers whether on the input or commodity side of the equation.

I recently went back through my records and discovered that in 1985 it cost $110 in inputs for an acre of corn, not counting land costs. This year I estimate it will cost $475. Our seed costs averaged $72 a bag in 1985. This year it will average $340 a bag. We are paying for the technology that makes us more productive given what Mother Nature throws at us. Despite some resistance—especially in our area of the state—our ability to control weeds is still far better than it ever was in the past. And I can tell you that our environment is better for it.

Recently, we had some excellent years. Kyle and I invested in new equipment and a new grain storage system. In some respects, some of our costs like rent, seed, and machinery seem to follow the market. They go up, up, up. It seems when prices go down, our input costs—what we pay for land, seed, fertilizer and crop protectants—don't fall quite as fast. Again, comparing to when I started in farming in the mid 1980's, nitrogen has increased from $150 to $625, DAP and urea costs are 3× higher. Fortunately, interest rates are much lower. I was paying 15–18% on my loans in the 1980s. While it's not our biggest cost, the recent and sustained drop in fuel prices has also helped.

I also spend significantly more time on filling out paperwork for permits, licenses, and applications.

In 1985 when I started farming, 400 acres could support a family. Today our farm is much larger and supports three families. Revenue from our farm goes to pay down debt and pay for inputs. We need to pay for repairs—while hoping to make improvements in equipment, technology and infrastructure.

All told, Illinois Farm Business Farm Management reports that over the past 4 years, farm income has dropped six percent a year, while costs have fallen at ½ that rate. Over the last 18 months we have seen our working capital erode over 25%. Our equity is fading into the sunset. Illinois farmers are paying taxes this year on a more valuable 2014 crop. Some are faced with the challenge of paying big tax bills at the same time they are buying inputs. Indexed to inflation, the economic return for Illinois farmers after family expenses is currently at its lowest level since 1972.

All of this has proven to be a very steep learning curve for a new generation of younger and less experienced farmers—like my 40 year old son Kyle—who entered the business when times were better.

When I started farming, I borrowed money over the phone. Not today. We know that farm lenders are being closely monitored. In turn, they pay close attention to their farmer customer's financial situation. Lately there has been some reluctance to lend to younger farmers who have not built up any cash reserves. It hasn't been a good time to get into corn and soybean farming and that does not bode well for agriculture.

To the consumer, it might seem reasonable that when prices fall, farmers should back away and plant less. That's counterintuitive for a farmer. Our job is to produce. We have fixed costs to cover. And if we give up land we rent, we may never get it back.

We are eternal optimists. At this time of year, as we sit in the planter, each of us hopes that we will produce our best crop ever.

While farming has changed over the past 35 years, one thing hasn't changed. Farming is risky, riskier than most enterprises. I farm in the Mississippi River bottoms. In 1993 we planted 1750 acres of corn, soybeans and wheat. We invested in inputs to raise the crop. And because of flooding we harvested 17 acres in the Fall of 1993. It is tough to recover from that.

In fact, we would not have survived without programs like Federal crop insurance and commodity programs. The farm safety net doesn't make us whole, nor should it. But it does help us recover from weather-related disaster and multi-year price declines. Crop insurance and commodity programs help farmers manage risk, recover some costs and get next year's crop planted while protecting consumers from sticker shock at the grocery store. I can't imagine what farming, food production or food prices would look like in the absence these essential programs.

But today, I want to speak about the challenges and opportunities that affect farmers and ranchers across the country, not just my own state. We are facing stiff headwinds on commodity prices, as AFBF President Zippy Duvall testified before the General Farm Commodities Subcommittee just 2 weeks ago. He laid out those challenges in detail. Naturally, no individual farmer or even a large organization like Farm Bureau can dictate or predict what will happen in markets. So we are continuing to do what we have done for generations—adapting to more challenging conditions, using the resources and tools at our command to make the most of our investments and provide high quality food and fiber to American consumers and others around the world.

At heart, every agricultural producer is a risk-taker. If they're not, they should probably be doing something else. Our livelihood isn't guaranteed. We don't expect it to be. But when it comes to legislation and regulations, we would ask that policymakers follow the old adage: *Primum non nocere.* "First, do no harm."

There are bright spots now in Federal policymaking, and I would like to touch on those first and to express our appreciation for the help and support of the Members of this Committee. Then, I would like to make you aware of issues where we are facing and potentially costly challenges.

Policies that Have Helped or Can Help to Restrain Production Costs

Transportation

In recent years, Congress has taken some significant steps on Federal transportation policy that are important to producers. These efforts have been bipartisan, and we want all the Members of the Committee to accept our gratitude for their hard work in making important changes to Federal transportation policy. These include:

- Regulatory relief for covered farm vehicle drivers in MAP–21.
- A WRRDA bill that made significant improvements to our waterway systems.
- An increase in revenues for the Inland Waterway Trust Fund.
- Additional regulatory clarity for agricultural drivers in the FAST Act.
- The Surface Transportation Board (STB) Reauthorization Act that updated the STB that we hope will benefit all shippers and agricultural producers particularly.

Unfortunately, in the energy and transportation field we are increasingly concerned about the reluctance of EPA to fully implement the Renewable Fuel Standard (RFS). Renewable fuels have been a tremendous success story for the nation as a whole and to rural economies in particular. Thousands of farmers and individuals in rural communities have invested millions of dollars in infrastructure to meet the

goals Congress has set out. The EPA should adhere to Congress' intent and fully implement the volumes specified in law.

Food Safety Modernization Act

Providing a safe food supply is a unified goal for farmers across the country and we believe farmers share the responsibility to work to meet that goal. Farm Bureau worked actively with the Food and Drug Administration as it developed its regulations to implement the Food Safety Modernization Act. We were heartened that, in many ways, FDA actively engaged the farming community. While the rules are not perfect, we do believe that FDA attempted to find solutions that balanced the need for public safety with farming realities. Regardless, FSMA requirements certainly place increased costs and burdens on farmers and open up farms to yet another Federal agency. We will continue to work with FDA in the implementation of FSMA so that we see limited increases in production costs and the benefit of a safer food supply.

Crop Protection

While Farm Bureau is concerned about EPA's approach on some crop protection tools, we are encouraged that EPA is now soliciting public comment on the use of Dicamba formulations for deregulated Dicamba-tolerant soybeans and cotton. Weed and pest management for farmers is an ongoing challenge, particularly as some weeds develop resistance to common herbicides. There is a growing need for new technologies to counteract weed resistance, and Farm Bureau supports EPA registration of these uses of Dicamba without onerous restrictions relating to tank mixes or buffer zones.

State Managed Pollinator Protection Plans (MP3s)

AFBF policy supports the continued use of neonicotinoids as well as the development and implementation of state-managed Pollinator Protection Plans (MP3s). These plans hold the prospect of greater communication between growers and beekeepers—an outcome that could help the bottom line for beekeepers while allowing crop farmers to manage their lands effectively.

Research

Agricultural research is critically important to solving some of society's greatest challenges, including improving human health, maintaining our global competitiveness and enhancing our national security. While it is true that a dollar of research money spent today might not translate immediately to the bottom line of farmers, these are truly investment dollars. They make a difference, and a vigorous, effective research program holds the promise of keeping more farmers more productive in the future.

In this past year alone, the vulnerability of our food system and the necessity of additional research was put on stark display with an estimated $3.3 billion in economic losses from a new strain of the avian flu and unprecedented drought in places like California. Yet 2015 also showed the strength of our agricultural research system with the development of vaccines and new products like the allergy-free peanut. These innovative discoveries are just the tip of the iceberg of what agricultural science and technology researchers can deliver with sufficient support.

Apiculture is a sector of agriculture that clearly needs research support. The long-term health of the managed honeybee sector has been the focus of much attention over the last several years. Farm Bureau members include not only dairy producers, corn and soybean farmers, fruit and vegetable growers but beekeepers as well. We are working to protect their interests and want to do all we can to help the beekeeping industry meet the challenges it currently faces.

As the President's Task Force mentioned last year, overwintering losses for beekeepers have been exceptionally high for a number of years. While some activists wish to pin the blame entirely on pesticides (especially neonicotinoids), the science and the facts point to other factors—most prominently the Varroa mite—that most likely have a greater impact on hive health. Farm Bureau supports ongoing research to assist the honey bee industry, and it is unquestionably true that a healthy beekeeping industry is important to agriculture and it affects some farmers' bottom line. For example, California almond growers are critically dependent on pollination services from managed honey bees to pollinate their crop; estimates are that approximately two million hives annually support the almond industry in California. And the price of pollination services, while it has moderated in more recent years, has risen appreciably over the last decade.

American agriculture needs a healthy bee industry and we should all continue to work constructively to surmount the challenges beekeepers face while assuring that farmers retain access to critically important pesticides.

In fact in Illinois, we are working hard with our Department of Agriculture and other stakeholders to begin the process of developing a Pollinator Protection Plan. We feel strongly that farmer stakeholders should be at the table and that we collectively arrive at reasonable solutions that protect both crops and pollinators. We in Illinois will continue to promote communication between neighbors through old fashioned face to face conversations, as well as with technology such as DriftWatch, an online platform for farmers and beekeepers to share location information. We will also continue to educate our members on the pesticide misuse complaint process through our Illinois Department of Agriculture, as well its apiary inspection process.

Policies that Can Increase Costs to Growers

Unfortunately, the number of issues where policies actually increase cost pressures are more numerous. But I want to draw the Subcommittee Members' attention to a few of the most urgent.

Mandatory Labeling of GMO foods

Probably our greatest concern at the moment is the failure of the Senate to take up and pass legislation to prohibit mandatory labeling of GMO foods. This failure may well lead to a patchwork of state labeling requirements that will be costly and difficult to sort out. If Congress cannot solve this problem, there is no question the long-term outlook for farmers is higher input costs, potentially lower yields, a more challenging environment in controlling pests—and higher costs for consumers.

Farm Bureau is tremendously grateful to the bipartisan leadership of this Committee in crafting H.R. 1599, the Safe and Accurate Food Labeling Act, and steering its passage through the House. Unfortunately, this issue has been stalled in the Senate by our opponents. No one who supports American agriculture should pretend that mandatory Federal labeling of GMOs will not have a significant impact on our bottom line in the future. But let it also be clear that a smattering of state labeling requirements is not an acceptable outcome either. It is extremely disappointing that some individuals claiming to be seeking 'compromise' are pressing for policies that will stifle innovation, hurt agriculture and raise consumer food costs.

H–2A Processing Delays

Although an increasing number of fruit and vegetable growers use the H–2A program, it still accounts for less than ten percent of hired labor in the agricultural sector. A major factor in this low utilization rate is the high cost of the program. Typical of the unworkable nature of the program are the delays faced by growers due to inefficiencies in the U.S. Department of Labor, which processes labor certifications. These delays can be devastating to a grower, who depends on his workers being present and available to plant, tend, and harvest his or her crops.

Additionally, we have seen increased delays at the United States Citizenship and Immigration Services (USCIS) processing center. Both agencies could make the program more efficient but have so far declined to do so. For example, both agencies refuse to process key forms and documentation electronically, insisting instead that these documents be sent by standard mail—a process that often causes complications and delays that could be easily avoided.

Worker Protection Standards Rule (WPS)

Last year, EPA imposed a wide range of new obligations on farmers—more frequent training, record-keeping, designation of 'applicator exclusion zones' and others—nearly all of which will mean greater costs for producers with very little, if any, real benefit for workers (in fact, EPA said repeatedly in its original proposal that it could not quantify the benefits of many of the new demands it was proposing). Even more significantly, however, EPA made a last-minute insertion in the rule that could have very pernicious impacts on growers.

Under the new EPA rule, anyone who shows up at a farm gate claiming to be a 'designated representative' of a worker can demand a farmer's pesticide use information merely by showing a signed piece of paper that is supposedly signed by a worker or former worker. The 'designated representative' can then turn around and publish that information in the community, put it online or even start up a petition against the farmer.

We see great potential liability in this provision, with no added protections for workers. And we are greatly distressed that EPA did not share that provision with this Committee, as it was required to do by law. But we want to thank Chairman Conaway and Ranking Member Peterson, who are now working on this matter and we hope it can be resolved.

Property Rights and Grazing

While Illinois might not have much grazing of cattle on public land, our colleagues out west have pointed out two significant Federal initiatives that could impose tremendous new costs on western growers:

- The decision by the Department of the Interior not to list the Sage-Grouse under the Endangered Species Act is bringing with it wholesale changes to Federal land planning in the West. For ranchers who have grazing allotments and whose livelihood is dependent on public lands, we have great anxiety that this step by DOI could mean greatly increased costs to producers.
- Until it was stopped by a Federal court, the U.S. Forest Service had proposed requiring some holders of Federal permits to transfer their state-adjudicated water rights to the USFS. Although the Forest Service has withdrawn the proposal, we remain concerned that the Federal Government, through the USFS as well as the Bureau of Land Management, could revisit this matter and attempt to coerce permit holders, such as ranchers who graze on public lands, to hand over their own property rights under threat of losing their permit.

National Pollutant Discharge Elimination System (NPDES) Permit for Pesticide Applications

Today farmers are facing a nearly unprecedented situation in which a normal pesticide application that is perfectly legal under FIFRA can be challenged by environmental groups as a violation of the Clean Water Act. The House of Representatives passed legislation (H.R. 897) to correct this regulatory 'double-jeopardy' and we commend the House Agriculture Committee, which played a major role in shepherding this bill to a strong bipartisan vote. We are working to have the Senate take up the House bill. If we don't succeed, farmers could face potential legal jeopardy and uncertainty over their ability to manage their crops to prevent infestation of their crops from pests or disease.

In Illinois, we have a General NPDES permit for pesticide application. In addition, we have general pesticide applicator certification and licensing requirements where farmers must take classes and pass exams. Farm Bureau supports the certified applicator process because we view it as one way to assure society that people who handle these products are trained and knowledgeable. Frankly, that's one reason why Farm Bureau is concerned about the changes EPA is proposing to the certified applicator program. We are not convinced the changes they are requiring—in mandating continuing education credits and increased licensure requirements—will result in meaningful changes; yet we know they will increase costs and put a real strain on extension services and others who often provide training. It's important to note the several different agencies, both state and Federal, and statutes that impact the single act of applying pesticides.

Spill Prevention and Countermeasure (SPCC) Rule for Farms

Farmers are now facing higher costs due to EPA's new SPCC rule as it applies to farms. Storage of oils, including fats, is captured by these regulations and the proposed revisions will broaden the regulation to more agricultural operations. These regulations impose secondary containment requirements, burdensome paperwork requirements, and penalties associated with failure to comply. Like the NPDES rule, the SPCC will also be directly affected by EPA's WOTUS rule should it be implemented.

Pesticide and Pollinator Issues

As mentioned earlier, AFBF is working actively to further the interests of the beekeeping industry. In this effort, we want crop producers and beekeepers to work together in a mutual effort to assure each other's success. In fact in Illinois, we are working hard with our Department of Agriculture and other stakeholders to begin the process of developing a Pollinator Protection Plan. We feel strongly that farmer stakeholders should be at the table and that we collectively arrive at reasonable solutions that protect both crops and pollinators.

Unfortunately, some activists want to divide us from each other because they have a totally separate agenda—which has nothing to do with agriculture but everything to do with eliminating pesticides. We in Illinois will continue to promote communication between neighbors through old fashioned face to face conversations, as well as with technology such as DriftWatch, an online platform for farmers and beekeepers to share location information. We will also continue to educate our members on the pesticide misuse complaint process through our Illinois Department of Agriculture, as well its apiary inspection process.

We are concerned that EPA has been reading too many inflammatory press releases from environmental groups and not enough science. Just in the past year, we

have seen the agency take a number of actions that are troubling for growers. If the agency continues along this path, we are greatly concerned that it will eventually impose higher and higher costs on producers by depriving them of the crop protection tools they need. To cite just a few examples:

- When the 9th Circuit recently invalidated the registration of sulfoxaflor, EPA essentially said it would not defend its own decision to register the pesticide.
- EPA abruptly withdrew its approval of the Enlist/Duo herbicide on corn and soybeans and has delayed the approval review of that same chemistry for cotton.
- In November, EPA proposed to revoke all tolerances for chlorpyrifos—and despite its reliance on questionable epidemiology studies that are not publicly available and overwhelming requests from the stakeholder community, the agency refused to extend the comment deadline past January 5. Last week, EPA held a Science Advisory Panel (SAP) despite requests from Farm Bureau and others to postpone the panel.
- EPA is under increasing political pressure to use agenda-driven science to limit use and pesticide availability under the guise of protecting pollinators—despite the fact that the primary culprit lies elsewhere. In fact, in the "Report on the National Stakeholders Conference on Honey Bee Health" held in 2012, it was noted that "The parasitic mite Varroa destructor remains the single most detrimental pest of honey bees, and is closely associated with overwintering colony declines."

Health Care Costs

Fruit and vegetable growers are heavily reliant on seasonal workers to harvest their crops. For those over the large employer threshold in the Affordable Care Act (ACA), the requirement to offer and administer health insurance increases the cost of doing business.

Although the ACA grants an exemption for small seasonal employers, the rules are burdensome and confusing. The definition of a seasonal *worker* used to determine if an employer is required to offer health insurance is 4 months. The regulation that determines if a seasonal *employee* is considered full time and therefore must be offered coverage is 6 months.

Farm Bureau believes as long as the ACA remains in place, it should be made as easy as possible for employers to comply with the law. This is why AFBF supports H.R. 863, the Simplifying Technical Aspects Regarding Seasonality Act (STARS), a bipartisan bill that would create a single definition for seasonal workers and seasonal employees in order to streamline and reduce compliance costs associated with the Affordable Care Act.

Policies that Can Affect Future Costs

Future Ag Innovation, Part 340 and OSTP Review of the Coordinated Framework

To remain internationally competitive and lead the world in achieving the productivity and efficiency gains required to meet the food, fiber and fuel demands and environmental challenges of the twenty-first century, U.S. agriculture must stay on the cutting edge of technology.

Therefore, Farm Bureau membership has a strong interest in maintaining and improving access to new input technologies, in fostering continued public confidence in the U.S. regulatory system and in preserving U.S. access to international markets, all while preserving and enhancing the coexistence of diverse crops and cropping systems.

The Animal and Plant Health Inspection Service (APHIS) of the U.S. Department of Agriculture (USDA) recently requested public comment concerning the notice of intent (NOI) to prepare a programmatic environmental impact statement in connection with potential changes to the regulations regarding the importation, interstate movement, and environmental release of certain genetically engineered organisms. We are supportive of APHIS's efforts to take a hard look at its regulations, to ensure that they are up-to-date with the best-available science and utilize the more than 20 years of experience APHIS has in reviewing the safety of these crops. However, because the options APHIS is considering include potential major departures from the current regulatory framework, it is critically important that APHIS does not lose sight of the importance of agricultural innovation.

In agriculture, the value of research, science, and innovation cannot be underestimated given serious challenges that lie ahead. Between today and the year 2050, farmers will be required to grow twice as much food to feed a rapidly growing global population. The U.S. Government must consistently promote policies that encourage

agricultural innovation to enable American farmers to confront serious food security and environmental challenges for U.S. agriculture to remain competitive.

Biotechnology has demonstrated significant potential for improving food and energy security, enhancing food safety and nutrition, and making agricultural and energy production systems more sustainable. The current set of biotechnology-derived plants have an impeccable record of safe use. During 30 years of research on these plants and 15 years of their wide-scale production globally, not a single instance of actual harm to human health, animals, or the environment has ever been demonstrated. In the United States, more than 90 percent of corn, cotton, canola, soybeans, and sugar beets grown in our soil contain at least one biotechnology-derived trait.

For 2 decades, the United States has been viewed as the global leader in agricultural biotechnology innovation. Our past success was attributable, in part, to a science-based regulatory system, known as the Coordinated Framework for the Regulation of Biotechnology that has facilitated the development of safe and beneficial products. An appropriately-designed, well-functioning regulatory system, working in conjunction with government policies that encourage investment in agricultural innovation, has provided U.S. farmers and ranchers with the tools they need to produce the safe, affordable food supply we enjoy today.

Despite the impressive record of safety and accumulated body of scientific knowledge about the technology, the requirements and costs of obtaining regulatory clearances for biotechnology products have grown and at times have been burdensome and unpredictable, subject to delay, and duplicative.

Irrespective of the cause, the loss of predictability and timeliness in the U.S. regulatory system carries a high price that is paid by many. As timelines lengthen and the rate of approval of safe GE crop products slows, the potential benefits of the new crops are withheld from U.S. farmers and society at large.

Farmers need access to new tools for controlling weeds, for withstanding insects and plant pathogens, and for coping with environmental stresses such as drought, in order to maintain a sufficient global food, fiber and fuel supply. The agricultural biotech industry employs tens of thousands of individuals across the country and invests millions of dollars each day to develop new technologies that farmers can use to help feed a growing global population.

Recouping the costs of agricultural biotech product discovery and development, which currently averages $136 million per product, is difficult under the best of circumstances. The direct cost of biotech product development is exacerbated by delayed product approval timelines and the trend of increased legal costs associated with environmental litigation, diminishing the incentive for further investments in product discovery and agricultural innovation, especially for small acreage crops. Furthermore, the opportunity costs from not using biotechnology tools to improve these crops are disproportionately born by small farmers and consumers.

The market for agricultural biotech products is global and growers in other countries have adopted biotech crops as quickly and decisively as U.S. growers because they are eager to reap the economic and environmental benefits provided by GE crops. Not surprisingly, countries with consistent, transparent, science-based regulatory systems that drive predictable decision-making processes provide opportunities for growers to gain access to new biotech products and are thus attractive to agricultural biotech companies looking to recoup their R&D investments.

Agricultural biotech companies can and do seek regulatory approvals to sell biotech seeds in other countries. However, U.S. farmers are totally dependent on the functionality of the U.S. regulatory system to support their current and future needs for breakthrough technology traits to support their farming operations. U.S. growers cannot retain their prominent position in the increasingly competitive, global agricultural commodity markets if growers are denied access to the best available products, which they clearly need and demand. Regulatory hurdles at U.S. agencies that slow reviews for much-needed, safe products, such as new herbicide tolerant traits, companion herbicides, and new pest resistance traits, ultimately put U.S. commodity producers at a competitive disadvantage relative to growers in other countries.

Regulatory hurdles at U.S. agencies have also deterred the diffusion of proven traits into small acreage crops and have severely impeded the development of new, innovative "second generation traits" with broad consumer and environmental benefits, such as fresh fruits and vegetables that last longer, staple crops with improved nutritional value, and animal feed that would reduce the amount of pollution.

A series of studies charting the diffusion of proven traits and research and development of new traits has shown that the loss of interest in developing these products is attributable to disincentives posed by the regulatory system. In addition, a report from the President's Council of Advisors on Science and Technology has also

acknowledged the detrimental effect of the current regulatory system on product development by public-sector scientists and small companies.

Breeders have historically integrated the latest discoveries in biology and genetics into their methodologies to fully exploit existing, and to induce new, genetic variation. Some of the latest breeding methods provide new ways to make similar genetic changes. They can also make very specific changes in existing genes in a way that mimics the changes that occur in nature. By applying these newer methods, breeders are more efficient and precise at making the same desired changes that can be made over a much longer period of time through earlier breeding methods.

Reviews of the regulatory system, broadly, and proposed changes to specific USDA regulatory functions must be science based. The level of agency oversight for products of biotechnology ought to be proportionate to the actual risk posed by the organism. Policies should promote innovation and advancements in plant breeding throughout the agricultural economy—in both public and private-sector settings. Minimizing unnecessary regulation will allow small and medium sized companies and universities to move forward in developing innovative products for specific regions of the country.

Definitions of biotechnology that are too broad don't make sense scientifically and will also stifle innovation by (1) erecting pre-market regulatory barriers that are difficult for small and medium sized companies and universities to overcome; and (2) classifying newer breeding methods as "Genetically Modified Organisms" in the eyes of regulators and the public (thus making it more difficult for them to be commercially acceptable for a broad range of crops).

We support a regulatory environment that will enable all kinds of plant breeders, including those who grow fruits and vegetables, to utilize the broad range of modern breeding methods and advance innovative products to the commercial marketplace without facing burdensome or non-risk based regulations and stigma.

Today, with an increased understanding of genetics, the capability to sequence plant genomes and the ability to link a specific gene to a specific characteristic, plant breeders are able to improve a plant's performance more precisely and efficiently by focusing on the plant's underlying genetics. Breeders can make very specific changes in existing plant genes in a way that mimics the changes that occur in nature.

The development of any new plant variety requires the evaluation of thousands of plants, over many years and many locations. The scrutiny breeders routinely apply to new variety development is well established and has been the foundation for a food supply that is safe, nutritious, and diverse.

These precise techniques help breeders achieve the same result that could be achieved via more traditional plant breeding methodologies. "Gene editing" is one of the more common and important techniques being utilized.

Importantly, the U.S. Government must approach this process mindful of international implications. While the regulation of these products should be based purely on science, this is an opportunity for the U.S. Government to lead an active dialogue with international governments to ensure that mutually beneficial policy goals are met.

Throughout the process of considering a new pre-market agricultural biotechnology regulatory system, APHIS should work closely with a broad range of scientific experts, stakeholders, and other government agencies to clarify, improve, and (as needed) modify and supplement the regulatory alternatives the agency is considering before publishing a proposed rule, with an eye to improving clarity, transparency, predictability, and ease of implementation.

If I may leave one thought with you today . . . our world population continues to grow. Farmers must expand markets through exports, new markets like biofuels and expanding our livestock production. Trade agreements—like the Trans-Pacific Partnership are vital. The world population will continue to grow. American farmers have proven time and time again we produce the food, fiber and fuel the world needs. Please don't restrict, limit or constrain our ability to provide what consumers around the world need.

Farm Bureau appreciates this opportunity to provide this testimony to the Committee and we look forward to working with you on these issues in the future.

The CHAIRMAN. Thank you, Mr. President, and great seeing you again.

Up next, no panel on this Agriculture Committee is without a Texan, and we are proud to be joined by our Chairman from the great State of Texas, Mr. Conaway, here.

Mr. Dale Murden, the President of the Texas Citrus Mutual in Mission, Texas, please feel free to offer your testimony.

STATEMENT OF DALE MURDEN, PRESIDENT, TEXAS CITRUS MUTUAL, MISSION, TX

Mr. MURDEN. Thank you, Chairman Davis, Ranking Member DelBene, Members of the Subcommittee. On behalf of the more than 600 commercial citrus growers in Texas, I would like to express our appreciation for allowing me to share details about some of the challenges facing the United States citrus industry. My name is Dale Murden. I am a grower and President of Texas Citrus Mutual.

The Texas citrus industry is comprised of almost 27,000 across three counties in lower south Texas. We grow more than nine million cartons of fresh grapefruit and oranges each year and another five million cartons of juice fruit. Citrus growers in California, Florida and Texas face a broad range of challenges. Like other sectors of agriculture we are consistently asked to do more with less. For example, look toward the confusion and challenges with the implementation of the Food Safety Modernization Act, along with our consistent concerns regarding labor needs. However, in my testimony today I will focus on pest and disease issues facing growers, which threaten our very existence and causes me to wonder if I will be in business in another year or so.

In the last few years, we in Texas have found ourselves in not one but three Federal quarantines due to pest and disease outbreaks. We are battling Mexican fruit flies once again even after it was declared eradicated. We have discovered citrus canker, although it was eradicated back in the 1940s. And of course, you have all heard about HLB and citrus greening that is currently devastating the Florida industry and is now prevalent in Texas.

Simply put, these issues have cost Texas citrus growers millions to battle these new issues and more as care costs have increased from an average of about $1,400 an acre to well over $2,000 per acre just in the last several years. Citrus growers in the United States are in need of solutions and Federal investments to counter the effects of the many pest and disease issues we are faced with.

I would like to take a minute to highlight several programs implemented in the last farm bill that we do feel are making a difference. Funds from the farm bill section 10007 program are supporting USDA and state partners in their efforts to eradicate and find cures for pest and disease issues, the Citrus Disease Research and Extension Program under the Specialty Crop Research Initiative. They are helping researchers develop methods to culture HLB so that it can be studied more efficiently. In addition, these funds support scientists searching for bactericides that can reduce or eliminate the disease in efforts to breed HLB-resistant root stocks. Much of the breeding relies on virus-free and genetically diverse germplasm, which is maintained at the Citrus National Clean Plant Network Centers.

Another tool that we will increasingly rely on for solutions is biotechnology. As USDA moves forward with its updates to part 340, I would ask the Committee to be intimately engaged. More regulation and the threat of litigation from anti-modern ag groups would

stifle innovation. If USDA gets the updates to part 340 wrong, we will not have a viable ag sector in this country. That is how important biotechnology is to the future of agriculture.

When I stop to consider the research and eradication activities underway to tackle the serious challenges facing citrus, I am reminded of the hard work this Subcommittee and your colleagues in the full Committee put in to see the last farm bill to completion and want to thank you for those efforts.

As we look forward to the next farm bill, I am also hopeful that funds can be made available to rehabilitate some of the very aging USDA facilities that carry out much of the work that growers like me are counting on. However, recent actions by the EPA have done significant harm to our access to the very tools USDA and academic scientists suggest we use. In January, EPA in collaboration with Health Canada published a preliminary risk assessment on imidacloprid regarding the potential for the chemistry to have a sublethal impact on bees. EPA chose to put out a press release with the lead statement saying the assessment shows a threat to pollinators while EPA's partner in the assessment, Health Canada, put out a very different message, simply stating, "Regulatory reviews shows slim risks to bees from imidacloprid."

One of the use patterns highlighted in the EPA's press release was foliar applications to citrus and cotton during bloom. As a grower of both of these commodities, this was especially inflammatory as neither of these crops even use bees for pollination purposes much less they didn't consider that we don't spray during the bloom. But again, the Agency didn't share that fact.

As a farmer, I know that come next season the same pests and perhaps some new ones will be in my fields impacting my crop but I have no idea if I will have a product to treat them with. As a citrus grower, the risk side of my assessment is very high, and the financial benefits of growing food in this country continue to dwindle. In short, the United States citrus industry as you know it is in extreme trouble.

Thanks again, Mr. Chairman, for holding this important hearing, and for all that you and the Subcommittee are doing. We need and appreciate your help.

[The prepared statement of Mr. Murden follows:]

PREPARED STATEMENT OF DALE MURDEN, PRESIDENT, TEXAS CITRUS MUTUAL, MISSION, TX

Thank you, Chairman Davis, Ranking Member DelBene, and Members of the Subcommittee. On behalf of the more than 400 commercial citrus growers in Texas, I want to express our appreciation for convening this hearing and allowing me to share details about some of the challenges facing the U.S. citrus industry and many of the small, family-owned growers in this country.

My name is Dale Murden. I am President of Texas Citrus Mutual and a farmer. My family and I currently grow citrus, sorghum and raise cattle near Harlingen, Texas.

The Texas citrus industry is comprised of almost 27,000 acres across three counties in the Lower Rio Grande Valley where we grow more than nine million cartons of fresh grapefruits and oranges each year and another five million cartons for fruit juice. Farmgate value of citrus is about $100 million per year with approximately $5 million of it coming from organic production.

Citrus growers in California, Florida and Texas face a broad range of challenges, from labor shortages to plant pests and diseases, that threaten our very existence as an industry. Like other sectors of agriculture we are consistently asked to do

more with less. Look also toward the confusion and challenges with the implementation of the Food Safety Modernization Act (FSMA). However, for my testimony today I will focus on two challenges facing growers that cause me to wonder if I will be in business in another year or 2 or 3—Mexican Fruit Fly and Huanglongbing (also known as HLB or Citrus Greening). My intention is to illustrate the very real threat these pests and pathogens pose to our industry and a contradictory Federal response that leaves growers vulnerable.

Mexican Fruit Fly

The Mexican fruit fly—or MexFly—is native to parts of Central America but has now spread across the border and into the lower Rio Grande Valley of Texas. The MexFly is a significant problem for citrus fruits, which are extremely susceptible to infestation. Economic losses result from direct damage caused by the larvae that feed on the fruit pulp.

Eradication efforts have been underway for years. Since 1986, Texas has participated in a fruit fly control program headed by USDA–APHIS, to eradicate the fruit fly from Texas and the Mexican state of Tamaulipas. In 2012 APHIS thought they had successfully eradicated the MexFly. However, the pest has recently reemerged and just last week APHIS found a mated female MexFly in the Granjeno area of Hidalgo County causing them to expand the quarantine zone in that county to 234 miles^2.

The small fruit fly triggers big economic losses. Last year proved especially hard for one small grove operation in Brownsville after a Mexican fruit fly was found in a neighboring back yard tree. The discovery triggered a decision to quarantine the area and the grower was no longer able to harvest his crop for the year, leaving thousands of dollars of inventory on the trees with no hope for harvest. The problem has reached a crisis level, since January 2014. There have been fruit fly quarantine areas off and on in the **entire** citrus growing region of South Texas.

Huanglongbing (HLB or Citrus Greening)

Recent finds of the disease HLB and its vector, the Asian Citrus Psyllid (ACP), has growers of all sizes in south Texas extremely concerned. There is no known cure for this disease and we've learned from the experience of our friends in Florida that its impacts are devastating. Since HLB was first detected in Florida in 2005, approximately 90% of production acres are now infected and production has been cut by more than ½, costing the state nearly $8 billion in revenue.

Greening was first discovered in a Texas grove in January of 2012. Three short years later, we have confirmed that trees located in almost 100 groves valley-wide show signs of the disease. With the extremely long latency period of this disease, it is unclear how many more trees have already been infected.

What this has done to growers in terms of dollars is hard to quantify. When it was first discovered in Texas, we removed not only infected trees, but several of the surrounding trees as well. This translated to lost income, and with no replacement trees to plant, it also equated to a loss of future income as well. Today, positive HLB finds have become so widespread, that most growers have discontinued tree removal.

In a desperate attempt to mitigate the effects of HLB, most growers have initiated aggressive psyllid spray programs to try to slow the spread of infestation until a cure can be found. This strategy requires treatments above and beyond our regular care programs and has increased our grove care expenses by almost $400 per acre or 22%.

Developing Solutions

Considering these challenges, citrus growers in Texas and elsewhere are in need of solutions, and Federal investments to counter the effects of HLB and MexFly are vital. Surveys, diagnoses, research and eradication programs are critical to the survivability of the citrus industry in the U.S.

Funds from the farm bill's section 10007 program, also known as the Plant Pest and Disease Management and Disaster Prevention Program, are supporting USDA and state partners in their regular surveying for new incursions of MexFly and arming them with the tools for its rapid identification. These dollars help scientists in devising eradication strategies and executing on those strategies, which include a mixture of biocontrols and insecticides.

On HLB, [section] 10007 has been vital to slowing the diseases spread by providing the industry with recommendations on the best practices for pesticide rotations and treatment timings to take on the psyllid. This program has also funded the training of canines to detect the disease, which has been shown as the most reliable early detection method. Heat treatment protocols identified through [section]

10007-funded projects show promise in the ability to treat infected stock providing temporary relief from the disease.

Through the Citrus Disease Research and Extension (CDRE) program under the Specialty Crop Research Initiative (SCRI) researchers are developing methods to culture HLB so that it can be studied more efficiently. In addition, these funds support scientists searching for bactericides that can reduce or eliminate the disease and efforts to breed HLB resistant rootstock. Much of the breeding relies on virus-free and genetically diverse germplasm maintained at the Citrus National Clean Plant Network Centers (NCPN) in Florida and California.

When I consider the breadth of research and eradication activities underway to tackle the serious challenges facing citrus, much of it through farm bill programs, I am reminded of the hard work this Subcommittee and your colleagues in the full Committee put in to see the last farm bill to completion. Thank you for those efforts.

As we look toward the next farm bill I am hopeful funds can be made available to rehabilitate some of the USDA facilities that carry out much of the work that growers like me are counting on. The USDA scientists, who are doing much of the research, need facilities and equipment that are up to the task to allow them to execute on the work we expect from them.

EPA Undermining Solutions

However, while we look to act on the information gleaned from the research and look ahead to the tools currently in development, as a result of this Committee's investments, we are frustrated by the fact that actions of another Federal agency serve to undermine these efforts and the associated investments.

Recent actions by the EPA have done significant harm to our access to the very tools USDA and academic scientists are suggesting we use, while their public comments erode the consumer's confidence in our stewardship of the land we grow on. In January, EPA, in collaboration with Health Canada, published a preliminary risk assessment [1] on imidacloprid, a neonicotinoid, regarding the potential for the chemistry to have a sublethal impact on bees. The results were generally positive with only three use patterns out of the 37 evaluated showing some level of concern.

Yet the agency decided to put out a press release with the lead statement [2] saying the assessment "shows a threat to some pollinators," and "indicates that imidacloprid potentially poses risk to hives when the pesticide comes in contact with certain crops that attract pollinators." In contrast, EPA's partner in the assessment, Health Canada, put out a very different message resulting in Canadian news coverage [3] stating, "regulatory reviews show slim risk to bees from imidacloprid."

In the same EPA press release the Assistant Administrator for the Office of Chemical Safety and Pollution Prevention stated that the, EPA is committed, "to protecting bees and reversing bee loss." However, the USDA–ARS clearly identifies a long list of issues impacting bee health including parasites, pathogens, lack of genetic diversity, beekeeper practices, habitat loss and, yes, pesticides, including the ones used by beekeepers to manage their primary pest, Varroa mites. Yet they place all of their emphasis on agricultural crop uses of pesticides.

In addition, bee losses have already reversed. After hitting a low of 2.3 million hives in 2008,[4] the number of hives have again been increasing and the 2015 USDA–NASS *Honey Report* [5] showed that there were an estimated 2.74 million colonies, the highest number in 20 years. The EPA is well aware of these facts yet that is not the narrative they present to the public.

One of the use patterns that was highlighted as a potential concern in the preliminary risk assessment and again in the EPA's press release was foliar applications to citrus. But again, the agency did not share the fact that with minor tweaks in the timing of the application the risk could be easily mitigated. To many growers it seems like the EPA is helping to push an anti-pesticide agenda.

Other products, like flubendiamide (Belt) and sulfoxaflor (Closer), both pivotal tools in fighting ACP, are in the process of being canceled or have been canceled. In the case of Closer, which I consider to be my best option for protecting my trees from HLB, the registration was canceled by a court decision. However, despite EPA's ability to grant Texas and Florida citrus an emergency use (Section 18) the agency has signaled that it will not grant them.

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[1] *https://www.regulations.gov/#!docketDetail;D=EPA-HQ-OPP-2008-0844.*

[2] *https://yosemite.epa.gov/opa/admpress.nsf/0/63E7FB0E47B1AA3685257F320050A7E3.*

[3] *http://www.agcanada.com/daily/regulatory-reviews-show-slim-risk-to-bees-from-imidacloprid.*

[4] *http://usda.mannlib.cornell.edu/usda/nass/Hone//2000s/2009/Hone-02-27-2009.pdf.*

[5] *http://usda.mannlib.cornell.edu/usda/nass/Hone//2010s/2015/Hone-03-20-2015.pdf.*

The hope for more new products to be approved for citrus has largely evaporated after the EPA sent letters to the registrants instructing them to withdraw new use applications for neonicotinoids. The agency made this move without first evaluating the products' risks or considering benefits. When we look to the chemicals that have been registered and reregistered for decades like the organophosphates, such as chlorpyrifos, EPA has proposed to revoke the tolerances.

As a farmer I know that come next season the same pests, and perhaps a new one or two, will be in my field impacting my crop but I have no idea if I will have a product to treat them with. As a citrus grower, the risk side of my assessment is very high and the financial benefits of growing food in this country continue to dwindle.

Finally, another tool that we will increasingly rely on for solutions is biotechnology. As USDA moves forward with its updates to Part 340, I ask that the Committee be intimately engaged. Earlier in the year, USDA published a Notice of Intent that included suggestions on how they might move forward. It included a significant expansion of the agency's authority into aspects of plant breeding that have been around since the 1950s and never before regulated. Other aspects of the NOI appear to infuse greater subjectivity and open up their process to outside challenges. More regulation and the threat of litigation, from anti-modern agriculture groups, would stifle innovation. If USDA gets the updates to Part 340 wrong, we will not have a viable agricultural sector in this country. That is how important biotechnology is to the future of agriculture.

I would like to thank you for your attention today on these critical issues. In short, the United States citrus industry as you know it, is in extreme trouble. We are fighting to preserve our very way of life and are doing everything in our power to prevent total eradication of an essential U.S. industry.

Thank you again, Mr. Chairman, for holding this important hearing and for all that you and the Subcommittee are doing. I look forward to working with you in the future.

The CHAIRMAN. Thank you, Mr. Murden, for your testimony, and thanks for being here today.

Although, his bio says he is from Washington, D.C., he is a native Illinoisan also. Great to see you again. The next witness is Mr. Jay Vroom, President of CropLife America, and another good friend of mine, so please let's hear your testimony, Jay.

STATEMENT OF JAY VROOM, PRESIDENT AND CHIEF EXECUTIVE OFFICER, CROPLIFE AMERICA, WASHINGTON, D.C.

Mr. VROOM. Thank you, Mr. Chairman. Good morning. Thank you, Ranking Member DelBene, and the entire panel, for inviting us to share with you some perspectives on behalf of the members of CropLife America. Our members produce, distribute, innovate and deliver virtually all of the crop protection tools and crop biotechnology traits used by American farmers and literally millions of other farmers around the world.

So I would like to start off by wishing all of us Happy Earth Day. So probably most of us think well, Earth Day was last Friday. So the whole world picks 1 day out of 365 days every year to celebrate Earth Day. Those of us in agriculture recognize that Earth Day is every day, certainly in farming, as we go about the business of producing an abundant supply of food and fiber.

Twenty years ago this Earth Day, there are a lot of us fretting as we had for a number of years about how would we ever find a policy path forward to solve the Delaney clause that was a pesticide policy matter jurisdiction between this Committee and the Energy and Commerce Committee, and yet because of the wisdom of Members in this body and eventually in the Senate, by August 3, 1996, President Clinton signed into law the Food Quality Protection Act, a high-speed policy action that was the benefit of a lot of

good work that started right here in this Committee hearing room. I say that because it relates to one of the three things that I want to point out here in my oral remarks, and that has to do with the settled process that then evolved after passage of the Food Quality Protection Act that put in place by EPA and the U.S. Department of Agriculture this sweeping new law 20 years ago, and yet last week EPA impaneled another Science Advisory Panel to look at the information from a New York City epidemiology study that claims to have found detections of chlorpyrifos, one of the important insecticides in use in agriculture, along with other organophosphates when they previously had Science Advisory Panels look at the same information in 2008 and 2012 and didn't get the answer that EPA was looking for. So, here we are again in 2016 with another EPA SAP looking at this epidemiology information; and unfortunately, they should act on the same kind of basis from this SAP, and that would be that without the raw data from this study from New York City where very little, if any, farming is done. This tool ought to still be available to farmers in the United States.

I pointed out when I appeared before the SAP last week, Mr. Chairman, that your provision in the 2014 Farm Bill still hadn't been implemented to provide an agricultural advisory committee to EPA's SAP/SAB system. If they had that, maybe they would have better input before that even gets started going down a path like what we would regard as an unfortunate loss of resources in conducting this SAP last week.

Another point I wanted to make is the International Agency for Research on Cancer over 10 months ago brought out a stunning finding that the widely used herbicide glyphosate might be a carcinogen completely in contrast to every other scientific study and government review on the planet for the last 30 or 40 years. We believe that there is an agenda in the Office of Research and Development at EPA to try to take this important tool away from farmers, and if you look at the selection of who the U.S. Government representative was to IARC that yielded this bizarre finding, I think there is a thread there. So we would invite further oversight from this Committee as well as the Energy and Commerce Committee to look at some of these key questions.

It is all about the future. We are all pretty well fed in this country today but as we know, the population is growing. The rest of the world wants to have diets more like what we enjoy here in America, and continuing to keep that engine of innovation and research, which also helps to lower costs eventually for growers but also provide a safe and abundant food supply with care to the environment is what we are all about. We hope that you will continue to work with all of us in agriculture to ensure that that bright future continues to be bright for the young people that will take over in the future.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Vroom follows:]

PREPARED STATEMENT OF JAY VROOM, PRESIDENT AND CHIEF EXECUTIVE OFFICER, CROPLIFE AMERICA, WASHINGTON, D.C.

Thank you, Chairman Davis and Ranking Member DelBene, for the opportunity to address the Subcommittee on behalf of CropLife America and its member compa-

nies. CropLife America's member companies, and our counterparts at RISE, develop, manufacture, formulate and distribute crop protection products for American agriculture and specialty uses outside of agriculture, such as for the promotion of public health and commercial pest management.

America's nutritious and affordable food supply depends on the availability of safe, effective crop protection products. Our members support modern agriculture by looking forward: each year the crop protection industry spends hundreds of millions of dollars on research and development, with much of that investment going into producing data that meets or exceeds the Environmental Protection Agency's (EPA) information requirements and requests for pesticides.

Technology, innovation and adoption is a key factor in advancing farmer profitability and rural economies. A recent study commissioned by CropLife America showed profitability gains on the farm by the careful use of crop protection tools resulted in the annual generation of $33 billion in off-farm wages for more over one million American workers. (Link to report available here: *www.croplifeamerica.org/economic-impact* and CLA statement here: *http://www.croplifeamerica.org/wp-content/uploads/2015/08/CLA-Socio-Economic-Report.pdf*)

CropLife America has a long history of working cooperatively with EPA on issues affecting crop protection, human health and the environment. But, recently, the crop protection businesses that support American agriculture have seen serious deviations from the regular order, transparency and scientific integrity of EPA's risk assessment based pesticide review process. These departures have made it difficult to provide business predictability for producers and users and they potentially inhibit investment in more advanced products.

We hope that today's hearing will help put EPA and agriculture back on a path to a more productive dialogue that leads to reasonable, timely regulatory decisions and solutions to shared concerns. A return to established regulatory process and sound science will help our industry support rural communities and improve farm incomes.

I would like to begin by reminding the Subcommittee of CropLife's longstanding support of the House, and now the Senate, effort to overturn the 6th Circuit court's requirement for Clean Water Act NPDES permits for pesticide applications over or to *waters of the United States.* Strong bipartisan support exists in the House and Senate for a legislative fix and pesticide users are well overdue for relief from the double regulation of pesticides under this water permit—especially those protecting public health from pest borne diseases like West Nile and Zika.

The NPDES permit poses a substantial paperwork burden on operators. But, most significantly, it creates legal jeopardy due to the potential for citizen suits based solely on mistakes, missed deadlines, or, even a neighbors 'judgement.' This is especially true now, since EPA's final Clean Water *Rule* expands the jurisdiction of what is determined to be a Federal waterbody. If the rule is allowed to be implemented, it would substantially increase the number and type of applications that could be subject to NPDES pesticide permit coverage and liability. We thank the Committee for your bipartisan efforts to unwind this burden and ask that you continue to look for vehicles to *finally* provide relief to pesticide users conducting FIFRA compliant applications.

CropLife America and pesticide stakeholders have every reason to believe the current array of our most serious challenges are more about political science that actual science. On several occasions, EPA officials have alluded to policy decisions being driven by 'Internet campaigns, social media' and NGO 'write-in campaigns.' The result of this internal response to external forces is a systemic breakdown in established regulatory process within EPA's pesticide program and a deviation away from FIFRA risk assessment based science towards precaution.

EPA is shifting focus to not just consider, but instead *elevate and rely on* less robust science, including epidemiological studies and models, rather than real-world and verified laboratory data. For example, in proposing to revoke the "tolerance" for chlorpyrifos—which could make the product virtually unmarketable—EPA is choosing to rely heavily on a decades-old epidemiological study, referred to as the *Columbia Study,* that suggests a correlation between adverse health outcomes for some children allegedly exposed to the pesticide in cities and for which Columbia will not publicly release the raw data from their study. At the same time, EPA is pushing aside the findings of long-standing verified laboratory studies and important new toxicological data that do exist about chlorpyrifos, all of which are available and subject to public scrutiny and demonstrate that the product is safe for agricultural use.

Just last week, EPA impaneled a Scientific Advisory Panel—or SAP—to once again look at this *Columbia* epidemiological study. Twice previously—in 2008 and

2012—SAP's did the same work and both rejected the *Columbia* work. Last week's 3 day session should reach the same outcome based on the material presented.

As a part of my presentation at the SAP, I noted the provision put in the 2014 Farm Bill, at your insistence mister Chairman, which instructs EPA's Scientific Advisory Board to create an Agricultural Advisory Committee within the SAP structure. (Link to CLA statement on SAP available here *http://www.croplifeamerica.org/croplife-america-pushes-for-transparent-robust-data-at-fifra-sap/*.) I noted that it is very unfortunate that EPA has yet to finalize and impanel that group.

In the review of other pesticides, EPA has pivoted to relying extensively on new ultra-conservative models for predicting consumptive exposures from drinking water. Further, the agency will not even consider other assessment methods that would allow for the factoring in of robust, real-world water monitoring data. Denying the use of this actual data could mean the loss of products for some existing crop uses or preclude access for new crop uses.

In evaluating the potential impacts of pesticides to pollinators, CropLife America believes that the pesticide program has been overly influenced by unscientific pressure from social media and other politicized campaigns. EPA attempted to "regulate by letter" on mandates for key seed treatments applications and in forcing label changes where we believe Administrative Procedures Act requirements for a public notice and comment were not properly followed. EPA went on to release a draft report suggesting that soybean crops did not benefit from neonicotinoid seed treatments, despite public findings from USDA demonstrating the products' benefits to the crop. Fortunately, the overarching White House Pollinator Task Force Report—called for by President Obama—is more balanced. But, *un*fortunately, the devil still remains in the actual regulatory details formulated at EPA.

This Subcommittee may be aware of the activities of the United Nations World Health Organization (WHO) International Agency for Research on Cancer—known as "IARC." As Reuters reported last week, this is the agency that 'ranks bacon alongside plutonium' as a carcinogen. One of IARC's other monographs recently concluded that the herbicide glyphosate is a carcinogen, too—notwithstanding all the prior science and risk assessment pointing to the opposite conclusion and demonstrating the safety of its use. Oddly, the U.S. Government's representative to this IARC monograph came from EPA's Office of Research and Development—not the Office of Pesticide Programs where the expertise in glyphosate resides. Further, since this surprise IARC action on glyphosate, many governments around the world have refuted the finding . . . but, our own U.S. EPA has yet to do so! EPA's reluctance to defend its own scientific findings and the safe use of such an important, widely used and well-studied product is very troubling.

You may be wondering, "does CLA think EPA does anything right?" Of course. Most recently, EPA robustly defended the use of risk assessment based decision making and routinely argued against the precautionary principle during trade negotiations, including leading the effort to resolve environmental policy disputes during TTP discussions with Asian-Pacific nations and during ongoing T-TIP negotiations between the U.S. and European Union (Link to example of EPA–EU interaction available here: *http://www.usda-eu.org/wp-content/uploads/2015/01/United-States-Submission-Endocrine-Disrupters-2015-01-20.pdf*).

EPA can be credited for their recent use of PRIA funds to advance new product approvals. However, we do ask that the Committee continue to provide careful oversight of the Pesticide Registration Improvement Act and, also, help to ensure that appropriators fund these critical program mechanisms at the agency.

Recently, CropLife helped the market research firm, Phillips McDougall, develop a study that shows the overall cost to discover and advance a new crop protection product averages $286 million—up 21% over the previous 5 years! (Link to CLA statement with imbedded report available here: *http://www.croplifeamerica.org/cost-of-crop-protection-innovation-increases-to-286-million-per-product/*.) The biggest driver in that cost increase appears to be regulatory compliance. That statistic demonstrates why it is so important to be sure that U.S. regulatory requirements are assessments of real science and safety advancements, not simply reactions to non-scientific political ideologies.

Despite EPA's significant deviations from process, science and, perhaps, even the law, the crop protection industry stands with farmers and rural communities as we all weather the uncertain economic and regulatory headwinds ahead—we hold a positive and long view for American agriculture. Tremendous, measurable increases in farm productivity and improved stewardship demonstrate that agricultural technology helps not only farmers but also creates jobs and economic development beyond the farm gate. CropLife America commits to the Committee to be full partners

in providing the best crop protection and pest management tools that the law will allow in order to support rural communities and improve farm income.

Thank you for the opportunity to testify today and I welcome your questions.

The CHAIRMAN. Thank you, Mr. Vroom, and thank you for your comments on the EPA. I hope they are watching on closed circuit today, and if they are, I would like to remind them again, there are 36 pages of unanswered questions from both Republicans and Democrats that we submitted after our last hearing with Administrator McCarthy, but hopefully the cricket sound will end soon.

I am going to begin the questioning period really quickly with Mr. Guebert, this is the home field advantage. You get to go first.

What would be the impact on growers both in terms of costs and access to new innovative applications if a mandatory warning label for foods derived through modern biotechnology were to become the law of the land?

Mr. GUEBERT. What we have seen, Mr. Chairman, if it is mandatory, we would have some real challenges. As you well know in agriculture, we are price takers, and we do not have those opportunities and industry has those opportunities to pass on those extra costs, and it would really have an impact, not only to the agricultural community but to the consumer in the long run. We would expect it to cause chaos throughout the whole marketplace and industry to make sure that the right product is on the right shelf in the right state if 50 other states have their own labeling law.

The CHAIRMAN. Thank you, Mr. President.

Let the record show just about a month ago, Secretary Vilsack sat at that same table and used the word *chaos* to describe what kind of impact the Vermont law going into effect without a national solution would mean to America too. So I am glad to see you agree with Secretary Vilsack.

Mr. Vroom, rather than going through the normal public process to propose to cancel a registration, to your knowledge, has the EPA ever asked a court to order to vacate a registration, and if so, please describe any of those circumstances.

Mr. VROOM. So there are lots of nuances with regard to how the law gets prosecuted and followed. I suspect that EPA would say that they have never actually asked a court to resolve a matter against a pesticide product that would overrule the existing science but clearly there are plenty of court cases where that kind of outcome has come about. So without putting public words in EPA's mouth, I would say the answer is clearly yes, that there is a lot of sue-and-settle kinds of activity in all kinds of agricultural matters including pesticide technologies that are appropriately licensed after a thorough review of the science.

Another point that I would like to make is that we have heard a lot from our friends and colleagues at the Environmental Protection Agency that they are under lots of pressure. They rarely would call it political pressure but they extensively talk about the social-media pressure that they are facing from Facebook moms and teens on Twitter. And so it behooves all of us in agriculture to step up to those same social media plates and to also weigh in with the important messages as well. So one of the things that we have invented is a red fly swatter that says on it, "Let's return science to pesticide regulation." We have a campaign going on social media,

#scienceorswat, and again, we need to step and get into those social media venues and tell the truth about the importance of science in this overall pesticide regulatory agenda.

But clearly the courts and the way negotiations occur in settling court cases is a very important matter and one of concern to all of us in the agricultural technology space.

The CHAIRMAN. Thank you, Mr. Vroom. I am shocked to hear that government officials are getting criticized via social media. Really? It never happens around here ever.

I would like to now recognize Ranking Member DelBene for questions.

Ms. DELBENE. Thank you, Mr. Chairman.

Many of you mentioned the struggle that producers are having in finding the workers necessary to grow and harvest crops, and I want your feedback on how agriculture can be a voice of reason in what has been a very contentious debate on immigration reform. Also, please speak a little bit about why immigration reform is sorely needed, but also some of the things you would like to see in reform. I guess I will point that to you, Mr. Conner.

Mr. CONNER. Ranking Member DelBene, thank you. We believe this is a critical regulatory issue facing American agriculture. To repeat what everyone knows, 60 to 70 percent of our hired workforce in American agriculture are workers who would have documentation problems. We have talked a little bit this morning about H–2A reform. I would remind this Committee that that still, even with the growth and interest in H–2A is less than ten percent of our total workforce. So we are not solving the problem. We can make H–2A better and more streamlined, and it desperately needs that, but ultimately it is about dealing with the 60 to 70 percent of the workforce out there that are involved in putting food and fiber on all our shelves every single day. We cannot do what we do without those workers, and at some point that problem has to be addressed.

Ms. DELBENE. Ms. Torrey, you also mentioned this in your testimony. Do you have any additional thoughts you want to add?

Ms. TORREY. Immigration reform is very important. Many of these people that are part of that 60 to 70 percent are people that are in mid-management on our farms and have gained skills that are very important to providing all their jobs besides the farm, and research has shown that for every farmworker I have there are another four jobs created.

The other thing that we are seeing we are having to change the type of specialty crops that we are growing. We will see some of these fruits and vegetables no longer grown in the United States because of the lack of labor. We are trying to do a Band-Aid approach now with the H–2A program but the program is costly, not only for the paperwork but also for what you have to pay in order to have your workers at your farm. You never know what curve ball you are going to get. I have to have my order in at least 65 to 70 days ahead so that my crops only need 45 days to be planted and harvested and I don't know how Mother Nature is going to work with us. As I said, labor is our number one cost on our vegetable farm and our number two cost on our dairy farm. An example in our rural community, I can grow 1,000 acres of onions and my

payroll is $2.5 million for 50 families. If I take that same thousand acres and put it into field corn, my labor bill will be about $80,000 to $90,000. And our rural communities need these jobs. Growing these specialty crops offer more benefits.

Ms. DELBENE. Thank you.

Issues related to the regulation of pesticides are very relevant not only to growers in my district but also the general public as well, and we need to acknowledge the public concerns about safety of pesticides for human health and the environment. But, it is also critical that the Federal Government address these concerns based on the best available science. Without that, our regulatory reputation and consumer education will suffer.

Mr. Vroom, you brought this up. Can you describe what your member companies do to evaluate health and environmental impacts of their products and what the EPA currently requires?

Mr. VROOM. Absolutely. So in summary, it is incredibly comprehensive and the system that EPA has evolved with inputs from a wide array of scientific community here and around the world really is the model for regulators in every other part of the globe. So there are about 130 different discrete scientific test areas that EPA mandates that companies test the products on so it has to do with the toxicological impacts for potential human health effects, both chronic and acute risks, and then also environmental exposures, environmental degradation studies, the potential for residues of the applied crop protection products ending up in either surface or ground waters, and this is not a static set of scientific tests. They evolved over time, and occasionally once a new scientific study is unveiled and implemented, it is discovered that it is redundant or duplicative with other tests that already exist, so we have actually seen a few of those kinds of tests moderated over time because the resources weren't appropriately being utilized, but our industry is always willing to step forward and negotiate and find the sweet spot, if you will, of what science is needed to prove and re-prove the safety of these products. It is just as important with regard to reevaluating older products that are on the market and ensuring that their risk profile is acceptable to the public as it is to get new products to the marketplace. So it is a very exhaustive system that gets lots of scientific input from all corners of society, and we believe that it represents a franchise ensuring level of safety that the public should be comfortable with.

Ms. DELBENE. My time has expired. Thank you very much. I yield back, Mr. Chairman.

The CHAIRMAN. Thank you, Ms. DelBene.

I now recognize my colleague, the gentleman from Washington, Mr. Newhouse, for questions.

Mr. NEWHOUSE. Thank you, Mr. Chairman, and thanks, everyone, for being here this morning.

Ms. Woods, I wanted to ask you a question after listening and reading your testimony. I am increasingly concerned with the challenges that our growers and packers are facing due to what sounds like really a lack of clarification and education on how to comply with the new Food Safety Modernization Act rules. You mentioned food industry experts who have been working for decades in the industry that are unable to get certified to offer any kind of compli-

ance instruction. Could you highlight some of the difficulties that you are seeing that our growers and packers are facing?

Ms. WOODS. Certainly. Just to kind of give you an idea of how this problem came about, when the Preventive Controls for Human Food rule was first released last fall and we realized that some packing houses were going to be falling under the Preventive Controls rule, industry brought up concerns with FDA and FDA did acknowledge those concerns and said they were going to try to be as flexible as possible and enforce the Preventive Controls rule on those packing houses similarly as possible as what was required under the Produce Safety rule. So we did appreciate that. It didn't completely address the problem but unfortunately, when the curriculum was released for the training that is required under the rule, it did not include any of the information the FDA had noted on how packing houses would be treated differently. We were running into a time crunch. It's 6 months until some packing houses are going to be required to be in compliance with this training requirement so we worked with a qualified trainer from the Washington State Department of Agriculture to put on a training for some of our most qualified food safety professionals, and this was a train the trainer course. Our intent was twofold; first, to identify specific areas where the constituents could be strengthened to better fit the needs of produce packers, and the second thing was to make sure that we had some people within industry who were at least qualified to provide the training so that we would have people who understand packing house operations who would be teaching these courses. Unfortunately, out of the 12 people who applied to be trainers, ten were rejected. Several of them reapplied multiple times to provide additional information about all of the food safety training they had provided and were again rejected, and the primary reason we were given was because they didn't have a degree in education or science, which is going to be a problem throughout the produce industry because in many cases the people who are in these food safety positions and who have been for a number of years, they don't come from that background.

So it really is creating a challenge of trying to not only meet the letter of the law on the training requirements, but also to make sure that our packing houses actually understand what they will be required to do to comply.

Mr. NEWHOUSE. That is problematic and challenging. I am glad to see WSDA's involvement in a positive way.

Ms. WOODS. Yes. They have been very helpful.

Mr. NEWHOUSE. Mr. Vroom, as you are well aware in regards to the ESA obligations, the EPA just released a biological evaluation for three active ingredients. I think each one was thousands of pages long. And based on very conservative precautionary assumptions that seem inconsistent with what you mentioned, that some of these things with available scientific data on these compounds. Is it true the assertions made that these three pesticides are harming 80 to 100 percent of all listed species as they suggest? Also, if this biological assessment approach is continued, what will the long-term effects be on access to pest management tools?

Mr. VROOM. So the simple answer is no, and in fact, if that allegation were true based on these biological opinion documents pro-

duced by the Agency and in coordination with the ESA authorities, the National Marine Fishery Service and Fish and Wildlife Service, those species likely would be extinct because these products have been used in commerce by farmers and others including those undertaking public health protection with mosquito control to reduce disease vector threats for decades, 40, in some cases 50 years for these three compounds, and of course, one of them is a very essential part of some of the mosquito control activities of Mosquito Control Districts.

So if that outcome were finalized, and this is the second time that the Federal Government has tried to get these three biological opinions completed to satisfied the Endangered Species Act review, it would be devastating and a precedent that not only could most crop protection products not meet, but probably a lot of other activities in agriculture would also be subject to similar kinds of restraints.

Mr. NEWHOUSE. Thank you, Mr. Vroom.

Mr. Chairman, I see my time is expired but I hope there is a second round, I don't want to let my former colleague from New Mexico off the hook too easily.

The CHAIRMAN. Secretary Witte, we will see if he gets that second round. We will just let everybody else go over so you can have a reprieve.

I am going to recognize my colleague who entered with a very loud door bang——

Ms. KUSTER. I apologize.

The CHAIRMAN. She does that all the time. Do not let her apologize like that. Ms. Kuster, you are recognized for your round of questions.

Ms. KUSTER. Thank you, Chairman Davis and Ranking Member DelBene, for holding this important hearing, and thank you to our panel of witnesses for being with us today.

I am one of only two Members from New England sitting on the House Agriculture Committee, and I have been proud to support the small family farms that are ubiquitous around my state and our entire region.

In New Hampshire, we have 4,400 farms that cover nearly ½ million acres of farmland averaging out to roughly 100 acres per farm. Of the 4,000 farms, a large number focus their production on specialty crops that contribute to the health and vitality of our local and rural communities. New Hampshire producers have significantly benefited from the Specialty Crop Block Grant program, which has funded grant projects focused on food safety, pest and disease prevention, and industry marketing.

So I wanted to direct my attention to Ms. Torrey. I was pleased to read in your testimony that you highlighted several benefits of the Specialty Crop Block Grant program. Could you provide some specific on-the-ground examples of how this Federal program has enhanced specialty crop production for farmers and are there ways that this program can be administered more efficiently to support specialty crop producers?

Ms. TORREY. This program is very important from not only a large specialty crop producer but to your home gardener. At our farm level, we are seeing increased disease and pest activity, and

basically because we have changed some of the ways that we farm: hoop houses, the greenhouses so our good New England cold weather is not taking the——

Ms. KUSTER. Hoop houses are very successful in New Hampshire. It has made a big difference.

Ms. TORREY. Correct, but they also harbor over-winter pests that were killed with our 0° weather in New York and in New England. We have a global economy and we see different insects and pests coming in: potato blight, tomato blight, a lot of research going on with that. We have seen new broccoli varieties that we can grow in the East that offer better nutrition and are adapted to our weather. Onion disease, downy mildew. It is such an important part of a specialty crop and is enabling us to continue to grow many corps that we might lose to these new diseases and pests that seem to be increasing.

Ms. KUSTER. And do you have any recommendations about the administration of the program, anything that you have been frustrated by or you think we can improve upon?

Ms. TORREY. I think each state is giving a section of the specialty crop where their research center can apply for the different grants. Our frustration has been, we need to look at some of the crucial needs of what needs to be done and maybe not some needs that have already been addressed previously, and home in on the primary needs of industry.

Ms. KUSTER. Okay. That is very helpful.

And my second question is for Secretary Witte from New Mexico. Mr. Secretary, in your testimony, you described the growing concerns about the flexibility of the Specialty Crop Multi-State program that was part of our 2014 Farm Bill. As this Committee continues to identify farm bill programs that can be improved for our next farm bill, can you expand on some of the challenges you face with the Specialty Crop Multi-State program and specifically how can this program be improved to enhance competitiveness of specialty crops in the marketplace?

Mr. WITTE. Sure. Thank you. The Specialty Crop Block Grant is a very important program for our state as well. When you talk about flexibility in administration, the reporting, the sales reporting, the new sales reporting requirements, that gets very specific, and a lot of time when you issue these grants, it takes years to do the reporting on the increase in sales. It doesn't just happen just like that in agriculture. And so that is a challenge. The administration of the multi-state program where states have to go through another state potentially to administer a program, that becomes very cumbersome both to the state that is having to administer that and the state that is working the project. And so the reduced flexibility to do your own thing with multi-states, it needs to be looked at.

Ms. KUSTER. Great. Thank you so much. My time is up, and Mr. Chairman, I yield back. Thank you.

The CHAIRMAN. Thank you, Ms. Kuster. Thank you for your questions. Thank you for your time and your service to this Subcommittee.

Mr. Thompson from the great Commonwealth of Pennsylvania.

Mr. THOMPSON. Thank you, Mr. Chairman, and thanks to all members of the panel for your expertise and being here. It is an important topic today.

I want to start with Mr. Guebert. This past weekend, or Monday night actually—it is all a blur—I had the privilege and honor of returning to my home high school which is in my Congressional district where 2 years ago they started a 4–H program and an ag education program after decades of it not being there, and then in the second year, I mean, this was a cafeteria that was full of kids and their blue jackets, and it was just amazing what those teachers have done, and I am so proud of them: 4–H is such an important program.

But my question centers around looking at the Census data, the average age of farmers is 58 despite large participation and positive experience in programs like 4–H like I saw at Bald Eagle Area on Monday night. In those few years that program has been in place, they actually have had some students come back from one of my other alma maters, Penn State University, kids that got introduced to agriculture education at the high school and are now freshmen and sophomores at that wonderful land-grant university and the College of Agricultural Science. It seems the passion for agriculture begins to dip as kids do grow older. To what extent do you think rising regulatory costs and limited profit margins deter young people from choosing agriculture as a profession or, more specifically, all those things deter parents, farmers from encouraging their kids to follow in their footsteps?

Mr. GUEBERT. Mr. Thompson, thank you very much for the question and, as you look back, nothing puts more of a gleam in your eye than when I am at a meeting or at a convention or a conference when you see those blue-and-gold jackets and the green uniforms that some 4–H kids wear. It is really tremendous. We have had programs in our state where conferences, it is just enlightening to see the energy that those students have today and how smart they really are.

If you look back a few years ago, go back to the 1970s and the 1980s, and times were pretty tough in the 1980s, and a lot of parents discouraged their sons and daughters or their grandchildren to come back to the farm because they did not see that there was a future there. You look at the Census data, we are growing older; but, from time to time, the more meetings I attend, I see more of an energy and more young people coming back to the farm, and we have seen that in the last decade or the last number of years of good farming opportunities and the encouragement not only in agriculture or in farming, *per se,* but the opportunities that surround agriculture whether it is mechanization, plant and soil sciences, the breeding, the industry. There are unique opportunities for the young people that are coming back and wanting to be engaged in food and what is important to them and what their parents have talked about for a number of years. It is just really enlightening to see the young people that want to be engaged.

Mr. THOMPSON. Thank you.

Secretary Witte, the pollinator issue, it is extremely complex. Some have oversimplified, I believe, by pointing to a single cause

related to certain crop protection practices, but I don't believe the science supports that conclusion.

In developing your State Managed Pollinator Protection Plan, how have you considered for the complexity of this issue?

Mr. WITTE. Well, thank you for the question. It is a complex issue, and my staff just recently completed a survey doing the survey work as part of their pollinator plan. We found that in 23 out of 24 of the hives that were surveyed, Varroa mite was the issue, and we started about the pests that were associated with the honeybee, and part of that issue is that we have a limited commercial population of beekeepers and an extensive hobbyist population of beekeepers. A lot of these programs don't take into account that factor and how that impacts the commercial beekeeping population. So we have a lot of work to do with both, and the beekeepers are walking side-by-side with us, and that is the nice thing about this MP3 program is it is a collaborative effort, and you have to look at the entire picture, not just one aspect of it, all the way through, and that is what our group is doing.

Mr. THOMPSON. Very good. Thank you.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Chairman Mike Conaway.

OPENING STATEMENT OF HON. K. MICHAEL CONAWAY, A REPRESENTATIVE IN CONGRESS FROM TEXAS

Mr. CONAWAY. Thank you, Chairman Davis. I appreciate that. Thanks to our panel for being here.

Mr. Murden, I want to talk to you about citrus greening and the revocation of pesticide registration, product registration, the impact it has, as well as does USDA have the infrastructure to fight the Mexican fruit fly?

Mr. MURDEN. No. In the case of the Mexican fruit fly, we have a sterile rearing facility down there that is an old World War II Army base that was old before World War II. We put Band-Aids on top of Band-Aids to try to keep the thing going, and it is fighting a battle with two arms tied behind your back. So no, there are facilities around the United States that are deteriorating and falling apart, and we need some help there.

In regards to the HLB problem, the citrus psyllid: just to back up a little bit, we have 750,000 estimated dooryard citrus trees in the Valley. Everybody has a lime tree in their backyard. So USDA and the industry go forth with collaborative outreach efforts based on lists of pesticides that you can go get at Lowe's or Home Depot. Well, EPA goes and takes them away from you and so the folks are in there trying to find chemicals that were approved and ready to go to try to help us with this outreach program and they are not there anymore. So we are sending a very mixed message as to how to go about and help. I hope that answered your question.

Mr. CONAWAY. Yes. Someone told me that the largest orange tree orchard in California is in the backyards of all those homes out there.

Mr. MURDEN. Yes. Well, that 750,000 acres in the Valley, if you tried to do that per acre, that's the equivalent of about 4,000 acres.

Mr. CONAWAY. Mr. Conner, given your background across a wide swath of service to a variety of folks, can you talk to us about the

importance of investment in agricultural research and maybe some examples that has had a positive impact on the industry?

Mr. CONNER. Mr. Chairman, in my written and oral testimony, I went to this point strongly. I mean, we believe that the investment that this Committee has fostered and has occurred through our Department of Agriculture has really been responsible for a major decrease in the cost of producing food in this country whether it is pests, which have been talked about extensively today, technology, better food products, less water consumption. These are all very, very positive returns on investment from our work in agricultural research and we would encourage this Committee to continue down that course. That is the very positive aspect of cost of production. There is a negative aspect too for some of these other things but our investment in agricultural research has really made us the premier food producers on this planet.

Mr. CONAWAY. Thank you.

Mr. Vroom, all Executive Branch agencies have a set pattern of rulemaking they have to go through, the Administrative Procedures Act, all kinds of things. Have you seen EPA sending pesticide registrants letters telling them of new requirements that aren't in existing regs that they are just kind of back-dooring them into the system?

Mr. VROOM. Thank you, Mr. Chairman. Yes, there is quite a history. It has been growing over the years but it seems to be more frequent occurrence. We would refer to this as regulation by letter as opposed to using the due process that is set out in the regulations under FIFRA, the jurisdiction of this Committee, to go to the *Federal Register* with notice and comment rulemaking, or to publish on matters of lesser importance, guidance in the *Federal Register* to do this either by a direct e-mail or other communication to a registrant, or through a press release. Sometimes we learn, by reading in social media or otherwise that EPA is making a change in direction. And so it is troubling. It is hard to have a predictable regulatory environment when these kinds of surprises occur.

Mr. CONAWAY. Has EPA tried to enforce those letter-based requirements on a registrant? Have they put enforcement actions or fined anybody as a result of that?

Mr. VROOM. Yes, absolutely, and the other aspect of this is that our industry for pesticide product approvals is governed by two laws, the FIFRA law, the pesticide law—this is the jurisdiction of this Committee—and the Food, Drug, and Cosmetic Act that is the jurisdiction of the Energy and Commerce Committee here on the House side. Unfortunately, the due-process protections for defending the tolerances that are established under the Food, Drug, and Cosmetic Act are a little lower a hurdle for EPA to prosecute and trying to revoke a tolerance as opposed to the more thorough adjudicatory protections that the pesticide company would have under FIFRA, and that is the reason it is troubling to us that EPA is now proposing to revoke only the tolerances for chlorpyrifos without simultaneously initiating under FIFRA a registration cancellation. We think that the law is clear that both laws say that you need a tolerance as well as a registration to come on to the market and that the same kind of constraint and burden ought to be on the regulatory authority if the regulator believes that there is a reason

to restrict the product or to drive it off of the marketplace. So a lot of important matters that are attendant to due process that we think are being skipped in the current Administration, and it of course has occurred in other Administrations but with much more frequency today.

Mr. CONAWAY. Thank you.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Mr. Chairman, if you had time to yield back, I would gladly accept it.

Mr. CONAWAY. I was going to make some comment to Mr. Witte about a recent connection with our families but I will talk to you after this is over with.

The CHAIRMAN. I learned one thing as the Subcommittee Chairman. If the Chairman wants to take some extra time, feel free.

Mr. CONAWAY. You will aspire to be Chairman one of these days and then you will have that wonderful power.

The CHAIRMAN. Since we are going to go ahead and go into a second round of questions, I had a couple I left off earlier.

Mr. Conner, in 2012 and 2013, our counterparts over in the U.S. Senate overwhelmingly rejected farm bill amendments to allow for state-by-state GMO food labeling laws. In each vote, over 70 Senators sided with our Federal approach, yet now the Senate is being blocked from being able to bring the issue up for a vote on the merits, and with some companies already announcing their plans to reformulate food products to exclude biotech ingredients, what does this mean for producer production costs and ultimately consumer food prices?

Mr. CONNER. Thank you for the question, and I just want to say in front of both of you, I came in this Committee for your prompt action last year to solve this problem by putting in place a preemption of Federal labeling requirements. We continue to work with the United States Senate to try to get them to pass legislation to do the same as the House did last fall.

The CHAIRMAN. Since you mentioned that, can you tell me where does this currently stand in the Senate? Is there some magical compromise yet?

Mr. CONNER. There has been one vote, as you know. That vote failed with the Majority Leader reserving the right to move to a second vote, and we are working to modify the so-called Roberts language in such a way that it would get to the 60 vote threshold in the Senate. Those negotiations are active as we speak.

The CHAIRMAN. Wasn't there, like last week or 2 weeks ago, supposed to be a compromise that——

Mr. CONNER. *Compromise,* as you know, is an elusive term, Mr. Chairman, but——

The CHAIRMAN. So there is no white smoke going through the chimney over there?

Mr. CONNER. It is down to what I would call three buckets of issues, and again, negotiations are very, very active. We remain optimistic that there will be compromise language that could not only get to the 60 vote threshold in the Senate and pass the Senate but we are hopeful, Mr. Chairman, something that you could take up again in the House and pass rather quickly because we are running out of time. July 1st, the full implementation of this horrible

Vermont law is nearly upon us. The consequences of that, you mentioned food prices, $1,000 per family per year is the consequence of Vermont, and it is just simply unacceptable.

The CHAIRMAN. I happen to agree with you, Mr. Conner, and while you are talking to our colleagues in the Senate, let them know that this bill that was a compromise over here with bipartisan support came out of this Agriculture Committee with bipartisan support out of the House, and bipartisan is pretty offensive to us on this side of the Capitol to hear from Senators say that this is their most partisan issue they are dealing with. Well, it didn't become partisan until it got over there, and we are not seeing any action, we are seeing a lot of talk, and you can vent some frustration to us when we pass a bipartisan bill that is a good compromise. Now they want us to take a look it again on our side. It is very difficult for us. So please let them know our frustrations.

Mr. CONNER. We are striving for that bipartisanship, Mr. Chairman. I noted earlier in the hearing that Chairman Roberts actually stuck his head in the door and hopefully he was on his way to meet with Ranking Member Stabenow to get this ironed out.

The CHAIRMAN. Well, I hope the goalposts don't continue to move at that meeting. My staff is not happy I said that but Ms. Woods, you understand that, don't you?

All right. I would like to go to Mr. Guebert next. Sorry, Rich. What are the Farm Bureau's top priorities for the research and horticulture titles in the next farm bill?

Mr. GUEBERT. Well, Mr. Chairman, thank you very much for the question, research has always been very important to agriculture for new products, new technology coming onto the market that gives us the opportunities to grow more with less crop protectants, to use different crop nutrients in the right place, and particularly in the seed industry that gives us the seeds, and the technology, that we can produce more on an acre of cropland.

But, our members have always had concerns about research and development and unbiased that come from the university side, land-grant colleges, but what we have seen over the years is a lack of funds and dollars that are available for research, dollars that could be passed on to different universities. It is getting tougher and tougher for universities to garner those dollars to put into the professors hands, to do the research at the university level where it gives farmers the greatest confidence of what is being done is in the best interest of the project, going forward.

We have had some real challenges and issues in Illinois with not only research dollars but fiscal issues in the state, and our universities are up against some really tough times and competing roughly in private practice or in public-private partnerships to find those dollars to continue to do their research whether it is on the specialty grower side, ag seed side, whatever the issue. We need more dollars to come out into the land-grant universities and universities.

The CHAIRMAN. Thank you, Mr. President. I would like to add, I think you would join me in applauding Governor Rauner for signing a recent bill that helped fund our higher education institutions including the University of Illinois, our land-grant institution that you mentioned.

Secretary Witte, I am very sorry I was unable to wait out Mr. Newhouse, your former colleague. I recognize Mr. Newhouse for questions.

Mr. NEWHOUSE. You did your best, though, I could tell. Thank you, Mr. Chairman.

Just a couple of more questions come to mind. We could talk about this issue for a long time, and like I said, I appreciate the focus on it, but Director Witte, you and I served together. I was a former director of my state's department of agriculture, and you coming to represent NASDA today is a tremendous testimony to your ability, and I just wanted to mention that NASDA does a great job of not only identifying issues, but advocating for the industry and helping to solve problems that we face in agriculture today. So I just wanted to make mention of that.

But I did want to talk to you or ask you about some of these regulations that are coming down the pipeline. As you know, to get it right as a director of a state agency, to make these things work for not only a state but the farmers, for the consumers, our whole economy, we have to have a trust between the Federal regulators and the rest of us, and that communication is very important between the two parties. So keeping in mind some of the recent rulemakings whether it is the worker protection rules, some of the Endangered Species Act findings, pesticide regulations which we have talked about a lot, other things, would you say that there has been sufficient communication, trust and shared goals between the states, between farmers, between consumers and the Federal regulators who are trying to put these rules into place?

Mr. WITTE. Wow. Mr. Chairman, I am glad time is not up because I am very happy to address this question.

Communication is key. States are typically co-regulators with the Federal laws. In the case of EPA, we have to implement the on-the-ground "boots-on-the-ground" kind of regulations that they come up with. Having early input is key, and we advocate and we try to work with the agencies to make sure our input is early and is structured in such a way that it's beneficial to the agency. On the WOTUS rule, my department submitted 38 pages of comments on our view of how to fix it. We are a dry state, but not according to WOTUS, and when you start thinking about the collaboration and then the on-the-ground implementation, the worker protection standards, the certification and training rule, we have to implement that, and in many cases we have told EPA early on that their proposed rules go contrary to what our existing statutes. We are going to need time to fix our statutes because they are going to be in conflict. We don't get a response back, and it is not like we were even at the table, and that is frustrating because we are the folks that have to do that, and in some cases I have heard states talk about if we can't implement that with our effective input, then we are going to turn it back to EPA, and that is not what the country needs.

Agencies at the Federal level, agencies at the state level have limited resources, and we can't be tripping over each other in enforcement. It has worked very well in the past to have the states on the ground implementing these rules and doing the regulatory compliance assistance, "educate before you regulate" kind of activi-

ties, and if it is going to change, it is going to be bad for the agriculture, it is going to be bad for the country.

So early consultation, effective consultation and having the agencies understand and truly look at what we are commenting on is key, and it hasn't been happening.

Mr. NEWHOUSE. Thank you very much. I appreciate that, and that is a good segue. I wanted to go back to Ms. Woods just real quickly.

FDA, from my understanding, has been working well with industry, working with us as concerns come up. They have even suggested that there will be more time to educate growers, and like Director Witte said, "educate before you regulate," which is a great concept. Do you think that this will be ultimately helpful for growers and packers to help ease into the FSMA rules and will this make a difference even for some of those private inspectors that you talked about with some of the gap programs?

Ms. WOODS. I can tell you that our members certainly did appreciate especially Deputy Commissioner Michael Taylor's outreach to the industry while these rules were being developed, and we certainly do appreciate his intent to take an "educate before you regulate" approach. Part of our concern is FDA traditionally has been a very enforcement-minded agency, and it would really take a change in culture all the way down to the auditor, who is going to be visiting these farms and packing houses, to really achieve this "educate before you regulate" ideal.

Second, Deputy Commissioner Taylor is going to be stepping down from the agency next month, and by the time the Produce Safety Rule is actually implementing, we are going to be entering a new Administration. So we would certainly like to see that "educate before you regulate" approach come down. And in addition, almost the reverse as well where the agency continues to work with industry on identifying concerns and really relying on their expertise as well to help identify the positions that they ultimately end up taking, but we are not relying that that is actually going to be what ends up happening.

Mr. NEWHOUSE. Yes, I would like to see that too and we will continue to work with the agency. In my experience, and I'm sure Secretary Witte's experience, it is much better to help people into compliance than it is to beat them into submission, and so hopefully we can follow along that line of thinking.

Unless there is a third round of questioning, Mr. Chairman, I will relinquish my time. Thank you.

The CHAIRMAN. I am going to finish that third round of questioning really quickly with one last question for each member of the panel.

Please for time's sake and my hunger's sake limit it to 1 minute. I just want to know from each of you if the EPA or the USDA were sitting where you are today and you are sitting in my chair, what is the most pressing question your organization would ask them relating to their impact on the rural economy? It doesn't have to be a question either. You can make a statement. Go ahead. We will start—actually, we are going to go to this way. Mr. Vroom. Go ahead, Jay.

Mr. VROOM. Thank you, Mr. Chairman. So it very simply is, put the right priority on the right science as you apply that base of facts to your regulatory decision-making and policy establishment. Again, it is not for today as much as it is for the future, laying the groundwork for the precedents that will lead us forward to continue to be a world leader with regard to innovation and research in both the public- and private-sectors so those future tools—and I have the benefit of seeing behind the curtain with some of our member companies some of the really exciting new technologies that are out there, and I would just also like to commend Mr. Thompson for having mentioned the youth organizations, 4–H and FFA, that are training the young people to be ready to farm and to be ready to be in agribusiness and to serve in government as well because those organizations are really vital. I happen to have the honor of serving on the National FFA Foundation Board right now and can tell you that what Mr. Guebert talked about, those youth organizations are essential because farming and agribusiness today is so complicated that they have to have that training to go forward.

The CHAIRMAN. Thank you. Mr. Murden?

Mr. MURDEN. My message would be simple to EPA is, think before you issue damning press releases with half-truths.

The CHAIRMAN. Thank you.

Mr. MURDEN. They are hurtful.

The CHAIRMAN. They are very much so. Thank you for your comments, and thank you for gaining some time back from Mr. Vroom.

Rich?

Mr. GUEBERT. Just three things. One, don't throw science out with the bathwater. Use that and bring common sense back to the table to make it work.

The CHAIRMAN. So you can't cherry-pick when you want to believe science?

Mr. GUEBERT. Right. Don't pick and choose. And last but not lease, don't handicap the farmer and industry to provide the opportunity to feed the world. We have millions of mouths to feed. We can do it, we have done it, and we will continue to do it.

The CHAIRMAN. Thanks, Rich.

Ms. Woods, are you having fun yet?

Ms. WOODS. Oh, yes.

The CHAIRMAN. All right.

Ms. WOODS. I would say rely on actual data whenever possible and not modeling.

The CHAIRMAN. Thank you.

Ms. Torrey?

Ms. TORREY. I am going to echo many of the things that have been said, but we need to make decisions using guidance from the grassroots and from people actually in the field. Also, decisions need to be made on sound science, and we need to make our regulations simpler and easier to understand.

The CHAIRMAN. Thank you very much.

Secretary Witte?

Mr. WITTE. Yes. My farmers tell me certainty and consistency are key to our success. There is a reason why we do a farm bill over 5 years for many reasons, but farming is not a 1 year endeav-

or. You plan for the next cycle, and the cycle can be long-term. So regulatory certainty is key to success, and you have to be consistent in your implementation of the regulations.

The CHAIRMAN. Thank you, Mr. Secretary.

Mr. Conner.

Mr. CONNER. My admonishment to them, Mr. Chairman, would be, believe in your science, stay true to it, but then help us communicate the results of that to consumers and the general public.

The CHAIRMAN. Well, thank you, and I would like to add, the next time any of you talk to the EPA, can you let them know we would appreciate them actually appointing somebody to the ag portion of the Science Advisory Board? It seemed like an easy thing to do 2 years ago but obviously not.

In closing, I do want to say again thank you to each and every one of you for taking the time today. Your testimony is crucial. As I laid out in my opening statement, what we are trying to do on this Committee and each Subcommittee is to lay out how we can actually ensure that the agricultural economy of this country continues to feed the world and continues to remain strong.

We all have our own geographical differences. We all have our own issues that each of your organizations face, but in the end we all fall under that umbrella of agriculture, and when we fall under that umbrella of agriculture, I see success, and success from each and every one of you and your organizations.

Now, I want to remind each witness that there will likely be questions submitted to each of you for the record. Unlike the EPA, I don't think there will be 36 pages. However, I would encourage you, otherwise you risk the wrath of me making fun of you later for not responding, please respond to those questions. They will be done in a bipartisan way.

I would now invite my Ranking Member to offer any closing remarks. Seeing none, I would like to remind, for housekeeping duties, under the rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplemental written responses from the witnesses to any questions posed by a Member.

This hearing of the Subcommittee on Biotechnology, Horticulture, and Research is adjourned.

[Whereupon, at 12:13 p.m., the Subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUPPLEMENTARY MATERIAL SUBMITTED BY ROBERT L. GUENTHER, SENIOR VICE PRESIDENT, PUBLIC POLICY, UNITED FRESH PRODUCE ASSOCIATION; ON BEHALF OF MAUREEN J. TORREY, VICE PRESIDENT, TORREY FARMS, INC.

June 3, 2016

Hon. RODNEY DAVIS,
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.;

Hon. SUZAN K. DELBENE,
Ranking Minority Member,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

Re: Supplemental Comments for the Record: House Committee on Agriculture, Subcommittee on Biotechnology, Horticulture and Research Hearing: *Focus on the Farm Economy—Factors Impacting the Cost of Production*

Dear Chairman Davis and Ranking Member DelBene:

United Fresh Produce Association commends the House Agriculture Committee for holding hearings regarding the current state of various agriculture sectors. We also appreciate the opportunity to have our Member and former Chairman of the Board, Maureen Torrey of Torrey Farms, Elba, NY, testify before the Biotechnology, Horticulture and Research Subcommittee on April 27 on the topic of factors affecting the cost of agriculture production. United Fresh is also grateful for the opportunity to provide these supplemental views for the hearing record on questions posed by Members of the Subcommittee. In addition to the comments provided in Maureen's testimony, we would like to elaborate further on a variety of issues of interest to the fresh fruit and vegetable industry.

Regarding the subject of biotechnology, in February of this year, USDA announced to the public, through a 14 page notice of intent in the *Federal Register,* its plan to completely re-write the United States' pre-market biotechnology regulatory framework called "Part 340." United Fresh joined with industry counterparts to submit the attached comments to the docket.

As the Committee is aware, United Fresh Produce Association serves at the coordinating organization for the Specialty Crop Farm Bill Alliance, which has provided farm bill policy recommendations to Congress for each farm bill since 2002. Our industry is grateful to the Committee and Congress for acting favorably on the Alliance's recommendations.

Each year that the Alliance has offered farm bill recommendations, we have stressed that Federal resources for research for specialty crops is among our top policy priorities.

As Congress began work on the 2014 Farm Bill, the Alliance provided a variety of recommendations on priorities to address research needs such as:

- threats from pests and disease;
- mitigating the negative impact of drought on specialty crops;
- technological innovations;
- improved prevention, detection, monitoring and response to food safety hazards; and
- improved plant breeding and genetics.

The Alliance also recommended that industry relevance play a greater role in determining the allocation of Specialty Crop Research Initiative (SCRI) grants. We are grateful to the Committee for incorporating this proposal into the 2014 Farm Bill and believe that such an effort will enhance producer support and interest in the grants process. Our members have expressed that the relevancy review process is very helpful toward the goal of ensuring that research projects have a direct effect on grower needs. Prior to the inclusion of the relevancy review process, United Fresh members voiced concerns that projects funded under the SCRI process may have had scientific merit, but not did not necessarily address the real-world needs of producers. We believe that the current process to make industry input a greater part of the review effort helps to ensure that research dollars are wisely spent. Examples of beneficial research include such efforts as disease management and mechanical harvesting in blueberry production; Fusarium wilt research in watermelon production; *Phytophera c.* disease management in peppers and melons, as well as research on issues in onion post-harvest and variety development in broccoli.

As the Committee has indicated, the value of SCRI and other programs is heightened by grower awareness of these programs. While additional outreach efforts

would be welcome and we would be pleased to work with the Committee and USDA on how best to develop such efforts, our members report that there seems to be a significant level of information disseminated about research programs through extension services, as well as industry publications and meetings.

Questions have also been raised about the impact of EPA's proposed Worker Protection Standard rule, which is set to become effective in January 2017. As the Committee is aware, this rule sets new standards for the training of and handling of pesticides by farmworkers. Ensuring the safe and proper handling of crop protection chemicals is a top priority for any conscientious grower. However, United Fresh and many others in the agriculture community have expressed concern with the manner in which this rule was promulgated, particularly with respect to the insertion late in the process of a provision known as the "designated representative" provision. Under this proposal, farm workers may authorize a designated representative to receive pesticide application-specific information for the operation that employs them. To some, this may seem reasonable, but United Fresh sees a number of potential problems with this provision. Our concerns were articulated in a letter, signed by United Fresh and other agriculture organizations, to the [Chairman] and Ranking Member of the Committee in March of this year and include:

- Farmers have no way of authenticating such designations.
- Farmers may be legally liable even when presented with fraudulent designations.
- There are no restrictions whatsoever on what "designated representatives" may do with farm-specific data once they have obtained it.
- Under the rule, "designated representatives" are not required to share the information they receive with the workers who have supposedly signed the designation (thus, undercutting any assertion that this provision would improve worker safety).
- Release of the information is not related in any way to exposure, health or risk to the worker.
- There are no provisions in the rule sanctioning third parties who abuse the provision.

Given the lack of transparency in the process for bringing this rule forward and the lack of accountability in the rule's provisions, we urge the Committee to work to ensure that worker safety programs such as this maintain high standards of safety for farm workers, without increasing growers' vulnerability to spurious attacks by third parties with a political agenda to promote.

Again, thank you to the Committee for holding this hearing and opening the record for additional comments. As always, United Fresh Produce Association welcomes future opportunities to work with the Members of the Committee to develop policies that enhance the competitiveness of the specialty crop industry and promote the success of America's farmers.

Thank you for your time and attention,



ROBERT L. GUENTHER,
Senior Vice President, Public Policy,
United Fresh Produce Association.

ATTACHMENT

April 21, 2016

SIDNEY W. ABEL,
Regulatory Services,
Animal and Plant Health Inspection Service.

Re: Docket No. APHIS–2014–0054 Environmental Impact Statement on the impacts of possible revisions to the biotechnology regulations

Dear Mr. Abel,

On behalf of the organizations listed below that represent many of the producers of specialty crops in the United States, we offer the following comments submitted in response to the request for comments by the USDA Animal and Plant Health Inspection Service (APHIS) on the agency's Notice of Intent (NOI) to prepare an Environmental Impact Statement (EIS) on the impacts of possible revisions to the biotechnology regulations (7 CFR part 340). The process established by Part 340 is im-

portant to the specialty crop industry as it impacts the ability to utilize potentially important technologies that can improve the nutritional value and production efficiency of the fruits and vegetables we produce.

We oppose the NOI APHIS proposed working definition for "biotechnology" that would essentially define the initial scope of products that would be subject to any of the alternatives described in the Notice of Intent:

> *Laboratory based techniques to create or modify a genome that result in a viable organism with intended altered phenotypes. Such techniques include, but are not limited to, deleting specific segments of the genome, adding segments to the genome, directed altering of the genome, creating additional genomes, or direct injection and cell fusion beyond the taxonomic family that overcomes natural physiological reproductive or recombination barriers.*

This definition is much broader than what is found in current regulations and is entirely based on the process by which a new plant variety is developed. If applied to Part 340, this definition would require pre-market regulatory review of many modifications that could be achieved through conventional breeding. Such a change is not warranted and should not be pursued. With our advanced knowledge of the genome of a tomato we could, for example, identify which tomato genes impact water use. With that knowledge we could use genes from a wild tomato variety that uses less water and insert them into commercial tomato plants in order to improve water use efficiency. While this type of cross-breeding (between otherwise compatible plants) could be accomplished using existing breeding techniques, doing so would take many, many years. Yet with advanced genome techniques, we will be able to save significant time and cost off the breeding process. Likewise with modern gene technology we are in a position to more accurately identify genes within a plant that control certain traits; thus rather than spending years or decades using traditional breeding techniques to "turn off" or "turn down" these genetic traits, we can do so in a more timely fashion. Historically, we have—as only one example—bred apples to be more or less sweet using traditional breeding techniques in which we identify apples with such a trait and then emphasize that trait, yet using current science we are able to make those types of alterations within plants more quickly. Nothing USDA is considering in this rulemaking should alter or inhibit this type of scientific advancement all of which is an evolution of existing breeding techniques using modern technology.

We believe that the current policies for evaluating the risks to health and the environment that may accompany the introduction of plants derived from biotechnology have been effective and have not been unduly restrictive in allowing innovative technologies to enter the market place. The current policies rely largely on the Coordinated Frame Work for the Regulation of Biotechnology (Coordinated Framework) established by the Executive Branch in 1986. The Coordinated Framework incorporated existing Federal laws to utilize the authority and expertise of established agencies to evaluate products developed using biotechnology. The evaluation of plants developed using biotechnology by the USDA is a clear example of why this approach has worked effectively. Under this approach USDA applies its significant knowledge of growing plants in the environment to evaluate the safety of food products regardless of their technological origin.

Throughout the history of modern agriculture, farmers have needed to innovate to be successful and to satisfy the nutritional needs of a rapidly growing population. Innovation has allowed agriculture to achieve unprecedented success in meeting both food security and environmental challenges. In plant agriculture, advances in breeding new and improved varieties has been the cornerstone of this success. Our advanced knowledge of the genetic structure of fruits and vegetables allows improved varieties to be developed more directly and more consistently.

The use of biotechnology is only one aspect of the application of this new knowledge. We believe that oversight of this array of new enhanced breeding techniques must be rooted in the principle that Federal oversight is based on an evaluation of the potential risk from the introduction, and not the process, by which it was developed. Failure to apply that principle will result in unnecessary costs and delays in bringing new products to the marketplace.

USDA should utilize its existing authority to conduct oversight of any new plant varieties in order to protect U.S. agriculture from the risks associated with the possible introduction of plant pests and noxious weeds. Significant pre-market oversight is only necessary when there is reason to believe that the new variety presents a risk to the environment based on a potential risk, not the development process. We believe it unlikely that new varieties resulting from many advanced breeding techniques will require any significant oversight since the resulting variety will be indistinguishable from varieties developed by conventional breeding techniques.

Finally, we urge the agency to conduct a robust process to obtain input from plant breeders and agricultural producers. We believe that their input will strongly support the idea that any changes to the current system should be minor and targeted and should allow more flexibility to utilize appropriate discretion on which new varieties require regulatory oversight. The long safety history and documented value of products developed through advanced breeding techniques including biotechnology strongly support this approach. Based on the current flexibility contained in USDA regulations and USDA's significant experience in previous reviews of similar traits developed through biotechnology, it may be possible to eliminate the need for premarket regulatory review for many products.

We appreciate the opportunity to provide these comments to the docket on USDA's proposed changes. In coming years, farmers will need to provide more food to more people using less resources. Innovation has always been critical to our industry and as it will be in the future. USDA should not make decisions today that make necessary innovations of the future more costly and difficult to achieve.

Sincerely,

United Fresh Produce Association;
National Potato Council;
U.S. Apple Association;
Fresh Produce Association of the Americas;
Western Growers;
California Fresh Fruit Association;
Grower-Shipper Association of Central California;
Florida Tomato Exchange;
Georgia Fruit and Vegetable Growers Association;
Idaho Grower Shippers Association;
Idaho Potato Commission;
Empire State Potato Growers;
New York Apple Association;
Oregon Potato Commission;
Texas Citrus Mutual;
Texas International Produce Association;
Texas Vegetable Association;
Washington State Potato Commission;
Wisconsin Potato & Vegetable Growers Association.

SUPPLEMENTARY MATERIAL SUBMITTED BY JAY VROOM, PRESIDENT AND CHIEF EXECUTIVE OFFICER, CROPLIFE AMERICA

LETTER TO HON. GINA MC CARTHY

April 13, 2016

Hon. GINA MCCARTHY,
Administrator,
U.S. Environmental Protection Agency.

Dear Administrator McCarthy:

As organizations representing U.S. agriculture and users of crop protection tools and pest control products, we are deeply concerned about EPA's planned Scientific Advisory Panel (SAP) meeting, April 19 to 21, to change the long-accepted, science-based regulatory endpoint for the pesticide chlorpyrifos, and we ask you to postpone this hastily called meeting.

Chlorpyrifos is a widely-used and widely-tested chemistry proven to be safe and effective for an array of commodities, specialty crops, and public health uses throughout the United States.

With this hasty and rushed SAP, EPA is attempting to fundamentally alter its process for evaluating potential risk and regulation of pesticides. EPA is moving forward as if the current regulatory process developed over 4 decades is broken. Recognizing the abruptness of this shift in approach and potential impact to all pesticides, the standards to be met for such a change should be set high. The failure to adhere to policies and regulations, reliance on a single epidemiological study for which the Agency does not even possess the underlying data, and lack of a solid basis for the most fundamental assumptions, do not meet such a high scientific or policy standard.

This not only would adversely affect chlorpyrifos; it also sets a terrible precedent for other organophosphates and pesticides. This also comes at a time when America's production agriculture is facing low commodity prices and strained budgets. If EPA proceeds with this European-style precautionary approach not based on sound scientific principles, we are going to lose valuable crop protection tools. Unfortunately, this path would have a chilling effect on the ability of companies to bring new and improved products to market—an objective sought by EPA—and further harm producers' ability to protect crops and compete in domestic and international markets.

We respectfully ask you to postpone the SAP until there is appropriate attention given to the scientific validity of the underlying assumptions for this dramatic change in how pesticides are regulated. Not only are there scientific questions, but

only days have been given to review what the Agency has prepared and distributed to SAP members and the public.

Our organizations believe that the Agency's lack of transparency is a violation of established EPA processes for review of products under the Federal Insecticide, Fungicide & Rodenticide Act (FIFRA). Within FIFRA, EPA also is required to review the best available data. In the process involving chlorpyrifos, the Agency has fallen woefully short of statutory requirements and as stakeholders we expect a consistent and scientific approach based on the law.

We look forward to your response.

Sincerely,

Agricultural Retailers Association;
Almond Hullers & Processors Association;
American Farm Bureau Federation;
AmericanHort;
American Soybean Association;
American Society of Sugar Beet Technologists;
American Sugarbeet Growers Association;
Beet Sugar Development Foundation;
California Citrus Mutual;
California Citrus Quality Council;
California Cotton Ginners Association;
California Cotton Growers Association;
California Date Commission;
California Dried Plum Board;
California Fig Advisory Board;
California Fresh Fruit Association;
California Specialty Crops Council;
California Strawberry Commission;
California Walnut Commission;
Cranberry Institute;
CropLife America;
Florida Fruit & Vegetable Association;
Golf Course Superintendents Association of America;
National Agricultural Aviation Association;
National Association of State Departments of Agriculture;
National Association of Wheat Growers;
National Corn Growers Association;
National Cotton Council;
National Council of Farmer Cooperatives;
National Pest Management Association;
National Potato Council;
National Sorghum Producers;
North American Blueberry Council;
Northwest Horticultural Council;
Sunsweet Growers Inc.;
United Fresh Produce Association;
U.S. Apple Association;
Valley Fig Growers;
Washington Friends of Farms & Forests;
Washington State Potato Commission;
Western Agricultural Processors Association;
Western Growers Association.

CC:

Secretary THOMAS "TOM" J. VILSACK;
JASON FURMAN, *Chairman* of the Council of Economic Advisers;
JEFFREY ZIENTS, *Director* of the National Economic Council;
CHRISTY GOLDFUSS, *Managing Director,* White House Council on Environmental Quality;
Chairman PAT ROBERTS;
Senator DEBBIE STABENOW;
Chairman K. MICHAEL CONAWAY;
Congressman COLLIN C. PETERSON.

SUBMITTED COMMENTS CONCERNING THE SCIENTIFIC ADVISORY PANEL

EPA's Precedent-Setting Proposal for a New PoD for Chlorpyrifos is Not Based on Sound Science or Established Policy (Initial comments by Dow AgroSciences, LLC. April 8, 2016)

Introduction

Over 4 decades of carefully developed and designed testing programs and risk assessment approaches for how EPA evaluates pesticides are being set aside without solid justification for such an abrupt and drastic change. The foundations used by EPA for the proposed process for setting a new Point of Departure (PoD) for chlorpyrifos, which is the subject of this Scientific Advisory Panel (SAP) (April 19–21), fail to meet scientific and policy standards. Positions presented as fact are, in reality, not supported. Before the specific charge questions asked of this SAP are addressed, these foundations should first be considered. More relevant charge questions for the SAP should focus on how as new hypotheses are generated from epidemiology studies, the EPA must establish a science-based approach to evaluate the evidence under the standards set for guideline studies.

This precedent-setting proposal jeopardizes the established, accepted science-based regulatory process. The impact of the proposed changes to determining a PoD goes beyond just the discussion of chlorpyrifos before this SAP. This approach will change regulatory endpoints by several orders of magnitude. If adopted, the regulatory status of many crop protection products will change and tools needed by American farmers will be lost.

The following are initial comments by Dow AgroSciences. Further, more extensive comments will be provided. In addition to these, SAP members are referred to supportive articles and information cited at the end of these comments.

EPA's Failure To Follow Established Policies Undermine the Scientific Validity of the Proposed Approach To Setting a PoD

EPA cites a "transparent process" and "systemic reviews" as included in the 2014 *Revised Human Health Risk Assessment,* then updated for the 2015 *Literature Review on Neurodevelopment Effects & FQPA Safety Factor Determination for the Organophosphate Pesticides* (*Literature Review*), and then repeated in the 2015 *Chlorpyrifos; Tolerance Revocations; Proposed Rule.* However, it must be noted EPA has not responded to or otherwise addressed public comments submitted in response to these documents. EPA is obligated to do so under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA") and the Federal Food, Drug, and Cosmetic Act ("FFDCA") and their implementing regulations. The comments submitted by registrants, academics and stakeholders are directly relevant to the issues before this SAP and should be considered.

EPA cites OPP's development of a 2010 draft *Framework for Incorporating Human Epidemiological & Incident Data in Health Risk Assessment* (*Draft Framework*). However, EPA has never responded to public comments solicited by EPA on this draft, and the *Draft Framework* has never been finalized. Giving epidemiology studies more weight than the extensive, required animal studies is premature and not well-supported if public comments have not been addressed and the Draft Framework not finalized.

EPA's Reliance on the Columbia University (CCCEH) Study Undercuts the Basic Scientific and Regulatory Foundation for the Proposal Before This SAP

A critical, fundamental question is whether data from a single epidemiology study can be used to replace decades of animal-based research to derive a new regulatory endpoint for chlorpyrifos. The regulatory process for accessing human health risks should be rigorous, science-based, and transparent; FIFRA, FFDCA, and FQPA (Food Quality Protection Act) demand no less. Fundamental to the discussion before the SAP is EPA's precedent-setting reliance on the reported results of the Columbia Study (CCCEH)—for which the Agency still lacks the complete underlying data and for which the scientific validity and transparency have been challenged. The Agency has been made aware of these challenges in several sets of comments to the chlorpyrifos dockets as well as in a critical review by D. Edwards, *et al.* (2014), which has been placed in the docket for this SAP.

Analyses by CCCEH Researchers Do Not Eliminate the Need for Access to the Raw Data

The EPA is evaluating the CCCEH maternal and cord blood data based only upon a frequency distribution provided by the investigators in published articles, not the actual data. Although challenged in repeated comment periods, EPA has not obtained the complete raw data in order for their own independent analysis and verification or peer-review. Many potential misinterpretations and even false conclusions are possible without full analyses of raw data. EPA could not have adequately accomplished a complete analysis and confirmation of finding in the few meetings and analyses cited. EPA has repeatedly sought, without success, all the raw data from the study researchers and has previously stated that it could not undertake dose reconstruction and analyses of other chemical exposures without the raw data.

The Health Endpoint Selected Is Speculative

EPA is proposing to use a health endpoint, working memory from an IQ test, from a single epidemiology study, which has not been replicated in other epidemiology studies. The Agency does not have expertise in epidemiology, intelligence testing, or pediatrics to select this as the best endpoint, nor are the charge questions for the SAP directed at the appropriateness of this endpoint.

EPA makes assumptions that are unsubstantiated by published reviews of the CCCEH and other epidemiology studies. Multiple peer-reviewed publications consistently concluded that at exposure levels below acetylcholinesterase inhibition, the evidence for adverse human effects did not support these assumptions. (Burns, *et al.* 2013; Eaton, *et al.* 2008; Li, *et al.* 2012; Prueitt, *et al.* 2011; Reiss, *et al.* 2015). These publications challenge the confidence for using a new endpoint.

Weakness in the Science Undermines the Validity of the Proposed PoD

Weaknesses in the science used to determine the proposed PoD have not been adequately investigated and addressed. For such an abrupt and dramatic change in overriding established regulatory approaches and policies, the standard for setting a new PoD should be much higher than offered by the current proposal

CCCEH researchers have not accounted for the impact of all potential, well-recognized confounding factors and EPA has failed to conduct any type of sensitivity analysis. Some members of the 2012 SAP cautioned about associating the observed

effects in the CCCEH studies with a single chemical since there were multi-chemical exposures over many important developmental years for the children. This issue has not been resolved by the EPA. Therefore, attributing independent physiological effects to a single chemical in this type of multi-chemical exposure scenarios is speculative.

Chlorpyrifos has been widely-tested in studies that have identified a clear Mode of Action (MOA) for potential causation at exposures which result in cholinesterase inhibition. The current proposal does not put forth a MOA for neurodevelopmental effects at exposures lower than associated with cholinesterase inhibition. While EPA notes other cases where a MOA for non-pesticides has not been determined, EPA's own 2010 *Draft Framework* requires that one be identified for the valid use of data from epidemiology studies. Since the extensive animal study data base for chlorpyrifos provides clear biological endpoints and MOA's, any causal relationship between exposure and effects based on the CCCEH is doubtful.

Retention of the 10X Intraspecies Uncertainty Factor (UF) and of the Increase in the FQPA Safety Factor to 10X Are Not Based on Sound Science

Reference to the 10X Intraspecies UF Approach for Methyl Mercury (MeHg) Is Not Relevant

EPA notes that a 3X and 3X (PK/PD) uncertainty factor was used for MeHg as support for a 10X intraspecies UF for chlorpyrifos. However, there are critical differences between heavy metals such as methyl mercury and chlorpyrifos. For methyl mercury, the biological target has been shown to be various brain tissues, the half-life is significantly longer, and there is a known positive fetal-maternal gradient, all of which are profoundly different than chlorpyrifos, particularly if the EPA is proposing a non-cholinergic mechanism in the CCCEH study. Therefore, MeHg is not relevant nor a valid case study to inform on or regulate chlorpyrifos.

PBPK Model Has Been Updated for Life-Stages of Pregnancy

EPA notes in the supporting document that the PBPK–PD model was updated and submitted to the EPA in April 2015 to address life-stages of pregnancy. Updates included predictions of physiological, anatomical and chlorpyrifos—specific biochemical changes associated with pregnancy and their impact on cholinesterase inhibition in pregnant women. These model enhancements were based on well published and validated approaches for incorporating pregnancy into models of this type. The relevant Data Derived Extrapolation Factor (DDEF) for protecting >99% of the population is 4 for all cohorts. As a result, the 10X intra-species extrapolation factor for pregnant women could be set to 4X. EPA now states the model was not validated with chlorpyrifos-specific PK data and therefore cannot be used for this life-stage. Although having the model for almost a year, EPA has not brought these questions to the researchers to resolve. Rather than rejecting the model for this life-stage, EPA should work to address the issues and refine the uncertainty factor.

An FQPA Safety Factor of 10X Is Not Justified

EPA cites its 2015 *Literature Review* as justification for increasing the FQPA Safety Factor from 1X to 10X. However, the 2015 *Literature Review* is significantly flawed and reliance on it lacks a sound scientific basis. It is built around an attempt to integrate non-occupational epidemiology studies that had low to unconfirmed exposure with the high dose toxicological endpoints derived from scientifically valid animal data.

In the *Literature Review,* there are critical errors in the approach, process, and conclusions: (1) review of published literature is incomplete, (2) quality assessment of the literature is arbitrary and capricious, (3) estimates of OP exposures are subject to error, (4) there is arbitrary use of suggestive evidence for null data, and (5) EPA's own 2010 *Draft Framework* is poorly followed. Burns (2015) offers a critical evaluation of the *Literature Review* and has been placed in the current docket.

Conclusions

EPA is attempting to fundamentally alter the methodology and process for evaluating potential risk and regulation of pesticides. Central to this is EPA's premise that the current regulatory process developed over 4 decades is broken and in the case of chlorpyrifos, that the current reliance on cholinesterase inhibition is not adequately protective. Recognizing the abruptness of this shift in approach and potential impact to all pesticides, the standards to be met for such a change should be set high, including, the use of sound, validated, replicable science. The failure to adhere to policies and regulations, the limitations of the studies used as support, weaknesses in the science of determining a new PoD, and lack of a solid basis for

the most fundamental assumptions, do not meet such a high scientific or policy standard.

References and Additional Supporting Materials

Review of EPA's Literature Review

Burns, C. 2015. *Comments on EPA's Literature Review on Neurodevelopment Effects & FQPA Safety Factor Determination for the Organophosphate Pesticides* (document posted in docket EPA–HQ–OPP–2010–0119). Dated December 22, 2015. Available in dockets: EPA–HQ–OPP–2010–0019; EPA–HQ–OPP–2015–0653 and the current EPA–HQ–OPP–2016–0062.

Review and Challenges to the Columbia Study (CCEH)

Edwards, D., Juberg, D., Burns, C., Goodman, J., Li, A., Bartels, M., Lickfeldt, D., 2013. *Epidemiology Studies Pertaining to Chlorpyrifos Exposures: Consideration of Reliability and Utility.* Submitted by Dow AgroSciences to EPA November 12, 2013. Available in dockets: EPA–HQ–OPP–0850–0224; EPA–HQ–OPP–2015–0653 and the current EPA–HQ–OPP–2016–0062.

Related to Lack of Adverse Effects Below the Level of Acetylcholinesterase Inhibition

Burns, C.J., McIntosh, L.J., Mink, P.J., Jurek, A.M., and Li, A.A. 2013. "Pesticide exposure and neurodevelopmental outcomes: review of the epidemiologic and animal studies," *J. Toxicol. Environ. Health B. Crit. Rev.* (16:3–4), pp. 127–283.

Eaton, D.L., Daroff, R.B., Autrup, H., Bridges, J., Buffler, P., Costa, L.G., Coyle, J., McKhann, G., Mobley, W.C., Nadel, L., Neubert, D., Schulte-Hermann, R., and Spencer, P.S. 2008. "Review of the toxicology of chlorpyrifos with an emphasis on human exposure and neurodevelopment," *Crit. Rev. Toxicol.* (38 Suppl. 2), pp. 1–125.

Li, A.A., Lowe, K.A., McIntosh, L.J., and Mink, P.J. 2012. "Evaluation of epidemiology and animal data for risk assessment: chlorpyrifos developmental neurobehavioral outcomes," *J. Toxicol. Environ. Health B. Crit. Rev.* (15:2), pp. 109–184.

Prueitt, R.L., Goodman, J.E., Bailey, L.A., and Rhomberg, L.R. 2011. "Hypothesis-based weight-of-evidence evaluation of the neurodevelopmental effects of chlorpyrifos," *Crit. Rev. Toxicol.* (41:10) Nov, pp. 822–903.

Reiss, R., Chang, E.T., Richardson, R.J., and Goodman, M. 2015. "A review of epidemiologic studies of low-level exposures to organophosphorus insecticides in non-occupational populations," *Crit. Rev. Toxicol.* (45:7), pp 531–641.

Submitted to EPA–HQ–OPP–2016–0062

Dow AgroSciences, LLC,
9330 Zionsville Rd.,
Indianapolis, IN 46268.

SUBMITTED LETTER BY BILL BOND, EXECUTIVE DIRECTOR, MINNESOTA CROP PRODUCTION RETAILERS

Wednesday, May 11, 2016

Hon. RODNEY DAVIS,
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

Dear Chairman Davis,

This correspondence is submitted for the record related to the April 27, 2016 hearing in the House Subcommittee on Biotechnology, Horticulture, and Research titled *Focus on the Farm Economy: Factors Impacting Cost of Production* in which the EPA regulation was a topic discussed. As a 60 year old agribusiness association in Minnesota we have witnessed an unprecedented series of missteps and confusing initiatives and statements which are a major concern to our 250 members who serve the 70,000 Minnesota farmers as they strive to provide food, feed, and fiber for the U.S. citizens and [the] world population.

EPA's recent actions diverge from historical practices and/or law. MCPR is encouraging Congress to increase its oversight of EPA. Examples of worrisome Agency actions are below:

- Issuance by EPA of letters to companies requesting they withdraw pending applications for new uses and re-submit with additional, time consuming and costly data not originally required, slowing time to market and limiting IPM tools. EPA also stated they would not consider new applications for uses without the additional data but have failed to justify the change in policy.
- EPA issued a benefits analysis for treated soybeans without engaging agricultural economics experts at USDA. The Department of Agriculture responded with a public letter chastising EPA for conducting an "incomplete" study and for creating confusion for farmers.
- In an odd move, the EPA appealed to the 9th Circuit to request the court vacate the Agency's registration of the combined use of two established herbicides. NGOs had petitioned EPA to cancel the registration citing documents from the patent filings from Dow that may have indicated "synergistic effects" would increase toxicity when the two products are combined. It is odd that the Agency essentially sued itself over its own action, which undermines confidence in its processes.
- EPA released a risk assessment [in] selected media, along with a related press release, before releasing it to the public seeking to shape coverage. The press release included statements that inflated the risks identified in the analysis. The press release from the Canadian Government, which cooperated with EPA on the analysis, conflicted with EPA's.
- EPA has sought to revoke a pesticide registration based on "theoretical modeling" that showed a potential risk from its use while rejecting more credible data from 6 years of real-world monitoring of use.
- EPA proposed a rule to reduce exposure to pesticides by honey bees of commercial pollination services that is not based on a risk assessment and was published without the required notification of the USDA. USDA publicly criticized EPA for this and questioned whether the Agency followed other statutory regulatory process requirements.

Please continue your oversight of this Federal agency which is operating suboptimal and is counterproductive to the interests of agriculture in the USA.

Sincerely,



BILL BOND,
Executive Director, Minnesota Crop Production Retailers.

SUBMITTED STATEMENT BY KELLY COVELLO, PRESIDENT, ALMOND HULLERS & PROCESSORS ASSOCIATION

Dear Chairman Davis, Ranking Member DelBene, Subcommittee Members:

Thank you for accepting our input on factors affecting the productivity of the U.S. farm economy. On behalf of our industry, we appreciate the opportunity to provide our thoughts on this important subject.

The Almond Hullers & Processors Association (AHPA) is a trade association that was established in 1980 and our members represent over 90% of the California almond industry based on volume. The association is dedicated to innovative leadership and advocacy, ensuring the sustainability and success of the California almond community.

California Almonds are California's No. 1 agricultural export and No. 2 agricultural crop valued at $5.9 billion in 2014 according to the California Department of Food & Agriculture. California produces 80 percent of the world's almonds and 100 percent of the U.S. commercial supply. The California Almond industry supports California's economic well-being by generating more than 100,000 jobs and more than $21 billion gross revenue across all industries in the state, adding about $11 billion to the size of the state's total economy.

Finding ways to do things better, faster and more efficiently is what drives advancements in all industries, and farming is no exception. Modern agriculture's success depends on the availability of new technologies to help farmers grow more food, more sustainably, than ever before. Production costs are a key component of this success and a major factor affecting a farm operation's long-term viability. Unfortunately, the impact of higher costs associated with pesticide regulations does not appear to be a consideration when it comes to implementing today's Federal regulatory policies.

The average farm today feeds almost six times as many people as it did in 1950 and Americans spend ½ as much of their personal income on food as they did then. Also, the success allows the majority of the U.S. population (98%) to use their talents outside of growing food and fiber. This success has accompanied a move toward greater human health and environmental safety. Improved mechanization, soil management and nutrition, combined with investments in research and innovations in crop protection breeding have produced more high-quality food on less land, while preserving our natural resources for future generations.

Despite this amazing success story, there are some who question the very innovations that have helped make our food more abundant and affordable to millions of people worldwide. Unfortunately, this attitude can "take root" in a society that is largely disconnected from farming. As less than two percent of all Americans work on a farm, a lack of understanding about farming can lead to wrong assumptions about how our food is produced. Misinformation can be quickly disseminated, unfortunately at times aided by a sympathetic media that gives credence to their unsupported claims.

We fear these negative voices can be persuasive, and unfortunately often successful in their influence. While we support the need for strong regulatory oversight, it can only be effective if it is based on sound scientific principles. We believe recent actions taken by the U.S. Environmental Protection Agency have diverged from these principles, which threaten the future success of modern agriculture. Some examples are included below:

- Without any justifying evidence, the EPA has proposed changing its long-standing policy of scientific risk assessment in favor of hazard-based regulation with regard to pesticides that are "acutely toxic" to pollinators. This ignores the well-accepted scientific premise that both toxicity and exposure data are needed to determine a true assessment of risk and unnecessarily denies farmers the use of important products that have shown little or no impact to bees.
- The U.S. Department of Agriculture has been critical of the EPA's proposed rule regarding pollinators, because of EPA's lack of a risk assessment, along with asking EPA to "carefully consider the economic impact this proposal may have on numerous specialty crop farmers and the rural economies they contribute to across the U.S."
- Following a 5 year pollinator risk assessment of a popular insecticide, the EPA provided its report to selected media, along with a related press release, before issuing it to the public. Instead of accurately describing the report's findings (which found little risk to bees), the EPA's press release greatly inflated the potential risks and unnecessarily frightened the public.
- The EPA has sought to revoke the use of an insecticide important to grower IPM programs, including almonds, based on its own theoretical modeling which claims a potential risk to certain invertebrates found in farm ponds, despite 6 years of real-world monitoring that shows no indication of harm.
- Under pressure from anti-pesticide activists, the EPA asked the 9th Circuit Court to vacate the registration of a herbicide already approved by the Agency—essentially suing itself to nullify procedural protections to the registrant that are guaranteed by Federal law.
- EPA proposed to revoke the tolerances of another well-used insecticide due to drinking water concerns, again based on modeling, and despite years and widespread testing of surface waters showing residues were much lower than modeled.
    - EPA chose to propose the route of tolerance revocation rather than the proper legal route of requesting a cancellation of the registration of the pesticide. EPA's choice prevents external judicial review of their decision as laid out in FIFRA.

The common thread in these examples is an agency that appears increasingly less focused on a science-based approach to assessing risk. Whether this is due to external pressures from groups that are vehemently opposed to modern agriculture, or a lack of understanding about what it takes to grow a crop, the trend is disturbing and dangerous. One need only to look at Europe, where the politicization of regulatory decision-making and the adoption of risk-adverse policies over scientific risk assessment has resulted in a reduction of tools available to farmers and decreased public confidence in the benefits of technological innovation.

Modern agriculture has been good for farmers, but it also has been good for the general public, the environment and our nation's economy. Our growers need the tools that come from innovation, which helps increase our productivity and improves

our cost efficiency. With a world population that is expected to exceed nine billion people in the next 30 years, we need more, not less, tools to do the job. And we need a regulatory agency that understands and balances benefits and costs to farmers, the public, and the environment.

Sincerely,



KELLY COVELLO,
President.

SUBMITTED STATEMENT BY KEITH JONES, EXECUTIVE DIRECTOR, BIOPESTICIDE INDUSTRY ALLIANCE

Overview of the Biopesticide Industry

The biopesticide industry is a $1.6 billion industry.[1] The industry is projected to grow at a compound annual growth rate of 16% through 2019.[2] This industry's growth is fueled by two major factors including consumers' demands for safer pest control products that can be used in both conventional and organic agricultural programs. The second major impetus to growth comes from innovation and technology, adding science-based jobs and contributing to the economy while at the same time providing growers, pest control applicators and public health officials with effective and safe pest control options.

Biopesticides are low risk pesticides that are naturally derived from or synthetic equivalents of plants, bacteria, fungi, and minerals, generally posing little risk to humans or the environment. Growers use biopesticides to control plant disease, insects, weeds and other pests. Biopesticides can be used to protect our food supply in food processing establishments as well as protect the public from pest-borne illness and disease by controlling or repelling rats, fleas, ticks and mosquitoes. The members of this industry segment, from small start-up to large established companies, have active research and development programs to address a broad array of pest problems on the farm as well as emerging threats such as Zika virus.

Generally, biopesticides are not persistent and pose little risk to people, birds, fish, bees and other wildlife. They help to maintain beneficial insect populations, break down quickly in the environment, and provide low risk alternative tools for conventional growers in integrated pest management programs.

Benefits of Biopesticides

Growers, pest control applicators and public health professionals are increasingly turning to biopesticides because they provide the following significant benefits:

- Biopesticides are versatile and functional in both organic and conventional production systems.
- Biopesticides allow organic growers to control pests while maintaining USDA National Organic Program (NOP) certified status.
- Biopesticides fit with integrated pest management systems and contribute to environmentally responsible production systems—while not compromising crop yield and quality.
- Biopesticides may offer greater flexibility when harvesting crops because of short pre-harvest and restricted entry intervals or waiting periods before individuals can enter a treated area.
- Biopesticides are important public health protection tools. They are used in food processing establishments to protect our food supply and in mosquito and tick control programs to protect the public from diseases like West Nile virus, Lyme disease and other pest-borne illness.
- Because naturally derived biopesticides often control pests through multiple modes of actions they can be less prone to pest resistance.

Biopesticide Regulation

The United States has one of the world's most robust programs to review and register biopesticides and is unique in that specific expertise has been developed within

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[1] The Kline Group. *Global Biopesticides: An Overview of Natural and Microbial Pesticides.* 2015.

[2] *Biopesticides Market by Active Ingredient (Microbials & Biorationals), by Type (Bioinsecticides, Biofungicides, Bionematicides & Bioherbicides), by Application, by Formulation, by Crop Type & by Geography—Global Trends & Forecast to 2019.*

a single division of the Environmental Protection Agency (EPA). The EPA's Office of Pesticide Programs houses the Biopesticide and Pollution Prevention Division (BPPD), which conducts vigorous reviews of biopesticide products before they can be registered and brought to market. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and Pesticide Registration and Improvement Act (PRIA) ensure that the highest safety standards are met while including specific incentives to encourage the adoption of these beneficial pest control products through tiered data requirements, significantly reduced registration fees and shorter timelines compared to conventional pesticides.

There are some instances where regulation could unnecessarily limit growers' ability to use biopesticides. Three such examples are (1) EPA's proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticides, (2) when science-based risk decisions for exemptions from tolerance are trumped by legal interpretations and policy considerations that do not give priority to lower risk pesticides and (3) the U.S. Department of Agriculture National Organic Program (USDA–NOP) work with EPA to address inert ingredients allowed in pesticides approved for organic production without industry's input on the effect of their decisions.

EPA Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products

In some cases, "catch-all" pesticide policies, which do not distinguish between types of pesticide products, fail to recognize the significant benefits associated with biopesticides and actually create obstacles to product registration. EPA's proposal to Mitigation Exposure to Bees from Acutely Toxic Pesticides is one such example.

In May 2015, EPA proposed mitigation measures for pesticides that are considered acutely toxic to bees. We are concerned that EPA's proposed approach to pollinator mitigation departs from FIFRA's risk-based standard and simply applies a hazard-based bright line number standard which leaves little or no room for varying interpretation. The proposed hazard classification is an indiscriminate trigger that could result in unnecessary restrictions on the use of biopesticides. This approach would deprive conventional growers from using some biochemicals in an integrated pest management program and severely diminish the already limited number of tools organic growers can use to control pests.

Science-Based Risk Assessments

Biopesticides are usually exempt from tolerances because of their negligible risk based on general lack of adverse health effects and low dietary exposure. An exemption from tolerance allows the biopesticide to be broadly labeled and used on any crop without the need for costly residue testing. However, over the past few years EPA has asserted that exemptions from tolerance for biopesticides cannot incorporate limitations from the label such as pre-harvest intervals and application rates to minimize exposure because FDA cannot enforce that label. Enforcement of the pesticide label has always been the responsibility of EPA and its state partners. EPA's new legal interpretation is unnecessarily restrictive. Moreover, it is at odds with EPA's past practice with biopesticides, its current practice with other pesticide product ingredients, and with the manner in which FDA has implemented the food safety provisions of the Federal Food, Drug, and Cosmetic Act for decades.

The label is the law and a fundamental compliance tool for all pesticide products. EPA and FDA can—and have in the past—worked together to ensure enforcement of tolerances and the biopesticide industry sees no reason that a label cannot be used effectively with tolerance exempt biopesticides when necessary. Moreover, EPA's narrow legal interpretation without the context of science drives unnecessary cost and time to a biopesticide registration. Since most biopesticides are targeted to minor crops such as vegetables and fruit, the expected revenues are considerably smaller. Unnecessary regulatory hurdles for low risk pesticides stifle the innovation we all seek to foster.

The biopesticide industry is keenly supportive of stringent safety standards to protect consumers as well as our industry and reputation. The biopesticide industry has raised the issue of "exemptions with label imitations" to EPA and provided our recommendations. We understand that this matter as well as other concerns relating to biopesticide risk assessment are under active discussion at EPA with the goal of developing Office of Pesticide Program-wide guidance so that substances such as biopesticides, antimicrobials and inert ingredients are assessed in a consistent manner. The biopesticide industry looks forward to having the opportunity to comment on this guidance.

Inert Ingredients Allowed by the National Organic Program

Inert ingredients are an integral part of effective biopesticide formulations, which require years of research to provide stability, crop safety and efficacy. Inerts are re-

viewed to stringent safety criteria by the EPA. In order for biopesticides to be used in organic production, the pesticide active ingredient and any inert ingredients in the formulation must be approved by the USDA National Organic Program (NOP). Because biopesticide active ingredients are often fragile, naturally derived ingredients, the inerts in the formulation are a vital part of making the product stable and efficacious. If certain inert ingredients are no longer allowed in organic production, growers could be left without critical tools to produce NOP compliant organic crops.

The National Organic Program regulations, 7 CFR Part 205, allow for the use of synthetic inert ingredients in pesticide formulas which appear on the EPA's List 4—Inerts of Minimal Concern. Because EPA no longer maintains this list, the NOP is also looking at future criteria for the review of inert ingredients. Although under consideration, the NOSB does not yet have a draft process nor has it approved a new inert in 12 years making it difficult for industry to innovate new products with the desirable characteristics of biopesticides.

Unfortunately, the biopesticide industry is not adequately represented in discussions on appropriate new criteria even though we are the only industry that can provide important technical guidance about the current inert ingredients used in organic pesticides and the feasibility of formulation changes. The USDA NOP and its National Organic Standards Board (NOSB), established under the Federal Advisory Committee Act (FACA), works with EPA on policy and procedures to assist the development and adoption of an alternative inert evaluation that adheres to the National Organic Program philosophy. The biopesticide industry would like to be a part of that discussion, since it will have a major effect on our business, and FACA's requirements support our participation in that effort. Last, the industry would like to note that any stress or change to the U.S. system further places the industry and growers at a trade disadvantage in reciprocal organic agreements with other countries.

Conclusion

The rapidly growing biopesticide industry is adding jobs and contributing to the economy while also providing organic and conventional growers, pest control applicators and public health officials with effective pest control tools that are safe for the environment and help reduce pesticide resistance. In order for the industry to continue to provide rural America with these pest control solutions, it is essential that regulations recognize the significant benefits associated with these products.

SUBMITTED LETTER BY JOHN KEELING, EXECUTIVE VICE PRESIDENT AND CHIEF EXECUTIVE OFFICER, NATIONAL POTATO COUNCIL

May 4, 2016

Hon. RODNEY DAVIS
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.;

Hon. SUZAN K. DELBENE,
Ranking Minority Member,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

Re: *Focus on the Farm Economy: Factors Impacting Cost of Production,* April 27

Dear Chairman Davis and Ranking Member DelBene:

The National Potato Council (NPC) applauds the Committee for holding this important hearing. We appreciate the opportunity to provide comments regarding the impact that EPA actions are having on the economic well-being of potato farmers. We ask that these comments be entered as part of the hearing record.

The NPC provides a unified voice for the U.S. potato industry on national legislative, regulatory, environmental and trade issues to promote the increased profitability for growers and greater consumption of potatoes. NPC plays a significant role analyzing policy that directly affects the U.S. grower's ability to compete both domestically and globally.

America's safe and affordable supply of food, including the 44 billion pounds of potatoes grown domestically every year, depends upon many factors regulated by the government, including crop protection products. It concerns NPC that several recent actions by EPA point to the agency's decreasing commitment to transparency

and scientific integrity. In a recent preliminary registration review process for imidacloprid, EPA deviated from nearly 40 years of established process. Potato growers utilize Imidacloprid as an integral part of their Integrated Pest Management Plans for their potato crop and for their rotational crops. This product provides the opportunity to target specific pests and reduce any impacts on beneficial insects. The loss of Imidacloprid and other neonicotinoids would reduce the effectiveness of IPM programs and would increase the use of other broad spectrum crop protection products.

The potential loss of approved pest management products such as imidacloprid and chlorpyrifos would harm growers' ability to farm and could inhibit future investment in alternative pesticides. The case of chlorpyrifos raises serious questions about the agency's use of data to support regulatory decision making. EPA's decision to rely on a single epidemiological study during the recent Scientific Advisory Panel review of chlorpyrifos April 19–21 means the Agency was choosing not to use findings from verified laboratory studies, which have more scientific weight.

While the panel agreed with NPC and others that the science from the epi study was not conclusive, EPA should not have based the review on such scant data.

In addition to ignoring sound science, EPA's policy decisions that are coming down the road would have serious negative effects on rural communities, farm incomes, and U.S. exports. With the U.S. exporting hundreds of millions of potatoes to Japan, Canada, and Mexico, a loss in production could negatively affect future export prospects and endanger the ability of the potato industry to benefit from the tariff reductions contained in the Trans-Pacific Partnership once it is approved.

We strongly agree with and support the testimony provided by CropLife America. In particular, NPC believes a return to established regulatory process and sound science will help U.S. farm economy, keep the costs of production stable and accordingly prevent rising costs for consumers. Most importantly, the NPC has asked EPA to seek the input of the growers who are most impacted by their decisions. Growers and agricultural groups are directly affected by regulatory actions, and to not obtain their feedback is to ignore useful information that can inform a science-based regulatory approach.

Thank you for consideration of these comments.

Sincerely,



JOHN KEELING,
Executive Vice President and CEO,
National Potato Council.

SUBMITTED STATEMENT BY HON. TOM NASSIF, J.D., PRESIDENT AND CHIEF EXECUTIVE OFFICER, WESTERN GROWERS ASSOCIATION

Western Growers is pleased to have the opportunity to provide comments to the Subcommittee on Biotechnology, Horticulture, and Research following its April 27 hearing entitled, *Focus on the Farm Economy: Factors Impacting Cost of Production.* Western Growers is a 90 year old trade organization representing local and regional family farmers growing fresh fruits, nuts and vegetables in Arizona, California and Colorado. Our members and their workers provide ½ the nation's fresh fruits, vegetables and tree nuts, including nearly ½ of America's fresh organic produce. Western Growers members produce in—and directly contribute to the economies of—over 25 states. In total, Western Growers members account for nearly ½ of the annual fresh produce grown in the United States and a majority of the tree nuts. For generations we have provided variety and healthy choices to consumers. Indeed, Western Growers' has long had the slogan: "We grow the best medicine."

Western Growers commends the Subcommittee on Biotechnology, Horticulture, and Research for holding the April 27 hearing focusing on factors, both positive and negative, impacting the cost of production. Our members must meet ever growing regulatory and marketplace demands, several of which are described below.

Innovation

Western Growers would like to bring to the attention of the Subcommittee some of the steps we are taking in response to policy challenges that raise production costs. Western Growers members and the Association itself have invested heavily in propelling forward cutting edge agricultural research. During 2013–14, led by and partially funded by Western Growers members, the University of Arizona opened a research and innovation center in Yuma, Arizona. The Yuma Center of Excellence

for Desert Agriculture provides rapid, direct value-adding responses to issues important for desert crop production systems.

During the spring of last year, Western Growers announced several new partnerships around agricultural research and technology. First, Western Growers and Silicon Valley Global Partners (SVG Partners) entered into a strategic alliance agreement to find, accelerate, advance and invest in innovative solutions intended to solve critical challenges to production agriculture. Through technology we will produce more with less water, labor and inputs. In December 2015, Western Growers launched the Center for Innovation and Technology in Salinas, California as an agricultural technology incubator that brings innovative entrepreneurs together with farmers and other agricultural companies to collaborate on bringing emerging technologies to market.

As a way to propel this activity, Western Growers and its members are involved as sponsors of Forbes' Reinventing America: The AgTech Summit in Salinas July 13–14, 2016. This summit will highlight emerging agricultural technologies from around the world. In addition, other mutual efforts include participation and collaboration in the SVG Thrive Accelerator program and the SVG Technology Growth Fund which are designed to help identify and then provide joint venture operating capital to agriculture technology companies.

We cannot however carry the burden of innovation on our own. Clearly the Federal Government has a key role in stimulating innovation. While more resources should be allocated to these types of research priorities across the Federal budget within *all* relevant Departments, the Federal Government also has, at minimum, a role in helping to facilitate better and wiser use of funds that are already available both from private- and public-sector sources. The produce industry is stepping up to address challenge in the long-term through technology and innovation—the Federal Government must do the same.

Crop Protection

Western Growers is concerned about recent activity at EPA impacting the use of crop protection tools. Our members deal with a host of pest threats. Western Growers urges the Subcommittee to work to protect the tools our members rely on. Western Growers has historically engaged with state and Federal agencies to provide further protections to the workers, bystanders, public and the environment while at the same time preserving access to important tools. We strongly contend that decisions that reduce access to and/or flexibility to use key compounds must be predicated on clear and credible science and full evaluation of the risks and benefits of regulation.

Crop protection concerns are particularly acute for the citrus industry as it fights to ward [off] Huanglongbing (HLB) or citrus greening. Last spring, the interagency Pollinator Health Task Force put out a strategy to better understand pollinator losses and improve pollinator health. Pursuant to this White House initiative, EPA is studying the pollinator risk of four neonicotinoid pesticides, which have been targeted as a potential cause of bee decline. In January, EPA released a draft pollinator risk assessment of one of the four compounds, imidacloprid, and found that use of these products on only citrus and cotton to surpass a threshold for harm to bees. In general, that substantive analysis was done well. Unfortunately, we know that EPA is under pressure to respond to public concern about the impact of pesticides on pollinators—concerns which may not be based in science. Perhaps as a result of these activist concerns, EPA's public statement gave the impression of widespread risk, even while the study itself affirmed the safety of imidacloprid in almost all cases. We urge the Committee to compare EPA's inflammatory press release with far more scientifically based press releases from companion study authors California EPA and Canadian Public Health (see *Attachment[s] 1,* [*2,* and *3*). While EPA has not yet proposed any regulatory action pursuant to the report, this misleading narrative gives fodder to state and local restrictions. Western Growers urges a balanced, science based approach as is outlined in the White House strategy. As Members of Congress you can urge EPA to remain scientifically focused and not make these types of inflammatory statements. In addition, you can help ensure that, going forward, inflammatory rhetoric does not color future regulation.

In addition, EPA has proposed a blanket revocation of all tolerances for chlorpyrifos. This is an imprudent and overly broad proposal that is predicated on EPA's lack of information, poor understanding of the agricultural settings in which this product is used and generic models that do not fit western drinking water systems. Western Growers has expressed concerns regarding the over reliance on epidemiologic studies and specifically the *Columbia* study. We remain concerned that the authors have not provided the raw data for review and that without this data *neither* EPA nor the affected public can review the "validity, completeness and reliability" of information being used to make these policy decisions. While epidemio-

logic studies have historically been used to supplement EPA's analysis of substances it appears to us that this Administration seeks to rely upon these studies as the main evaluation tool for crop protection substances. This change should be examined by Congress to ensure there is merit to such a shift, just as we in the regulated community or EPA itself must be able to examine underlying data of these epidemiological studies themselves.

Beyond the impacts of EPA's actions on any particular compound, Western Growers emphasizes the importance of a transparent, predictable science based process that fully engages the community of users while at the same time encouraging investment in newer, safe and better performing pesticides to meet crop protection challenges. It will be difficult to meet the challenges of growing food for a growing world without a fully capable toolbox.

Biotech

Western Growers asks the Committee to engage on USDA's Notice of Intent to update Section 340 of the Plant Protection Act. Currently the Executive Branch is taking comments and debating whether the high level of regulatory oversight used for transgenic biotech should apply to other uses of biotechnology. For example, using gene editing professors at Penn State recently announced that they were able to "turn off" the gene in mushrooms that cause them to brown thus extending shelf-life. These mushroom products did not go through any additional regulatory oversight than would mushrooms that went through normal breeding techniques. Traditional breeding techniques and new breeding techniques such as gene editing can achieve identical results. The rules for biotechnology should not deviate from rules currently in place for normal plant breeding. If something can be accomplished more quickly, accurately and cheaply through gene technology rather than traditional breeding techniques then the Federal Government should *not* make any changes to regulatory systems.

H–2A and Labor

Fruit, vegetable and tree nut producers heavily rely upon a large group of skilled farm laborers in order to harvest and produce our nation's crops. Labor shortages have grown increasingly acute in our industry and it is critical that Congress step up to address this issue. While immigration reform and a new guest worker program will be the best long-term solution to our labor issues, we understand as an industry that we have to look at current solutions as well. In that regard, the industry will likely be forced to rely on the current H–2A program for meeting the labor demands we face.

Indeed, labor shortages and pressures have grown to such a level that growers across California, Arizona, Colorado and other western states are turning to the H–2A program in greater numbers, including in areas that have had little exposure to the program in the past. This has resulted in a significant increase in H–2A applications across all western states. Unfortunately, as our growers increasingly use the program we are experiencing its downsides with greater frequency. During the first quarter of 2016 processing delays for H–2A applications became particularly acute. Western Growers urges the Subcommittee and all Members of Congress to engage on this issue. The current H–2A system must be improved while Congress works through a more complete replacement. Specifically, Congress should help ensure that the three Federal agencies involved in running the program are doing so with a minimum of red tape and with maximum efficiency. In addition, over the last 5 years we have seen a huge increase in H–2A applications yet funding to modernize computers and hire staff have shrunk, Congress needs to properly resource these agencies as use increases.

Food Safety Modernization Act

Although it is not widely discussed, the Food and Drug [Administration] (FDA) is to be commended for their roll out of the new regulations authorized under the Food Safety Modernization Act (FSMA). In fact, their process of consultation with affected parties, development of a draft regulation based on broad consultation, along with the formal comment process which they extended in order to more fully understand the affected community, and the resulting care they took to address all commentary prior to the publication of "Final" rules should serve as a model for other agencies.

The FDA's process has resulted in a set of regulations that while not universally embraced are credible and will result in safer food. While Western Growers believes there is still ambiguity in a few areas—for instance which operations are covered under which rule and the need for FDA to develop some process for recognizing food safety programs authorized and administered under state-Federal marketing authorities—we are confident that FDA will clarify these questions in guidance and

FAQs that are under development. In addition, as several compliance dates are approaching, it is imperative that the agency has the resources to ensure a successful implementation of FSMA rules.

Western Growers is strongly committed to food safety. Our industry is known for being proactive and has already started to develop resources and conduct outreach to assist impacted parties to work towards implementation of FSMA rules and food safety. No one can guarantee safety every bite, every time but we should guarantee that every operation is implementing robust food safety measures and the FSMA regulations will help ensure that is taking place. Finally, one issue that we do want to raise for Congress, is that as operators certify—to FDA's satisfaction—that operations are in compliance with FSMA we would ask that Congress work with FDA and producers to find ways to reduce criminal liability for unintentional food safety violations.

Drought

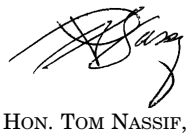
Western agriculture is severely impacted by drought conditions—indeed so much so that some of our growers have fallowed production, destroyed orchards, laid off employees or worse. In response to this crisis producers across the West are taking steps to use both less water and use what water we have more efficiently. Members of Congress should never forget that over a hundred years ago it was the efforts of the Federal Government that led to the development of water resources across the West which in turn lead to an explosion in the population of all western states. Western states however face a crisis point and while producers are adapting as best they can, the Federal Government can and must do more. Congress has a responsibility to comprehensively tackle this issue and do so immediately. In the long-term Congress needs to help reduce regulations that impede construction of new conveyance and storage systems—whether that storage is above ground or below—and we need to have both direct Federal assistance as well as create new financing tools to help local communities to pay for construction. In the short-term, we also need to ensure that water systems are operated with the proper balance between environmental concerns and concerns for fellow citizens.

Conclusion

Western Growers commends the Subcommittee's leadership on examining the factors impacting cost of production. Western Growers' members understand that we will need to grow more food while facing diminishing natural and human resources. The fresh produce industry is innovating to meet these challenges, but the Federal Government has a critical role to play.

We look forward to working with the Committee on this issue.

Sincerely,



HON. TOM NASSIF, J.D.

ATTACHMENT 1

Re-evaluation Note
REV2016–04

Joint PMRA/USEPA Re-evaluation Update for the Pollinator Risk Assessment of the Neonicotinoid Insecticides

(*publié aussi en français*) 6 January 2016
http://www.hc-sc.gc.ca/cps-spc/alt_formats/pdf/pubs/pest/_decisions/rev2016-04/rev2016-04-eng.pdf

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Introduction

In May 2015, Health Canada's Pest Management Regulatory Agency (PMRA) and the United States Environmental Protection Agency's Office of Pesticide Programs (USEPA OPP) (Agencies) announced, as an initiative of the Regulatory Cooperation Council, that they would be collaborating on a bilateral pesticide re-evaluation process for the pollinator assessment of three neonicotinoid pesticides (clothianidin, imidacloprid, and thiamethoxam), based on the jointly developed harmonized Pollinator Risk Assessment Framework.[1] The Agencies have been working closely with the California Department of Pesticide Regulation (CDPR). In addition, USEPA OPP and CDPR are using the same framework to conduct a co-operative re-evaluation of dinotefuran, a neonicotinoid pesticide which is registered in the United States but not in Canada.

These pesticides are nitroguanidine neonicotinoids, a group of insecticides that have been approved for use in the United States and Canada for a number of years. In recent years, there have been reports in scientific literature suggesting that exposure to neonicotinoids may impact pollinator health; however, these studies have generally been conducted under laboratory situations, or in the field with exposure to doses that are higher than would normally be encountered in the environment.

In support of science-based risk management decisions, the Agencies are relying on the harmonized Pollinator Risk Assessment Framework methodology to conduct the pollinator risk assessment for the neonicotinoids. The Framework relies on a tiered approach which begins with conservative exposure assumptions and laboratory toxicity data conducted with individual bees, then progresses to more realistic exposure measurements in nectar and pollen, as well as colony level bee studies conducted in the field.

Data required under the Framework has been divided into three tiers. Tier 1 consists of laboratory toxicity studies with both adult and larval honey bees exposed for acute and chronic durations. Tier 2 effects studies include feeding and tunnel studies in which honey bee hives are exposed to neonicotinoids in a more realistic setting than the laboratory. Tier 2 residue studies measure exposure based on pollen and nectar residue data from neonicotinoid products applied to crops using different application methods. Tier 3 studies are generally large-scale field studies that most closely resemble an in-field exposure scenario for honey bees.

Neonicotinoid registrants have submitted, or are in the process of conducting, a number of studies to support their chemical-specific pollinator risk assessments. The Agencies will use these studies as well as information from published literature in the tiered risk assessment approach. All relevant scientific information will be considered alongside incident data in a weight-of-evidence approach, which considers if the information is robust and consistent, for the risk characterization.

This document provides a status update on the pollinator risk assessments of clothianidin, imidacloprid, thiamethoxam, and dinotefuran.

Status of Registrant Data Submission and Review by the Agencies

Over 350 pollinator studies have been submitted by the neonicotinoid registrants and are currently undergoing a cooperative review by all three agencies. To date, over 300 of the studies received have been reviewed by at least one agency. While progress is being made with the study reviews, there are additional studies that are currently being conducted which are required for the completion of the re-evaluations.

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[1] *http://www2.epa.gov/sites/production/files/2014-06/documents/pollinator_risk_assessment_guidance_06_19_14.pdf.*

Status of Open Literature Review

The Agencies will incorporate information from the body of peer-reviewed scientific literature into the pollinator risk assessments. Studies may include information about neonicotinoid residues in pollen/nectar as well as lethal and sublethal effects (foraging behavior, *etc.*) to different life stages (larvae, adults) in honey bee hives, and overall colony health. Studies on different types of bees (for example bumble bees and solitary bees) will also be included.

The Agencies have conducted a number of literature searches which have identified hundreds of peer reviewed scientific studies. After a screen of the results, the Agencies prioritized about 250 open literature studies for further evaluation based on whether they assessed the residues or effects described above. Studies which are considered to be informative will be incorporated into the pollinator risk assessment. The Agencies continue to monitor current research findings and will incorporate more recent information as it becomes available.

Next Steps

Since the Agencies began the imidacloprid review about a year before the other neonicotinoids, imidacloprid is further along in the review process and initial findings have been presented in preliminary pollinator risk assessment documents:

- Health Canada's PMRA—Re-evaluation of Imidacloprid—Preliminary Pollinator Assessment.
- USEPA—Preliminary Pollinator Assessment to Support the Registration Review of Imidacloprid.

See table below for anticipated milestones for the pollinator assessments. The publication of each document will be followed by a public consultation period.

Neonicotinoid	Assessment	PMRA/USEPA/CDPR [1]
Imidacloprid	Preliminary	Jan. 2016
	Final	Dec. 2016
Clothianidin	Preliminary	Dec. 2016
	Final	Dec. 2017
Thiamethoxam	Preliminary	Dec. 2016
	Final	Dec. 2017
Dinotefuran	Preliminary	Dec. 2016 [2]
	Final	Dec. 2017 [2]

[1] CDPR plans to issue its determination with respect to its reevaluation of neonicotinoids (clothianidin, dinotefuran, imidacloprid, and thiamethoxam) on or before 1 July 2018.

[2] Not Applicable to PMRA.

Additional Information

The issue of pollinator health is complex, and is likely influenced by a number of factors including pests, pathogens and viruses, nutrition, pesticide exposure, bee management practices, and lack of genetic diversity. The PMRA and USEPA OPP, as the Federal regulators of pesticides in Canada and the United States, respectively, are working together to protect bees and other pollinators from pesticide exposure.

Information regarding PMRA's and USEPA OPP's actions to protect pollinators and additional resources can be found at:

Health Canada's PMRA—*www.healthcanada.gc.ca/pollinators*
USEPA—*http://www2.epa.gov/pollinator-protection*

[ATTACHMENT 2]

Neonicotinoid Reevaluation Progress and Protecting Bee Health

http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/neonicotinoids.htm

The California Department of Pesticide Regulation (DPR) is at the national forefront of the effort to protect bee health, taking proactive steps and a scientific approach to address concerns about the impact of pesticides on bees and pollinators health.



Apiary training sponsored by DPR, Parlier, CA June 2014.

U.S. EPA Releases Preliminary Pollinator Risk Assessment for Neonicotinoid Insecticide Imidacloprid

As part of DPR, U.S. Environmental Protection Agency's (U.S. EPA's), and Pest Management Regulatory Agency (PMRA) Health Canada's ongoing collaborative efforts to assure the protection of pollinators from neonicotinoid exposure, two imidacloprid preliminary pollinator risk assessment publications are available for public review. *U.S. EPA's assessment* (*http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2008-0844-0140*), which was prepared in collaboration with DPR, indicates potential risk to pollinators at the hive level (as opposed to risks to individual bees) from use of imidacloprid on agricultural crops that are attractive to pollinators. PMRA Health Canada's imidacloprid *pollinator-only assessment* (*http://www.hc-sc.gc.ca/cps-spc/pest/part/consultations/_rev2016-05/index-eng.php*) reaches the same preliminary conclusions as U.S. EPA's. A *joint status report* (*http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OPP-2008-0844-0141*) from all three agencies on the progress of neonicotinoid pollinator assessments for the neonicotinoids—clothianidin, thiamethoxam, and dinotefuran—is also available.

During U.S. EPA's comment period and PMRA Health Canada's consultation period, the agencies will work with the manufacturers and other stakeholders to discuss possible early actions to reduce risks to pollinators from imidacloprid containing products. U.S. EPA's 60 day public comment period begins upon publication in the *Federal Register*. After the comment period ends, U.S. EPA may revise the pollinator assessment based on comments received and, if necessary, take action to reduce risks from imidacloprid containing products. Other supporting documents associated with the imidacloprid registration review are available in U.S. EPA's Docket *EPA–HQ–OPP–2008–0844* (*http://www.regulations.gov/#!docketDetail;D=EPA-HQ-OPP-2008-0844*) on *regulations.gov* Web site. There is an option to sign up for daily, weekly, or monthly e-mail alerts when U.S. EPA modifies the docket.

This imidacloprid assessment is the first of four preliminary pollinator risk assessments for neonicotinoid containing insecticides. Preliminary pollinator-only risk assessments for the other compounds—clothianidin, thiamethoxam, and dinotefuran—are anticipated to be released for public comment in December 2016. A comprehensive risk assessment for imidacloprid, including human health and ecological risk, is anticipated to be released in December 2016. A comprehensive risk assessment for clothianidin, thiamethoxam, and dinotefuran are anticipated to be released in December 2017.

Reevaluation

In 2009, DPR initiated the reevaluation of certain pesticide products containing four neonicotinoid chemicals: imidacloprid, thiamethoxam, clothianidin, and dinotefuran. Reevaluation is the legal mechanism that allows DPR to require the companies who have registered products for use in California to conduct tests and submit data for analysis by DPR scientists. The purpose of the reevaluation process is to provide DPR with a better understanding of the effects of neonicotinoids use on pollinators and provide a credible scientific basis for potential regulatory action to eliminate any significant impact resulting from their use on bee health.

DPR partnered with scientists at the U.S. EPA's Office of Pesticide Programs and PMRA Health Canada to ensure that the required studies, and methods and procedures used to conduct studies on the effects of neonicotinoids provide useful and reliable information across the board to all three agencies for use in guiding their regulatory actions. A unified approach across jurisdictions is critical as bees and beekeepers are not limited by state borders, nor are their importance to agriculture and society.

A considerable volume of scientific research has been required to be conducted in specified ways as designed by DPR or in collaboration with its partners to elicit the most important and useful data for regulatory purposes. Much of this data has been submitted and evaluated. However, there is more work to be done in order to assure that any actions taken actually address the perceived decline in bee health.

Each of the four neonicotinoid pesticides have different application rates for specific crops, requiring a substantial number of studies to understand the impact of the different pesticides using the application methods used for each crop group. Studies were required for each of the four neonicotinoids as used in the most relevant representative situations to determine the level of residue that remains in the pollen, nectar, and leaves of plants after multiple applications—residue if found in high enough levels, could result in lethal exposure to adult pollinators. Tests were then required to determine what levels of neonicotinoid pesticide would have lethal effects on pollinator larvæ. Finally, U.S. EPA required higher tiered honey bees studies with input from both DPR and PMRA Health Canada. Tier II studies, or

honey bee feeding studies, examine the effects on colonies following exposures to known concentrations of a pesticide in a food source fed to a bee colony. Tier III studies, or full field studies, is a field-level test that looks at long-term effects under environmentally realistic exposure conditions. Each set of requirements pushed the research one step further after inconclusive or preliminary results and analysis showed no likely significant hazards from neonicotinoid use under existing labels. DPR anticipates receipt of the final results of these studies by the end of 2016.

Other Information and Proactive Actions to Protect Bee Health

- ➢ DPR protects honey bees from the effects of pesticides by working with County Agricultural Commissioners, agricultural producers, beekeepers and other agencies to develop and implement regulatory measures as well as voluntary measures to *Protect Bee Health* (*http://www.cdpr.ca.gov/docs/enforce/pollinators/*).
- ➢ DPR continues to work closely with the U.S. EPA and PMRA Health Canada. To protect bees and other pollinators DPR collaborated on making product labels (instructions) much easier to understand. The labels clearly explain that the uses of some neonicotinoids pesticide products are prohibited where bees are present. The updated labels have a bee advisory box and icon with information on routes of exposure and spray drift precautions. DPR made it a priority to review the amended labels in order to get them out into the California marketplace. All affected California products contain the pollinator protection label language.
- ➢ *Reevaluation Timeline* (*http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/neonic_timeline.htm*)
- ➢ *Reevaluation Notice* (*http://www.cdpr.ca.gov/docs/registration/canot/2009/ca2009-02.pdf*), PDF (59 kb)
  - ➤ *Example Letters to Registrants* (*http://www.cdpr.ca.gov/docs/registration/reevaluation/example_letter.pdf*), PDF (233 kb) (September 15, 2009)
- ➢ *List of Products Included in Reevaluation* (*http://www.cdpr.ca.gov/docs/registration/reevaluation/chemicals/niclistofproducts.pdf*), PDF (110 kb)

For content questions, contact:

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[ATTACHMENT 3]

EPA Releases the First of Four Preliminary Risk Assessments for Insecticides Potentially Harmful to Bees

https://www.epa.gov/pesticides/epa-releases-first-four-preliminary-risk-assessments-insecticides-potentially-harmful

January 6, 2016

The U.S. Environmental Protection Agency (EPA) has announced a preliminary pollinator risk assessment for the neonicotinoid insecticide, imidacloprid, which shows a threat to some pollinators. EPA's assessment, prepared in collaboration with California's Department of Pesticide Regulation, indicates that imidacloprid potentially poses risk to hives when the pesticide comes in contact with certain crops that attract pollinators.

"Delivering on the President's National Pollinator Strategy means EPA is committed not only to protecting bees and reversing bee loss, but for the first time assessing the health of the colony for the neonicotinoid pesticides," said Jim Jones Assistant Administrator of the Office of Chemical Safety and Pollution Prevention. "Using science as our guide, this preliminary assessment reflects our collaboration with the State of California and Canada to assess the results of the most recent testing required by EPA."

The preliminary risk assessment identified a residue level for imidacloprid of 25 ppb, which sets a threshold above which effects on pollinator hives are likely to be seen, and at that level and below which effects are unlikely. These effects include decreases in pollinators as well as less honey produced.

For example, data show that citrus and cotton may have residues of the pesticide in pollen and nectar above the threshold level. Other crops such as corn and leafy vegetables either do not produce nectar or have residues below the threshold. Addi-

tional data is being generated on these and other crops to help EPA evaluate whether imidacloprid poses a risk to hives.

The imidacloprid assessment is the first of four preliminary pollinator risk assessments for the neonicotinoid insecticides. Preliminary pollinator risk assessments for three other neonicotinoids, clothianidin, thiamethoxam, and dinotefuran, are scheduled to be released for public comment in December 2016.

A preliminary risk assessment of all ecological effects for imidacloprid, including a revised pollinator assessment and impacts on other species such as aquatic and terrestrial animals and plants will also be released in December 2016.

In addition to working with California, EPA coordinated efforts with Canada's Pest Management Regulatory Agency. Canada's Imidacloprid pollinator-only assessment—also released today—reaches the same preliminary conclusions as EPA's report.

The 60 day public comment period will begin upon publication in the *Federal Register*. After the comment period ends, EPA may revise the pollinator assessment based on comments received and, if necessary, take action to reduce risks from the insecticide.

In 2015, EPA proposed to prohibit the use of pesticides that are toxic to bees, including the neonicotinoids, when crops are in bloom and bees are under contract for pollination services. The Agency temporarily halted the approval of new outdoor neonicotinoid pesticide uses until new bee data is submitted and pollinator risk assessments are complete.

EPA encourages stakeholders and interested members of the public to visit the imidacloprid docket and sign up for e-mail alerts to be automatically notified when the agency opens the public comment period for the pollinator-only risk assessment. The risk assessment and other supporting documents are available in the docket at: *https://www.regulations.gov/#!docketBrowser;rpp=25;so=DESC;sb=postedDate;po=0;dct=SR;D=EPA-HQ-OPP-2008-0844*.

EPA is also planning to hold a webinar on the imidacloprid assessment in early February. The times and details will be posted at: *How We Assess Risk to Pollinators* (*https://www.epa.gov/pollinator-protection/how-we-assess-risks-pollinators*).

Contact Us (*https://www.epa.gov/pesticides/forms/contact-us-about-pesticides*) to ask a question, provide feedback, or report a problem.

Last updated on April 6, 2016.

SUBMITTED LETTER BY CINDY BAKER SMITH, SENIOR VICE PRESIDENT AND DIRECTOR OF GLOBAL REGULATORY AND PRODUCT DEVELOPMENT, AMVAC CHEMICAL CORPORATION

April 26, 2016

House Committee on Agriculture.

Honorable Members of the House Committee on Agriculture:

AMVAC would like to submit these comments to the record for your upcoming "Hearing on Federal Actions and Policies Affecting Costs of Production and Impacting the Rural Economy", April 27, 2016. AMVAC fully supports the comments made by Jay Vroom, President of CropLife America.

Additionally, as a basic manufacturer of crop protection products based in California but with additional plants in Alabama, Missouri and Idaho, we are quite concerned by the recent changes in the way that EPA is making their decisions. The products we develop, register and manufacture here in the U.S. are critical in agricultural crops to protect corn, cotton, potatoes and other fruits and vegetables from pests (insects, weeds and disease) that would otherwise destroy their crops. Congress passed FIFRA and FQPA to establish appropriate standards to ensure the products registered by EPA can be used without harm to people or the environment. There is language in the statutes that properly requires that EPA decisions be made use reliable and available data. Agriculture and the consumers it feeds deserve science based and transparent decisions made by the government that regulates their food supply. EPA's proposal to revoke all the tolerances for critical products based on use of models that don't reflect actual exposure (drinking water models) and epidemiological studies for which the raw data has not been received or reviewed and also for which there are serious questions about whether any exposure to the products actually results in alleged effects does not meet any of the standards. The data used are not reliable and available, the process is not transparent and sound scientific principles are not being followed.

AMVAC encourages the House Committee on Agriculture to require EPA return to the principles laid out by then Vice President Al Gore after the passage of FQPA to have a transparent regulatory process that uses the best available science and data.

Sincerely,



CINDY BAKER SMITH,
Senior VP and Director of Global Regulatory and Product Development.

SUBMITTED LETTER BY CHRISTOPHER VALADEZ, DIRECTOR, ENVIRONMENTAL, AND REGULATORY AFFAIRS, CALIFORNIA FRESH FRUIT ASSOCIATION

May 10, 2016

Hon. RODNEY DAVIS,
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

Re: April 27th Subcommittee Hearing, Focus on the Farm Economy: Factors Impacting the Cost of Production

Dear Chairman Davis,

The California Fresh Fruit Association (CFFA) is a voluntary, nonprofit agricultural trade association representing California's permanent, fresh fruit (except citrus and avocados) industry on legislative and regulatory issues at state, Federal and international levels. Our membership is comprised of growers, shippers, and marketers of the approximate $3 billion fresh grape, blueberry and deciduous tree fruit industry. On their behalf I write to provide input on regulatory decision-making affecting the continued viability of our farming sector.

As received through testimony before the Subcommittee on Biotechnology, Horticulture and Research, the viability of production agriculture is dependent upon the availability of new crop protection technologies to help growers meet current and future food demands in a manner that is both economically and environmentally sustainable. Unfortunately, activism on the part of a vocal minority has appeared to capture the attention of those responsible for making decisions on the use of critically important crop protection tools which has led to outcomes jeopardizing their continued use via a shift in decision making away from science and risk-based determinations to an overreliance upon precaution, particularly in cases where available data would suggest otherwise.

To that point, actions undertaken by the U.S. Environmental Protection Agency (EPA) have caused concern due to the appearance of politically driven outcomes that fail to adequately factor for the economic benefits derived from the continued use of important crop protection materials. For instance, the U.S. Department of Agriculture has voiced criticism of the EPA's proposed pollinator rule having asked the Agency to consider the economic impact of the proposal onto the specialty crop sector and onto rural economies.[1] Following a 5 year pollinator risk assessment of imidacloprid, the EPA issued an imbalanced press release focusing on risks to pollinators without emphasizing the overall finding in the report which found minimal risk to bees. In another example, EPA sought to revoke use of the insecticide flubendiamide based on theoretical modeling claiming a potential risk to certain invertebrates found in farm ponds despite evidence supporting its continued use which includes real-world monitoring data showing no indication of harm.

Adopting risk-adverse policies over science-based risk assessment results in the reduction of critically important crop protection tools, which in turn stands to negatively impact both productivity and the continued viability of our farm sector. Our growers expect EPA to employ a rigorous science and risk based evaluation of crop protection tools that balances the benefits derived from their use with credible risks. By continuing to explore EPA decision-making processes and asking for an accounting of rationale used to support negatively impactful decisions, when data and benefits support continuing the use of important crop protection materials, your efforts will help to ensure we have a regulatory agency that understands and supports the

[1] August 25, 2015 Comments to Mr. Jack Housenger, Director, Office of Pesticide Programs on the EPA proposed rule: Mitigation of Exposure to Bees from Acutely Toxic Pesticide Products.

needs of the farming community. To discuss further please feel free to contact Christopher Valadez (**Redacted**).

Regards,



CHRISTOPHER VALADEZ,
Director, Environmental, and Regulatory Affairs,
California Fresh Fruit Association.

SUBMITTED LETTER BY PAUL WENGER, PRESIDENT, CALIFORNIA FARM BUREAU FEDERATION

May 11, 2016

Hon. RODNEY DAVIS,
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.;

Hon. SUZAN K. DELBENE,
Ranking Minority Member,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

Dear Chairman Davis, Ranking Member DelBene, and Subcommittee Members:

The California Farm Bureau Federation (CFBF) is California's largest farm organization, comprised of 53 county Farm Bureaus, representing over 53,000 farm families and individual members throughout the state's 56 counties. CFBF strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

CFBF appreciates the Subcommittee and Committee as a whole for the opportunity to provide input on [*Focus on*] *the Farm Economy: Factors Impacting the Cost of Production.* Modern agriculture's success depends on the availability of new technologies to help farmers grow more food, more sustainably, than ever before. Production costs are a key component of this success and a major factor affecting a farm operation's long-term viability.

Although there are many factors affecting the cost of farming operations, we would like to focus our comments on those associated with today's environmental regulations. Unfortunately, the impact of higher costs associated with pesticide regulations does not appear to be a consideration when it comes to implementing today's Federal regulatory policies. If the U.S. Environmental Protection Agency (EPA) fails to adequately calculate and/or consider the economic costs of these impacts and beneficial uses in its regulatory proposals, the consequences could be devastating.

By almost any measure, American agriculture is a success story. Farmers and ranchers are producing more food on less land and using more sustainable practices than ever before. In addition to the hard work and dedication of today's growers, a key reason for this success can be explained in one word: innovation. Agricultural research investment from both land-grant universities and science-based industries has enabled our productivity to rise to unprecedented levels.

However, modern agriculture's success is not appreciated by everyone. There are some who wish to drag our industry backwards, in a futile pursuit of a pristine image of farming that never existed. These groups represent only a small segment of our society, but they are vocal, influential, and frequently challenge the new technologies that come to agriculture. Unfortunately, these activists appear to have undue influence on EPA, especially when it comes to regulatory policies. All too often, this results in senseless registration delays and restrictions which threaten the ability of farmers to protect their crops.

While CFBF supports the need for regulatory oversight, we are concerned that the EPA is shifting its focus from science-based risk assessment to a more troubling precautionary approach. Regulatory oversight can only be effective if it is based on sound scientific principles. Recent actions taken by the EPA have diverged from these principles and threaten the future success of modern agriculture. The following are indisputable examples of this dangerous trend:

- Following new guidance regarding pollinator warnings on labels, the EPA proposed changing the basis of its long-standing policy of scientific risk assessment

in favor of a "hazard-based" approach. This completely ignores the importance of exposure when determining risk, breaking a fundamental tenet of toxicology.

- As part of its proposed rule regarding pollinators, the EPA issued letters to registrants requesting them to withdraw all pending applications for new label uses. The EPA is demanding that applications be resubmitted only after developing additional, costly and time-consuming data not originally required—but failed to provide sufficient justification to this change in policy.
- The EPA conducted a benefits analysis of insecticide-treated seeds on soybeans without consulting farmers or other agricultural experts, including USDA economists, resulting in the publication of a misleading report that significantly undervalued the benefits these products possess.
- After completing a 5 year review of an insecticide's potential impact on honey bee health, the EPA misled the public by issuing a press release that basically ignored the low risk potential found in their review. Instead of taking the opportunity to reassure the public, the EPA needlessly took an alarmist approach that further diminished our ability to educate using science.
- The EPA recently moved to cancel the registration of a new insecticide, important to grower integrated pest management (IPM) programs, without undergoing a full review process. The revocation is based on theoretical modeling which claims certain organisms living at the bottom of agricultural ponds are at risk, despite 6 years of real-world monitoring showing no evidence of harm.
- In a move that defies belief, the EPA asked the 9th Circuit Court to revoke an existing herbicide label the agency had previously approved—essentially suing itself to nullify procedural protections to the registrant that are guaranteed by Federal law.

The common thread in these examples is an agency that appears increasingly focused on trivial risks and less interested in the important benefits these technologies bring to society. Whether this is due to external pressures from activist groups that are vehemently opposed to modern agriculture, or a lack of understanding about what it takes to grow a crop, the trend is disturbing and dangerous.

The global economy demands that we be best-in-class in managing our production. Investment costs in the seed and chemical technologies we use today are expensive, but they have helped us optimize our operational capacity to stay one step ahead of our global competitors. Moreover, these technologies enable us to avoid costs associated with older practices that no longer meet the high standards required by today's best management practices.

Farmers and ranchers depend upon the new technologies that come from investment in innovation. Yes, we want the EPA to ensure these technologies are safe for humans and the environment, but we also want the agency to be responsive to the legitimate concerns of agriculture when developing regulatory policy. Modern agriculture has been good for farmers and ranchers, the general public, the environment, and our nation's economy. Because innovation is the life-blood of not just our industry but the nation as a whole, we believe the EPA should support safe new technologies instead of finding undue reasons to deny them.

Thank you again for the opportunity to provide input on the farm economy.

Sincerely,



PAUL WENGER,
President.

SUBMITTED STATEMENT BY RICHARD WILKINS, PRESIDENT, AMERICAN SOYBEAN ASSOCIATION

Thank you to Chairman Davis and Ranking Member DelBene for holding today's hearing. The American Soybean Association (ASA) appreciates the opportunity to provide a statement to the Subcommittee. ASA represents all U.S. soybean farmers on domestic and international issues of importance to the soybean industry. ASA's advocacy efforts are made possible through the voluntary membership in ASA by over 22,500 farmers in 31 states where soybeans are grown.

Soybean farmers, like producers of all crops, are especially focused this spring on the topic of today's hearing: the factors that contribute positively and negatively to their cost of production. With commodity prices down by an average of 40 percent since 2013 and land rents remaining relatively high, farmers are looking to productivity gains through agricultural research and technological innovation as ways to

reduce per-unit costs. And we know that, if the U.S. is going to continue to provide food, feed, fiber and fuel to a world population expected to reach 9.7 billion by 2050, it must be done on the same or less land and in a sustainable way. Agricultural research and technology have been and will continue to provide the tools for achieving this goal.

ASA would like to associate ourselves with testimony provided by several of your witnesses. In particular, we support the statement offered by Chuck Conner representing the National Council of Farmer Cooperatives regarding the vital importance of agricultural research. ASA has long supported full funding for USDA's flagship competitive research program, the Agriculture and Food Research Initiative (AFRI) and that remains our top agricultural appropriations priority for FY 2017. At the same time, we strongly support the research programs carried out by a national network of land-grant universities. The fruits of this research positively and directly affect the cost of production for America's soybean farmers, and we want to make sure the Subcommittee understands how deeply soybean farmers value agricultural research and the land-grant system.

ASA also shares the concern of many of the witnesses about farmers' continued access to important crop protection products, and the sense that the Environmental Protection Agency is consciously delaying decisions to bring and keep products on the market, as well as declining to defend its own science-based process and decisions.

We expressed many of these concerns in a January 2016 letter to the House Agriculture Committee. We again highlight these recent decisions:

- The 9th Circuit invalidated the registration of sulfoxaflor; EPA has indicated that it will not defend its own decision to register sulfoxaflor.
- EPA abruptly withdrew its approval of the Enlist/Duo herbicide on corn and soybeans.
- EPA proposed to revoke all tolerances for chlorpyrifos based on questionable epidemiology studies that are not publicly available.
- EPA moved to cancel registration of flubendiamide without notice and comment or weighing grower interests.
- EPA published a paper which concluded that neonicotinoid seed treatments "provide negligible overall benefits to soybean production in most situations" and that "in most cases there is no difference in soybean yield when soybean seed was treated with neonicotinoids *versus* not receiving any insect control treatment." USDA was not consulted and issued a strong response that contradicted EPA's conclusions. ASA also objected to the paper, noting that actual experience from soybean farmers proved differently.

The United States has the world's most rigorous pesticide registration and review processes. EPA has historically relied on a predictable, science-based process for crop protection products—one that the public and farmers have trusted to keep air, soil and water safe. We urge the Subcommittee to direct the EPA to return to this risk-based system so that farmers and consumers again trust in EPA decision-making.

Again, thank you for holding this hearing and for the opportunity to provide testimony.

SUBMITTED STATEMENT BY AMERICANHORT

Dear Chairman Davis, Ranking Member DelBene, Subcommittee Members:

Thank you for this opportunity to submit official testimony for the hearing record on this important topic. AmericanHort is the national trade organization representing the horticulture industry. AmericanHort supports nearly 16,000 member and affiliated businesses that include plant breeders, greenhouse and nursery growers, garden retailers, distributors, interior and exterior landscape professionals, florists, students, educators, researchers, manufacturers, and all of those who are part of the industry market chain.

While the Great Recession had a very negative impact on much of our industry, a slow but steady rebound is underway. The production value of nursery and greenhouse crops reached $16.7 billion in 2013. The horticulture industry's plant production, wholesale, retail, and landscape service components have annual sales of $163 billion, and sustain over 1,150,000 full- and part-time jobs.

Nursery and greenhouse plants are produced in all 50 states. At farm gate they represent about ⅓ of the value of all specialty crops, and about 15% of the total

value of U.S. crop production. This places our sector ahead of other major crop sectors such as wheat and cotton.

Our industry also provides a critical linkage between increasingly urban consumers and the agricultural sector. "Seek first to understand," best-selling author Stephen Covey urges. Getting their hands in the soil and learning to grow plants is the best way for many consumers to understand in a small way the lives and labors of our growers.

In this hearing statement, we focus on four issues impacting production costs and profitability—pest prevention, tools and inputs, labor, and research and market development. We then elaborate on how some key programs under the jurisdiction of the Subcommittee are helping.

Pest Prevention

Our industry produces literally thousands of plant species and varieties. Nearly every invasive foreign plant pest that is introduced into the U.S. as an inadvertent consequence of international trade and travel finds suitable host plants somewhere in our industry. Introduced pests (including insects, pathogens, and weeds) often cause plant damage and loss, and market access can be jeopardized due to Federal or state quarantines intended to limit pest spread.

In the year 2000, Congress modernized and streamlined the authorities under which USDA's Animal & Plant Health Inspection Service implements its efforts to safeguard American plant agriculture from such threats. At that time, AmericanHort (then the American Nursery & Landscape Association) co-chaired an external review of the APHIS plant safeguarding mission. The resulting report presented several hundred recommendations and a blueprint for the implementation program that followed.

Beyond APHIS' historic approach and activities, Section 10007 of the Horticulture title of the farm bill features two very important components which have improved capacity, collaboration, and efficacy of efforts to prevent, detect, contain, and mitigate foreign invasive plant pests. The first is the National Clean Plant Network, NCPN, which provides high quality asexually propagated plant material free of targeted plant pathogens and pests that cause economic loss to protect the environment and ensure the global competitiveness of specialty crop producers.

NCPN currently serves an array of high-value crop sectors that are vulnerable to high-consequence foreign pathogens. Sectors served include apples and pears, stone fruits, citrus, berries, grapevines, hops, roses, and sweet potatoes. A network of centers providing diagnostics and therapy enables the safe and orderly importation of new varieties, which contributes to the competitiveness and success of our growers. We attach some background information on the economic importance of clean plant programs.

Sec. 10007 enables other important pest prevention and mitigation efforts, many of which involve Federal, state, and industry collaboration. For example, a pilot program known as Systems Approach to Nursery Certification (SANC) is now underway with the goal of modernizing the system for certifying nursery and greenhouse plants for interstate shipment by embracing hazard analysis, identification of critical control points, and application of management measures to mitigate pest and pathogen risk.

Finally, a large and growing share of our industry's production starts overseas as young plants or vegetative cuttings subject to further growth and development here in the U.S. They are highly perishable and must enter free of regulated pests. An efficient inspection and clearance process is critical to our growers' success.

Tools in the Toolkit

Effective plant production depends on an array of tools in the toolkit for both plant breeding and pest management. With this in mind, and as a "minor use" crop, we are deeply concerned that decisions regarding plant breeding and product availability for pest management are made based on sound science. This is true as well for efforts to respond to threats to pollinator health. Despite the advancements in new breeding technologies in recent years, the greenhouse and nursery production industry has benefited little. The fragmented pattern of ownership, the sheer number of species and varieties used, intellectual property issues, and high regulatory costs of permits have all rendered these promising new breeding technologies cost prohibitive and inaccessible to our industry. However, some of the newer technologies, such as gene editing, are much more economical. In many cases the resulting plant product is similar to historically used breeding practices but created in far less development time.

These powerful tools could finally become a reality for our industry, provided that the associated regulatory framework does not overreach and become too costly. Po-

tential gains are huge with respect to traits such as disease resistance and environmental stress tolerance. As USDA–APHIS reviews its biotechnology regulatory framework especially as it applies to genetically engineered plants, we urge restraint, so as to not unduly restrict ongoing nursery and greenhouse crop breeding operations and stifle future innovation.

Horticulture is a major stakeholder in the pollinator health debate. On one hand, we are professional producers of trees, shrubs, vines, and flowers that are "critical infrastructure" for providing habitat and forage. Experts across the spectrum agree that improved habitat and forage are critical to ensuring healthy and diverse pollinator populations.

On the other hand, our growers must also manage pests, and of course systemic insecticides generally—and neonicotinoids in particular—are at the center of the debate. The neonics have become integral in pest management for many reasons—they are broadly effective against invasive and often regulated insect pests, and have generally better worker safety and environmental profiles than many alternatives. They are also the subject of vigorous debate with respect to potential pollinator impacts.

With a total of 76 active ingredients—including the neonics—subject to enhanced data requirements for pollinator impacts, it is crucial that the Environmental Protection Agency follows the science. It is equally important that USDA's relevant research programs serve up solutions with respect to effective invasive pest management that ensures pollinator stewardship. We are deeply concerned that hasty or unsound regulatory decisions—as well as "retail regulation"—may leave a toolkit that fails to enable our industry to effectively manage pest threats, mitigate the development of pesticide resistance, and meet quarantine and shipping requirements.

Labor and the Immigration Reform Imperative

For many specialty crop producers, hired labor is the single biggest production expense. That is certainly true for nursery and greenhouse growers, where labor often constitutes 30 to 50 percent of production costs. And yet, labor-intensive agricultural sectors are in the midst of a worsening labor crisis characterized by the following:

- Aging and attrition of the current workforce;
- Very little workforce replenishment, either by domestic or foreign workers;
- Growing reliance on the only legal visa option, H–2A, though the program is mired in bureaucracy and dysfunction;
- Little prospect for near-term Congressional action that would bring our immigration and agricultural visa system into the 21st century.

While often overlooked by critics, farmers are constantly striving to innovate, and to adopt mechanization, automation, and labor-saving strategies where possible. With respect to mechanization, the easy work has been done, and there are many functions workers perform that are not likely amenable to mechanization. That said, mechanization research is long-term and speculative and isn't likely to happen without a Federal partner. Much USDA research in this space seems to have been deemphasized; meanwhile, the Department of Labor spends over $50 million each year through the Workforce Innovation and Opportunity Act to provide farm workers with the training and skills to exit agricultural employment!

While the prospect for legislative reforms is not bright, hope springs eternal. After all, even in the narrow context of agriculture, legislative reforms are essential to the goals of stabilizing the workforce and ensuring a workforce in the future. Studies and reports have demonstrated the catastrophic economic lost opportunity to the U.S. if current and potential production of high-value specialty crops shifts overseas because the U.S. has an unending labor drought and a dearth of solutions.

Members of the Agriculture Committee are well positioned to articulate these truths, and to work across the aisle toward enactment of badly needed reforms. Our growers and producers need your leadership.

Research and Market Development

Robust research is key to innovation and progress. With declining funding and capacity in many of the traditional institutions conducting ag and hort research, targeted programs like the Specialty Crop Research Initiative are growing in importance. And, organizations like the Horticultural Research Institute, the AmericanHort foundation, are creatively raising funds and partnering with others to advance priority research.

A key example of such leveraging can be found in the "intelligent sprayer" project that was initially funded through the USDA Agricultural Research Service's (ARS) Floriculture and Nursery Research Initiative (FNRI), with industry support through HRI. Through the FNRI, ARS and land-grant university scientists developed and

trialed innovative pesticide application technology that has delivered impressive results: 47% to 70% reduction in pesticide active ingredient applied, reductions in drift and off-target spray, and cost savings of up to $280 per acre. Please see the attached summary for further details.

This groundbreaking work more recently received support through the Specialty Crop Research Initiative. This next phase of the project seeks to enable existing spray equipment to be retrofitted with the new technology, allowing cost savings and enhanced environmental protection without the need to necessarily acquire a major new piece of equipment. This is "partnership in action" that underscores the importance of these programs toward achieving profitable farms and broader societal goals.

Landscape horticulture is in the early stages of a major marketplace transition, from the historic use of trees, shrubs, flowers, and plants primarily for aesthetic enhancement, to a world where plants and landscapes are properly seen as investments that deliver tangible returns in the form of ecosystem services, enhanced human health and well-being, and economic benefits like increased property values.

For our industry, the Specialty Crop Block Grant program has served a key role in engaging consumers to invest in plants and landscaping for these reasons, through a unique outreach program called *Plant Something*. However, a new and unrealistic performance measure requirement to report actual dollar sales increases, applied to marketing proposals only, is problematic. For most specialty crops, including nursery and floriculture crops, annual baseline sales data in the retail setting do not exist. Individual companies often consider sales as proprietary business information. Total sales are influenced by many factors, and the impact of marketing efforts is often broader than that covered by a grant in any one year.

To have to build in a major statistical gathering and evaluation mechanism as part of each marketing grant proposal would not constitute a wise use of limited program resources. Expanding markets for and consumption of specialty crops is a key goal of this program, and this new performance measure—applied only to marketing proposals—should be sidelined.

Conclusion

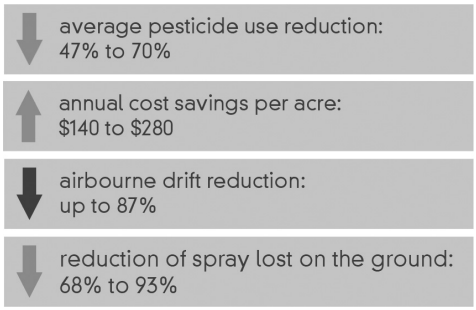
Thank you for the opportunity to share perspectives of the horticulture industry with regard to factors impacting the cost of production and the success and future potential of our growers. We welcome questions and feedback.

ATTACHMENT

This Could Change Everything

Mechanization at Its Finest: Technology that Automatically Adjusts Spray Output to the Structure of the Crop

Controlled spray output that matches plant canopies brings many benefits. Using this new sprayer technologies, Nelson has experienced the following:



The bottom line—effective pest management that is much more cost-effective and environmentally friendly than the air-blast sprayers it replaces.

Dan Nelson, of Hans Nelson and Sons Nursery in Boring, Oregon, is usually a pretty laid-back fellow-until the conversation turns to spray technology and the recent advancements made possible by a unique partnership effort involving the Horticultural Research Institute, USDA's Agricultural Research Service, and several universities. Then, Nelson gets animated.

His passion for pest management innovation is easy to understand. Nelson and Sons has been fortunate to be one of six test sites for the new "intelligent sprayer" technology developed at the USDA–ARS research station in Wooster, Ohio. Dr. Heping Zhu and his staff designed and built the first prototypes. Their objective was simple: develop an advanced and affordable pest management spray application system that employs intelligent technology to automatically match spray output to the structure of the crop.

How It Works

The technology starts with a variable-rate air assisted sprayer. It uses a laser scanning sensor that feeds data into a tractor-mounted computer. The computer feeds information to 40 individual solenoids each with a tee jet spray nozzle. The data coming from the laser computer activates individual nozzles based on what the laser sees. When nothing is seen, the nozzles are not activated.

Our Support

This remarkable research advancement is a perfect example of progress through partnerships. The Horticultural Research Institute, AmericanHort's research and development affiliate, believed in the potential of this project and its visionary scientist team led by Dr. Zhu. HRI provided some of the initial funding to get the project going. That demonstration of industry commitment opened the door to further funding through our Floriculture and Nursery Research Initiative partnership with USDA–ARS. Eventually, additional funding came through the Specialty Crop Research Initiative, a program AmericanHort has supported through the farm bill. University research and extension involvement in Ohio, Oregon, and Tennessee has helped transform a research theory into an industry reality.

What's Next

The "smart sprayer" project is now at the commercialization phase. And, the research team led by Dr. Zhu is now working to make the technology adaptable to existing equipment, eventually allowing many growers to retrofit existing spray equipment to reap the benefits of this work. The project showcases what can be achieved when the industry's own research dollars, through HRI, are leveraged through partnerships to move the industry forward.

SUBMITTED STATEMENT BY AMERICAN SEED TRADE ASSOCIATION

Innovative, science-based solutions are fundamental to meet our growing agricultural needs. Since 1948, total U.S. agricultural output has more than doubled. The ability of the farm sector to feed far more people today while using less farmland than 6 decades ago is attributed to increases in agricultural productivity. The major driver of growth in agricultural productivity is innovation, and it will continue to be critical as we look for ways to sustainably feed nine billion people in the coming years.

Founded in 1883, ASTA's mission is to enhance the development and movement of quality seed worldwide. ASTA's diverse membership consists of over 700 companies involved in seed production, distribution, plant breeding and related industries in North America. ASTA represents all varieties of seeds, including grasses, forages, flowers, vegetables, row crops and cereals. Many ASTA members are research-intensive companies engaged in the discovery, development and marketing of seed varieties with enhanced agronomic and end-use quality characteristics.

Research programs authorized in the farm bill are critical to advancing agriculture, and these programs have shown a high rate of return for the dollars invested. The programs outlined below are particularly important for the seed industry's mission to provide better seed to improve the quality of life for all of us. It is important to note, however, that the promise of U.S. research investments will not be fully realized if the regulatory burden for commercialization of these tools is too great. Congress must ensure that Executive branch actions, regulatory and otherwise, foster the growth of a strong 21st century farming economy through science-based decision making.

Farm Bill—Research Title

Agriculture and Food Research Initiative (AFRI) is the premier competitive grants program for fundamental and applied research, extension, and education to support our nation's food and agricultural systems. While the 2014 Farm Bill authorized $700 million for AFRI, annual appropriations have not met this authorization target. Failure to meet this commitment could deter the next generation of sci-

entists from pursuing critical research in agriculture innovations that could benefits all Americans.

Due to limited funding, only a small percentage of NIFA grant applications are awarded each year. In light of this situation, Congress may wish to refine the review process to maximize impact of the sparse research dollars available. For example, the Specialty Crop Research Initiative has a two-step review process so that proposals are reviewed and ranked by a panel of specialty crop industry representatives as well as peer reviewed by research experts.

Foundation for Food and Agriculture Research provides an innovative solution to increase funding and leverage current and future investments in research. The Foundation provides a structure for new public-private collaborations that will further USDA's research mission by addressing knowledge gaps in water use, soil health and plant efficiency. While still in the beginning stages of operation, the Foundation intends to complement USDA's portfolio of intramural and extramural research programs to solve current and future challenges and provide a mechanism for rapid response for emerging issues. We support its continued authorization and funding in future farm bills.

National Genetic Resources Program was established to acquire, characterize, preserve, document, and distribute germplasm of all lifeforms important for food and agricultural production to scientists. These materials are the key to increasing genetic diversity to reduce vulnerability of crops to pests, diseases, and environmental stress. The program is authorized at $1 million in the farm bill. Twenty-six National Plant Germplasm System labs are funded with further annual appropriations of $44 million. The U.S. germplasm system is enviable for its size and scope. However, current funding through the farm bill and annual appropriations is insufficient to maintain and distribute the collections to U.S. researchers who use those materials to develop varieties for all types of cropping systems and landscape uses. Without sufficient funding, the collections are deteriorating, and the beneficial attributes of the collected materials are going undiscovered.

Farm Bill—Horticulture Title

The National Seed Health Accreditation Pilot Program (NSHAPP) was funded from dollars designated in the Horticulture Title for Plant Disease Management and Disaster Prevention Programs (10007)—an important funding mechanism for specialty crops. Under the goal of enhancing mitigation and rapid response, NSHAPP is developing a model for a voluntary system of testing imported seed for pathogens of phytosanitary concern that can be continuously adapted to emerging pathogens. The USDA–APHIS National Seed Health System has coordinated with the seed industry in a unique partnership to screen imported seed with diagnostic testing to prevent the introduction of previously undetectable and economically damaging seed-transmitted pathogens. Continued funding for plant disease management programs in the farm bill is important for the horticulture sector to address pressing problems.

Regulatory Oversight

Thanks to seed improvement, farmers can count on increased varieties of crops, consistent and reliable harvests, and greater yields. The result is increased quality and quantity of our food supply, quality of life, and a more sustainable future.

Many breeders now have access to newer tools that take advantage of a better understanding of plant genetics. Innovative plant breeding techniques, such as gene editing, hold enormous promise for improving the productivity and environmental sustainability of food, feed, fiber, and biofuels. Today, with the capability to sequence plant genomes and the ability to link a specific gene(s) to a specific characteristic, breeders are able to more precisely make improvements that mimic the improvements that happen in nature or through traditional plant breeding.

By applying newer methods, plant breeders can be more efficient and precise at making the same desired changes that can be made over a much longer period of time through earlier breeding methods. Opportunities abound for the use of precise breeding techniques, such as gene editing in horticultural crops including: improved disease resistance and yield, water and nitrogen-use efficiency, and enhanced nutrition, colors, flavors and shelf-life. Because these new methods are efficient and economical, they are accessible to public and commercial plant breeders and can be used across all agriculturally important crops, including field, vegetables, and specialty crops.

All plant varieties are regulated in the U.S., and plant breeders have a phenomenal track record of safety. USDA has a process for determining if a plant product will be subject to a pre-market review, and they have recently determined that a number of products (*e.g.,* a non-browning mushroom) do not pose any risk that

would require further USDA review. Scientists and breeders are now conducting critical performance evaluations of those varieties prior to bringing them to market.

As farmers strive to address production challenges in the 21st century, it is important that they have access to the most sophisticated tools. It would have significant ramifications for the rural economy if the U.S. was no longer a leader in agriculture innovation. Recently, USDA's Animal and Plant Health Inspection Services (APHIS) began the process of implementing an overhaul of its biotechnology premarket regulations through a Notice of Intent published in the *Federal Register.* In comments to APHIS, the American Seed Trade Association (ASTA) and a wide range of agriculture organizations have raised concerns that the proposal goes well beyond the scope of what the agency reviews today. In particular, APHIS's proposals create ambiguity as to what processes and products will receive pre-market regulatory scrutiny and to what degree.

A transparent regulatory system that is based on the risk posed by the product and not on the specific process used to develop the product will encourage innovation in the U.S. In turn, that innovation will benefit growers and all participants in the food and feed value-chain. Congress must stay actively engaged to monitor how USDA intends to implement proposed changes to the regulatory system. APHIS should be encouraged to consult with other Federal agencies, international regulatory bodies, and stakeholders so that the sweeping changes they have outlined do not have unintended consequences to trade and innovation. Other countries are moving towards not regulating newer breeding methods under their GMO regulations. This is the approach that ASTA supports as it is science-based and presents the best opportunity to ensure a promising future for agriculture.

SUBMITTED STATEMENT BY AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE

The American Society for Horticultural Science (ASHS), the professional society of horticulture researchers and educators supports continuation of USDA's competitive extramural and intramural research programs. These programs fall under both the National Institute for Food & Agriculture (NIFA), and the Agriculture Research Service (ARS)—agencies dedicated to expanding knowledge and innovation for abundant, healthy, and safe agricultural products. We believe vibrant innovative research programs must remain in place to meet rising domestic and global demands for accessible and affordable food and plant sources. USDA lists horticulture as comprising 50% of total crop farm-gate value. As such, specialty crop research is the essential common denominator for basic and applied science that ensures quality growth and production of nutritious foods, as well as enabling responsible environmental stewardship and harnessing new forms of energy.

For ASHS members, some of the most commonly used NIFA programs are the Specialty Crop Research Initiative (SCRI), the Organic Agriculture Research and Education Initiative (OREI), the Specialty Crop Block Grant program, and Hatch and Smith-Lever capacity funding for land-grant institutions.

SCRI addresses a host of challenges with fruits, vegetables, and ornamentals. Recent projects funded by this successful initiative are helping the potato and citrus industries ward off devastating psyllid-borne diseases. Each of these $3.5 billion industries is threatened by this harmful infestation. Interdisciplinary teams are identifying pathogen origins, and implementing effective means to arrest their spread and eventual eradication. What has been learned about potato zebra chip now informs strategies for halting citrus greening. While Texas potato growers have already saved several hundred million dollars, the savings in production costs is even greater because the spread of zebra chip to California and the Pacific Northwest has been stopped. SCRI's model of coordinated management has made many of these projects successful on a much greater scale, serving the needs of the specialty crop industry, and providing measurable dividends for taxpayer investments.

OREI's dual research and education components make it another popular program used by ASHS. One recent OREI success story deals with food safety. Specifically, tracking foodborne pathogens in leafy greens and other vegetables at production and distribution levels. Sanitization techniques, and use of various herbal substances, are part of this OREI grant which tests various handling methods for ensuring that disease-free specialty crops make it to retail outlets and consumers.

Specialty Crop Block Grants allow states to fund projects having state-specific needs. One such Block Grant trained Illinois farmers to use high tunnels (unheated greenhouses) to provide top quality vegetables for local consumers over a longer growing season. Implementation of new techniques and technologies allows more productivity and profitability for Illinois' horticulture growers in an area known more for corn and soybeans. Block Grants recently helped fund a "Grassroots" edu-

cation exhibit at the U.S. National Arboretum in Washington, DC. Using both visual and interactive tools, visitors learn about turf's history, and its many modern-day uses courtesy of horticulture science.

Capacity funding for land-grant institutions allow ASHS member scientists to solve problems not effectively addressed by competitive grant models. ASHS supports adjusting appropriations for these programs for inflation so that our land-grants maintain adequate research capacity to assure the nation's food security needs. A recent capacity-funded project, "*Improving Sustainability in Fruit Tree Production through Changes in Rootstock Use,*" is the basis of a revolution in U.S. apple production. These high-density, disease-resistant orchards lower production costs for growers by approximately $250 million per year, while reducing environmental impact and improving apple quality. Capacity funding also provides critical foundations for all intra- and extramural research. These funds provide unique and invaluable education, training, and extension opportunities that sustain new generations of agriculture scientists.

As Howard Buffett, a businessman, philanthropist, and farmer recently said in an interview with PBS, "land-grant universities are what built our agricultural system into a powerhouse." Utilizing collaborative partnerships between academia, government, and private industry, ASHS views the combination of capacity and competitive research—in collaboration with private industry—as maintaining America's powerhouse role for horticulture science and all of agriculture.

SUBMITTED STATEMENT BY BIOTECHNOLOGY INNOVATION ORGANIZATION

The Biotechnology Innovation Organization (BIO) is pleased to submit this testimony to the House Committee on Agriculture, Subcommittee on Biotechnology, Horticulture, and Research. BIO is the world's largest biotechnology trade association representing 1,000 companies, academic institutions, state biotechnology centers and related organizations across the United States and in more than 30 other nations. BIO members are involved in the research and development of healthcare, agricultural, industrial and environmental biotechnology products, and BIO represents the majority of the biotechnology product developers in North America.

Introduction

Scientific advancements across the American economy are responsible for accelerating economic growth through improved productivity. New technologies, in agricultural and industrial biotechnology and beyond, create new products and processes; stimulate the creation of new companies and new industries; improve existing products; and lower manufacturing costs. They also provide public- and private-sector researchers with the tools and techniques necessary for discovering new products that hold tremendous potential for society. Over the past 200 years, the primary scientific drivers of technology development were physics and chemistry. But today, in the 21st Century, society is leveraging a deep and rich understanding of the fundamental mechanics of life and its molecular components to drive the development of an array of biologically-based technologies that fuel innovation, stimulate greater economic growth, and transform American lives for the better.

For agriculture, biological breakthroughs are enabling farmers to rise to the grand challenge confronting it: doing more with less. Throughout history, as human population growth drove ever-increasing demand for food, animal feed, fuel and fiber, our agricultural production systems kept pace. In the mid-20th century, fears of a population-driven food crisis led to research and investment to intensify crop production. This "Green Revolution" saved one billion from famine; halved the global percentage of undernourished people; improved rural economies; and protected approximately 2.2 to 3.8 billion acres of land from being cleared for crop production.

Society still faces the challenge of feeding an ever-expanding population, which will reach nine billion by 2050 and require at least a 70 percent increase in food, feed and fuel production. However, this time the challenge of increasing agricultural production is exacerbated by a confluence of interacting pressures in addition to population growth: increased competition for water, land and energy; a dietary shift from cereals to animal products; diminishing supplies of fossil fuels—the source of most agrochemicals; resources degraded from past activities; and the global effects of climate change. The Green Revolution allowed society to produce more with more inputs, most of which are derived from nonrenewable resources. Our current challenge is to produce more with less and to do so in a sustainable fashion. Biotechnology provides a set of precise, yet flexible, tools for meeting that challenge.

Creating an Environment in Which Biotechnology Innovation Flourishes

To meet the challenges of today and tomorrow, Congress must consistently promote policies that encourage biotechnology innovation and ensure Executive Branch actions, regulatory and otherwise, foster the growth of a strong 21st Century farming and biobased economy. BIO recommends the House Agriculture Committee and the broader House Membership consider the following policies that foster current and future innovation:

- Promoting predictable, science and risk based regulatory policy at USDA, EPA, and FDA.
- Promoting national consistency regarding the labeling of bioengineered food.
- Promoting national consistency regarding the cultivation & movement of bioengineered seeds.
- Promoting patent laws that drive critical life science discoveries.
- Promoting U.S. Government efforts to avoid trade barriers or trade disruptions related to non-harmonious policies and practices.
- Promoting investments in public-sector agricultural research.
- Promoting public education about agricultural innovation.
- Promoting the development of animal biotechnology products that prevent and mitigate major livestock disease outbreaks.
- Promoting policies that nurture innovation and investment in advanced biofuels, renewable chemicals, and biobased products.
- Promoting a strong and steady Renewable Fuel Standard (RFS)

Plant Biotechnology

Value to Farmers, Productivity, and the Rural Economy

For the past 2 decades, the products of agricultural biotechnology have been commercially available and widely used by farmers around the world. In the U.S., more than 90 percent of corn, cotton, canola, soybeans, and sugarbeets grown contain at least one biotechnology-derived trait to help farmers better manage pests, weeds, disease, and harsh weather conditions. Because biotech crops make up such a large portion of American production agriculture, they have a major positive impact on the overall strength of the rural economy.

Gains in productivity associated with biotech crops help grow the American agricultural trade surplus because so many biotech crop harvests are dedicated to foreign markets. In Fiscal Year 2015, U.S. agricultural exports totaled more than $143 billion contributing to a $27.5 billion agricultural trade surplus. We can thank biotechnology, in part, for strong and steady growth in the U.S. agricultural export market, particularly for corn and soybeans.

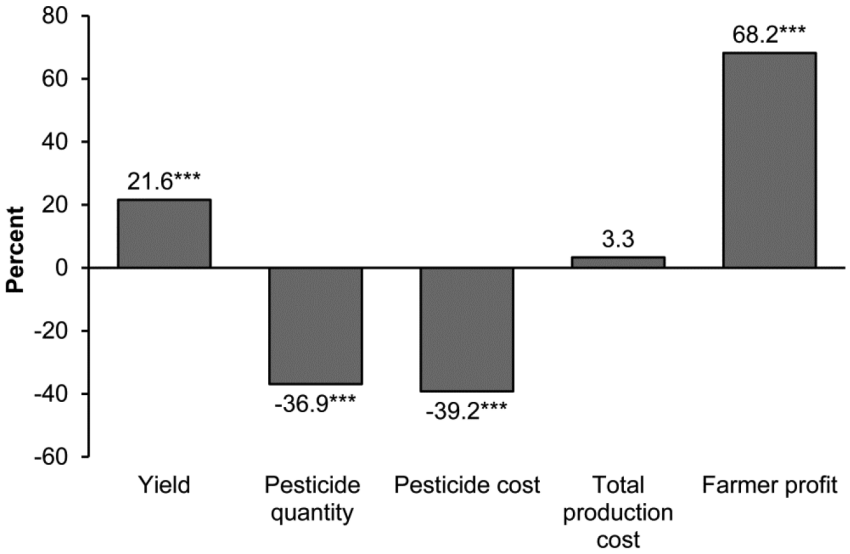
Additionally, USDA has published reports noting how the adoption of biotech crops by farm families is associated with higher off-farm household income. Farming efficiencies associated with the use of biotech crops allow farmers to save time, which is then used to generate income from off-farm employment. One USDA report highlights that a ten percent increase in the use of herbicide tolerant soybeans, for example, is associated with a 16 percent increase in off-farm household income. These statistics illustrate how more efficient farming practices, such as the use of biotechnology, generate greater economic activity in rural communities.

It is also noteworthy that, according to the *White House National Bioeconomy Blueprint,* published in 2012, U.S. revenues from biotech crops totaled more than $75 billion. The investments by companies in research, development and commercialization of these crops has generated good jobs all across our country.

The pattern of rapid and persistent adoption of biotech crops occurs in other countries where farmers have access to them. Globally, farmers growing biotech crops saw net economic benefits at the farm level of more than $20 billion in a single year (2013). When compared to non-biotech crops, biotech crops increase farmer profits 68%, on average due to increased yields (21.6%) and decreased chemical pesticide use (−36.9%). (*Figure 1* and *Table 1*). Yield and profit gains are higher in developing countries than in industrialized countries.[1]

[1] Klümper W., Qaim M. (2014) *A Meta-Analysis of the Impacts of Genetically Modified Crops.* PLoS ONE 9(11): e111629. doi:10.1371/journal.pone.0111629.

Figure 1



Impacts of Biotech Crop Adoption. Average percentage differences between biotech and non-biotech crops are shown. Results refer to all GM crops, including herbicide-tolerant and insect-resistant traits. A total of 147 original studies comparing biotech and non-biotech crops were included in the analysis. The number of observations varies by outcome variable; yield: 451; pesticide quantity: 121; pesticide cost: 193; total production cost: 115; farmer profit: 136. *** indicates statistical significance at the 1% level.

Klümper W., Qaim M. (2014) *A Meta-Analysis of the Impacts of Genetically Modified Crops.* PLoS ONE 9(11): e111629. doi:10.1371/journal.pone.0111629.

Table 1

Outcome variable	All GM crops	Insect resistance	Herbicide tolerance
Yield	*** 21.57	*** 24.85	** 9.29
	(15.65; 27.48)	(18.49; 31.22)	(1.78; 16.80)
n/*m*	451/100	353/83	94/25
Pesticide quantity	*** −36.93	*** −41 .67	2.43
	(−48.01; −25.86)	(−51.99; −31.36)	(−20.26; 25.12)
n/*m*	121/37	108/31	13/7
Pesticide cost	*** −39.15	*** −43.43	*** −25.29
	(−46.96; −31.33)	(−51.64; −35.22)	(−33.84; −16.74)
n/*m*	193/57	145/45	48/15
Total production cost	3.25	** 5.24	−6.83
	(−1.76; 8.25)	(0.25; 10.73)	(−16.43; 2.77)
n/*m*	115/46	96/38	19/10
Farmer profit	*** 68.21	*** 68.78	64.29
	(46.31; 90.12)	(46.45; 91.11)	(−24.73; 153.31)
n/*m*	136/42	119/36	17/9

Average percentage differences between GM and non-GM crops are shown with 95% confidence intervals in parentheses.

*, **, *** indicate statistical significance at the 10%, 5%, and 1% level, respectively.

n is the number of observations, *m* the number of different primary datasets from which these observations are derived.

doi:10.1371/journal.pone.0111629.t002.

Klümper W., Qaim M. (2014) *A Meta-Analysis of the Impacts of Genetically Modified Crops.* PLoS ONE 9(11): e111629. doi:10.1371/journal.pone.0111629.

Predictable, Risk Appropriate Regulation

- **U.S. Department of Agriculture (USDA)**

Recently, USDA's Animal and Plant Health Inspection Services (APHIS) began the process of implementing an overhaul of its biotechnology pre-market regulations. Some of the regulatory systems APHIS is considering, which were publicized in the *Federal Register* in February, go well beyond the scope of what the agency reviews today.

While many stakeholders agree with APHIS's goal of making improvements to its pre-market regulatory system so the scope of regulation better aligns with the actual risk posed by biotechnology products, much of what APHIS described in the *Federal Register* raises concerns about how the agency will actually achieve its goal.

APHIS must get this project right. Congress should stay actively engaged and monitor what the agency is considering. It will be essential that any new APHIS pre-market regulatory structure (1) continue to promote innovation that enables American farmers to remain competitive while simultaneously confronting serious food security and environmental challenges; (2) is predictable, transparent, and based on science and actual risk of the product; and (3) is developed in close consultation with a broad range of scientific experts, stakeholders, and other government agencies responsible for biotechnology policy, such as the U.S. Food and Drug Administration, the U.S. Environmental Protection Agency, and the Office of the U.S. Trade Representative.

- **U.S. Environmental Protection Agency (EPA)**

  Biotech crops are particularly beneficial to the environment, which should be noteworthy to the EPA. Widespread adoption of these crops since the early 1990s have resulted in significant reductions in insecticide use, substitution of less toxic herbicides, and significant labor savings for farmers. Their use reduces agriculture's energy consumption and facilitates the use of no-till agriculture, which prevents soil erosion and reduces CO_2 emissions. According to peer reviewed publications measuring environmental impacts, the use of biotech seeds has reduced the environmental footprint of agriculture by 18 percent.

  The EPA is responsible for assessing the safety of pesticide—like substances, known as Plant Incorporated Protectants (PIPs), produced by certain biotech crops. The most common of these are the so-called "Bt" crops, which produce a protein derived from soil bacteria that confers insect resistance to the plant. In its own independent analysis, the EPA confirmed the environmental safety of the PIPs that it reviews. Not only are Bt crops safe for the environment, but they also typically result in significantly less insecticide use. The EPA also approves new uses of previously registered herbicides on biotech plants that are developed to resist those herbicides.

  The EPA's regulatory performance with respect to ag-biotech products has declined over the years, as regulatory requirements and costs have increased significantly. Even though Congress enacted the Pesticide Registration Improvement Act (PRIA) to impose very specific time limits for reviews of new uses and registration of new PIPs in biotech plants, the EPA's Office of Pesticide Products (OPP) routinely extends the legally-mandated time limits for biotech products. Additionally, the EPA has made several attempts in recent years to expand its authority over agricultural biotechnology products. BIO urges the Committee to exercise appropriate Congressional oversight to ensure OPP is following legally-mandated timelines and that the EPA is, more generally, not unnecessarily expanding regulatory authority.

National Uniformity for Labeling, Cultivation, and Seed Movement

It is essential that policies related to bioengineered food labeling and the cultivation and movement of bioengineered seeds and plants be nationally uniform to promote the smooth movement of food and feed crops and other agricultural products into, out of, and within the United States. Avoiding trade barriers and disruptions is vital to agricultural commerce and the nation's economy and should be facilitated to the greatest extent possible.

- **Labeling**

  Some consumers are expressing a desire to know, via food product labeling, whether they are purchasing or consuming food that contains ingredients that were developed through biotechnology, and some manufacturers want to respond to this consumer interest. Some states and localities are requiring bioengineered food product labeling, creating the potential for conflicting legal and regulatory requirements, increased costs of food for all consumers, and substantial disruptions in, and adverse economic effects on, interstate commerce and trade. To prevent the negative repercussions associated with state-by-state food

labeling laws, the Congress should quickly enact national bioengineered food labeling legislation.

- **Cultivation/Seed Movement**

  Some states and localities have attempted to ban or otherwise restrict the movement, introduction, development, planting, cultivation, harvesting, production, marketing, sale, or other use of bioengineered foods, diminishing the beneficial economic effects of economies of scale and creating the potential for substantial disruptions and adverse economic effects on interstate commerce and trade. Indeed, some localities have even enacted bans on the cultivation of bioengineered seeds and plants, causing distress and harm to farmers and resulting in considerable litigation.

  The petition process established for bioengineered plants under the *U.S. Coordinated Framework for the Regulation of Biotechnology* and the *Plant Protection Act* provides seed developers with the **national clearance** they need to commercialize bioengineered crops, provides farmers with clarity with respect to the crops they can legally grow, and provides farmers, agribusinesses, food companies, and consumers with confirmation that bioengineered crops are as safe to grow, market, and consume as non-bioengineered crops.

  State and local cultivation bans and restrictions, however passionately their supporters may favor them, pose a direct threat to the reliability of the Federal system of uniform science-based regulation that governs agricultural biotechnology in the United States. State and local bans and other measures result in a patchwork of laws governing farming. This is a serious and unnecessary obstacle to interstate commerce; local governments lack the expertise and resources to second-guess the expert decisions of national regulatory agencies.

Animal Biotechnology

The budding animal biotechnology industry has potential to solve numerous human, animal, and environmental challenges but is at a crossroads. Its future in the United States is in danger because universities and companies, which have developed numerous innovative applications over the past 3 decades, are impeded by costly, unpredictable regulations that are not proportionate to the product's risk.

The House Agriculture Committee should be keenly interested in the viability of the animal biotechnology sector, because its products can prevent or mitigate animal diseases that cause tremendous pain and hardship for livestock producers and damage the rural economy. Unfortunately development of many of these products has either moved to other countries, such as China and Brazil, or been abandoned due to unnecessarily burdensome regulations:

- In 1998, researchers at the USDA developed dairy cows that required fewer antibiotics due to increased amounts of a naturally occurring enzyme, lysostaphin, in their milk. This enzyme, which occurs in high amounts in human milk, provided resistance to mastitis, the number one reason antibiotics are used in dairy cattle. Mastitis costs U.S. farmers $1.7–$2 billion every year.
- South Dakota scientists have produced beef cattle that are capable of resisting "Mad Cow Disease" or Bovine Spongiform Encephalopathy (BSE). A cow that carried BSE was discovered in the U.S. in December 2003. In 2004, the disease cost U.S. beef producers $4.7 billion because international markets were closed to U.S. beef.
- In 2010, scientists developed chickens that are unable to transmit avian influenza. In 2015 alone, almost 50 million chickens and turkeys were destroyed in the U.S. due to an outbreak of the H5N2 strain of "bird flu." The total economic cost to Iowa alone was over $1 billion in 2015.

Many diseases can jump from animals to humans, as evidenced by the 137 human cases of H7H9 avian flu with 45 deaths through 2013. Therefore, regulations that impede development of disease-resistant farm animals threaten the physical health of people in rural environments in addition to their economic well-being.

Industrial Biotechnology

While feeding and healing the world, biotechnology is also helping society to develop and commercialize new feedstocks and biological catalysts for production of advanced biofuels, renewable chemicals, and biobased products. The biobased industry created four million jobs and contributed $369 billion to the U.S. economy in 2013. The jobs multiplier for this industry is high, at 2.64, and these jobs benefit

rural communities.[2] Because these feedstocks, manufacturing methods, and products are based on plants and biological processes, they are more efficient, sustainable and environmentally friendly. According to a McKinsey report, the production of renewable chemicals, which go into products like plastics, textiles, and cosmetics, is expected to grow at twice the rate of the overall chemical market, comprising 11 to 13 percent of total chemical industry revenues by the year 2020. Importantly, the development and use of biomass for fuels and chemicals in an American biobased economy, by necessity, cannot be outsourced to other countries.

- **Farm Bill Energy Title Programs**

  Industrial biotechnology is unlocking the potential of agriculture and forestry, enabling the production of a new generation of advanced biofuels, renewable chemicals, and biobased products produced from biomass, to create new opportunities for rural economic prosperity and energy security. Farm bill energy programs, such as an expanded Biorefinery Assistance Program that promotes the development of standalone renewable chemicals facilities; the Biomass Crop Assistance Program; and the Biobased Markets Program, in combination with complementary Federal policies like the Renewable Fuel Standard (RFS) and supportive tax policies, are speeding technologies to commercial reality. We must continue investments in America's energy and agricultural future.

- **A Strong, Steady Renewable Fuel Standard (RFS)**

  Though not a policy within the jurisdiction of the House Agriculture Committee, BIO draws your attention to its support for a strong RFS. Because of the incentives created by the RFS, and the stability of the program generally, BIO members are producing commercial quantities of advanced biofuels. When properly administered in accordance with the RFS statute, the policy drives investment and ensures a steady and increasing market for renewable fuels in the United States, which in turn maintains and furthers investment in that market.

Promoting Patent Laws that Drive Life Science Discoveries

Agricultural innovation depends upon clear, predictable, and enforceable patent rights. Without these patent rights, new products used to produce healthful food, protect crops, preserve the environment, and improve human & animal health will be more costly to develop. Companies and universities expend tremendous resources to research and develop economically and environmentally beneficial technologies to help feed, fuel, clothe, and heal people and animals. But developing new products is a slow, uncertain, and expensive process. It can easily take a decade or longer and more than $100 million to commercialize a single product. Strong patents are critical to ensure a return on investments of time and money, which in turn supports future investments in the industry that directly benefit American agricultural producers. Given the critical role that innovation plays in modern farming, we urge Congress to carefully consider the impact of any changes to the patent system on the agricultural innovation community.

BIO also urges the Congress to enact the *Defend Trade Secrets Act,* bipartisan legislation that would promote economic growth by enabling America's most innovative companies to effectively protect their trade secrets from theft. Strong trade secret protection can help retain and increase American jobs.

Defending Science-Based Agency Actions through Public Education

Regrettably, there is a tremendous amount of misinformation about agricultural biotechnology in the public domain. Dedicated educational resources will ensure key Federal agencies responsible for the safety of our nation's food supply—the U.S. Food and Drug Administration (FDA) and the U.S. Department of Agriculture (USDA)—are able to more easily convey to the public science- and fact-based information about food.

As has been previously discussed, biotechnology innovation is important to all Americans because it enables plant and animal producers to increase production of healthful food using less land, while conserving soil, water, and on-farm energy. These benefits are passed on to consumers who reap the advantage of affordable food prices, greater access to nutritious food, an improved environment, a strengthened rural economy, and enhanced domestic and international food security.

Embracing modern agriculture is the right thing to do for our country, which has a rich history of nurturing science, research, and innovation in all areas of the econ-

[2] *An Economic Impact Analysis of the U.S. Biobased Products Industry—A Report to the Congress of the United States of America.* Golden, J.S., *et. al* 2015. Joint publication of the Duke Center for Sustainability and Commerce and the Supply Chain Resource Cooperative at North Carolina State University.

omy, including farming. As President Obama stated in December 2011, "The world is shifting to an innovation economy and nobody does innovation better than America." This Presidential quote is displayed prominently in the *National Bioeconomy Blueprint,* which embraces and promotes the use of biotechnology as a significant driver of American economic growth.

The United States is strong and prosperous because American leaders embrace the responsible use of technology and set forth public policies to move the nation forward in this regard. Science education plays an important role in this forward momentum.

Trade

As a member of the broad U.S. agricultural biotechnology value chain, BIO supports efforts to improve the domestic and international marketability for bioengineered crops, which are critical to U.S. farmers and represent the vast majority of corn, soybean, and cotton acreage in the United States. We appreciate the work done, to date, by the Administration and the Congress to elevate agricultural biotechnology trade challenges with global partners and to seek both short- and long-term policy solutions. The Office of the Secretary and the Foreign Agricultural Service at USDA, along with the Office of the U.S. Trade Representative, play a central role in coordinating international trade initiatives related to agricultural biotechnology for the U.S. Government. BIO asks these entities, and others at USDA that play a role in trade policy execution, receive appropriate support by the Congress.

Agricultural Research

Commitments by the Congress to public-sector agricultural research are at the heart of the USDA's core responsibilities. Research drives innovative solutions to real-world agronomic challenges. The 2014 Farm Bill authorized $700 million for the Agriculture and Food Research Initiative (AFRI), which is the premier competitive grants program for fundamental and applied research, extension, and education to support American agriculture, and created the Foundation for Food and Agriculture Research, which is designed to better leverage public- and private-sector investments in agricultural research. We urge Members of the Agriculture Committee to work with their counterparts on the Appropriations Committee to ensure these key research programs are fully operational and have the funding necessary to ensure agronomists have the ability to solve challenges and rapidly respond to emerging threats.

ATTACHMENT

Agricultural Biotechnology Innovation

Overview: The value of science and agricultural innovation cannot be underestimated. Between today and the year 2050, farmers will be required to grow twice as much food to feed rapidly growing numbers of people inhabiting [Earth]. Food will be grown in the face of increasingly severe weather and environmental conditions, with greater strains on water, soil, and energy resources. To enable American farmers to confront serious food security and environmental challenges, while still growing enough food to feed hungry people, Congress must consistently promote policies that encourage agricultural innovation and ensure Executive branch actions, regulatory and otherwise, foster the growth of a strong 21st Century farming economy.

For the past 2 decades, the products of agricultural biotechnology have been commercially available and widely used by farmers around the world. In the U.S., more than 90 percent of corn, cotton, canola, soybeans, and sugar beets grown contain at least one biotechnology-derived trait. Because biotech crops make up such a large segment of the American production farming sector, they have a big impact on the overall strength of the rural economy.

Globally, farmers growing biotech crops saw net economic benefits at the farm level amounting to more than $20 billion in 2013. Of the total farm income benefit, 60 percent was due to yield gains. Gains in productivity associated with biotech crops help grow the American agricultural trade surplus because so many biotech crop harvests are dedicated to foreign markets. In Fiscal Year 2015, U.S. agricultural exports totaled more than $143 billion contributing to a $27.5 billion agricultural trade surplus. We can thank biotechnology, in part, for strong and steady growth in the U.S. ag-export market, particularly for corn and soybeans. Additionally, USDA has published reports noting how the adoption of biotech crops by farm families is associated with higher off-farm household income. Farming efficiencies associated with the use of biotech crops allow farmers to save time, which is then used to generate income from off-farm employment. One USDA report highlights

that a ten percent increase in the use of herbicide tolerant soybeans, for example, is associated with a 16 percent increase in off-farm household income. These statistics illustrate how more efficient farming practices, such as the use of biotechnology, generate greater economic activity in rural communities.

It is also noteworthy that, according to the *White House National Bioeconomy Blueprint,* published in 2012, U.S. revenues from biotech crops totaled more than $75 billion. The investments by companies in research, development and commercialization of these crops has generated good jobs all across our country.

Congress can create an environment in which agricultural innovation flourishes by:

- Promoting predictable, transparent, science and risk based regulatory policy at USDA, EPA, and FDA.
- Promoting national consistency regarding the labeling of bioengineered food.
- Promoting national consistency regarding the cultivation & movement of bioengineered seeds.
- Promoting patent laws that drive critical life science discoveries.
- Promoting U.S. Government efforts to avoid trade barriers or trade disruptions related to non-harmonious policies and practices.
- Promoting investments in public-sector agricultural research.
- Promoting public education about agricultural innovation.
- Promoting policies that foster innovation & investment in advanced biofuels, renewable chemicals, and biobased products.

Messages for Key Issues

Predictable, Risk Appropriate Regulation

Recently, USDA's Animal and Plant Health Inspection Services (APHIS) began the process of implementing an overhaul of its biotechnology pre-market regulations. Some of the regulatory systems APHIS is considering, which were publicized in the *Federal Register* in February, go well beyond the scope of what the agency reviews today.

While many stakeholders agree with APHIS's goal of making improvements to its pre-market regulatory system so the scope of regulation better aligns with the actual risk posed by biotechnology products, much of what APHIS described in the *Federal Register* raises concerns about how the agency will actually achieve its goal.

APHIS must get this project right. Congress should stay actively engaged and monitor what the agency is considering. It will be essential that any new APHIS pre-market regulatory structure (1) continue to promote innovation that enables American farmers to remain competitive while simultaneously confronting serious food security and environmental challenges; (2) is predictable, transparent, and based on science and actual risk of the product; and (3) is developed in close consultation with a broad range of scientific experts, stakeholders, and other government agencies responsible for biotechnology policy, such as FDA, EPA, and USTR.

National Uniformity for Labeling, Cultivation, and Seed Movement

It is essential that policies related to bioengineered food labeling and the cultivation and movement of bioengineered seeds be nationally uniform to promote the smooth movement of food and feed crops and other agricultural products into, out of, and within the United States. Avoiding trade barriers and disruptions is vital to agricultural commerce and the nation's economy and should be facilitated to the greatest extent possible.

Labeling

Some consumers are expressing a desire to know, via food product labeling, whether they are purchasing or consuming food that contains ingredients that were developed through biotechnology, and some manufacturers want to respond to this consumer interest. Some states and localities are requiring bioengineered food product labeling, creating the potential for conflicting legal and regulatory requirements, increased costs of food for all consumers, and substantial disruptions in, and adverse economic effects on, interstate commerce and trade. To prevent the negative repercussions associated with state-by-state food labeling laws, the Congress should quickly enact national bioengineered food labeling legislation.

Cultivation/Seed Movement

Some localities have attempted to ban or otherwise restrict the movement, introduction, development, planting, cultivation, harvesting, production, marketing, sale, or other use of bioengineered foods, diminishing the beneficial economic effects of

economies of scale and creating the potential for substantial disruptions and adverse economic effects on interstate commerce and trade.

The petition process established for bioengineered plants under the *U.S. Coordinated Framework for the Regulation of Biotechnology* and the *Plant Protection Act* provides seed developers with the national clearance they need to commercialize bioengineered crops, provides farmers with clarity with respect to the crops they can legally grow, and provides farmers, agribusinesses, food companies, and consumers with confirmation that bioengineered crops are as safe to grow, market, and consume as non-bioengineered crops.

Local cultivation bans, however passionately their supporters may favor them, pose a direct threat to the reliability of the Federal system of uniform science-based regulation that governs agricultural biotechnology in the United States. Local bans result in a patchwork of laws governing farming. This is a serious and unnecessary obstacle to interstate commerce; local governments lack the expertise and resources to second-guess the expert decisions of national regulatory agencies.

Biofuels, Renewable Chemicals, and Biobased Products

Farm bill energy programs (Title IX) generate new revenue streams for American manufacturers, high-tech and construction jobs in rural America, and additional income streams for farm families. Authorizations and funding for farm bill energy programs are critical to a strong rural, biobased economy.

Key provisions of the farm bill energy title important to the biotechnology innovation sector include: (1) mandatory, rather than discretionary, funding; (2) a robust Section 9003 Biorefinery Assistance Program that offers continued eligibility to renewable chemicals producers; (3) a strong Biobased Markets Program, Biomass Crop Assistance Program, and Biomass Research & Development initiative; and (4) a commitment to greater research on other efforts that grow the biobased economy.

SUBMITTED STATEMENT BY NATIONAL TURFGRASS FEDERATION

The National Turfgrass Federation (NTF), a nonprofit organization formed in 2007, coordinates and advocates for turfgrass research within the Federal Government and private industry. Prior to the 2008 Farm Bill, NTF believed a more visible role was needed for the turf industry to promote its economic, environmental, and aesthetic values to society. Following successful inclusion of "turf" and "sod" as horticulture crops in the 2008 Farm Bill, NTF continues to pursue competitive research grants under USDA's National Institute for Food & Agriculture (NIFA), and intramural research within USDA's [Agricultural] Research Service (ARS). These efforts are augmented by our National Turfgrass Evaluation Program (NTEP), designed to conduct uniform evaluation of turf varieties, the results of which help determine adaptable cultivars for efficient use and low maintenance costs. We believe these approaches offer valuable cross-sections of experimentation, analysis, and extension outreach to scientists, producers, commercial retailers, and consumers. It also benefits collaborative research with private industry.

Turf is ranked as America's fourth largest crop, comprising approximately 60 million acres nationwide. It forms the foundation for lawns, gardens, commercial and ornamental landscapes, parks, recreation fields, golf courses, and medians along our nation's highways. Turf also impedes soil erosion and contaminant runoff into streams, bays, and waterways. As a result, NTF believes turf research is critical for many of America's greenscape initiatives, and for creating environmental buffer zones for acreage preservation.

Three of our most active and successful research areas are the following: the *Specialty Crop Research Initiative (SCRI),* where turf science is developing sustainable grasses adaptable to various climates, and requiring less water and chemical fertilizer applications; *Specialty Crop Block Grants,* two of which were recently utilized to construct "Grassroots" education exhibits at the multi-field Maryland SoccerPlex & Discovery Sports Center in Montgomery Co., Maryland and the U.S. National Arboretum in Washington, D.C.; and many success stories with *Smith-Lever Extension,* an active education and outreach area for turf for over 80 years. A considerable amount of turf's extension resources relate to sports fields, commercial landscapes, and residential lawns. Extension also conveys discoveries from applied research toward sustainable practices lowering maintenance costs, and increasing durability of grass types based on usage and climate growth factors. Both critical factors in drought-stricken areas of the West.

In the past decade, turf has received a lower percentage of research related to other specialty crops. While SCRI, Block Grants, Extension, and Hatch/Evans-Allen funding remain vitally important, NTF members also utilize research funds from

the United States Golf Association (USGA), Golf Course Superintendents of America Association, and numerous chemical companies. Rather than limit funding sources, NTF prefers a balance between USDA grants and private industry. We believe this enhances scientific collaboration, and affords more comprehensive results for turf producers and consumers. As such, NTF is a strong supporter of NIFA's new Foundation for Food & Agriculture Research (FFAR). We welcome FFAR's mission to establish ties between government, academia, and private industry. This also creates new avenues for exchanging ideas, and increasing awareness of budgetary parameters for research within each of those entities.

SUBMITTED STATEMENT BY RISE (RESPONSIBLE INDUSTRY FOR A SOUND ENVIRONMENT©)

Thank you to Chairman Davis and Ranking Member DelBene for holding today's hearing and furthering this important dialogue. RISE is the national not-for-profit trade association representing close to 200 manufacturers, formulators and distributors of specialty pesticide and fertilizer products to both the professional and consumer markets. Our members provide solutions to nursery and greenhouse production, vegetation management, lawn and garden customers, sport field managers, golf course superintendents, structural pest control operators and to public health officials.

Americans on and off the farm seek the solutions we provide to pest problems and to enhance green spaces in and around their home, on the sportsfields where their children play, and in the lakes and on the golf courses where they recreate. Our role in the protection of the public from disease carrying pests, protecting America's waters and infrastructure from invasives, and providing healthy green spaces.

Unfortunately, some EPA actions are restricting our ability to create inspiring and healthy places where people live, work and play.

We highlight today two of our primary concerns, Clean Water Act permits National Pollutant Discharge Elimination System (NPDES) and the expansion of the *Water of the United States* Rule, and EPA proposals that are contrary to the risk based approach required under the Federal Insecticide Fungicide and Rodenticide Act (FIFRA).

Clean Water Act Permits and the *Waters of the United States* (WOTUS) Rule

To begin, the courts, not Congress, in October 2011, via *National Cotton Council* v. *EPA* created the new requirement that National Pollutant Discharge Elimination System (NPDES) permits be required for pesticide applications "to, over, or near" water. Congress and EPA never intended to regulate pesticide applications with Clean Water Act NPDES permits. Requiring NPDES permits is duplicative of the long-standing Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)-based regulatory process and provides no additional protection to water beyond those already in place via FIFRA.

Additionally, these permits are creating significant financial strain for small businesses, cities, counties, and states which we will highlight further below. We laud this Committee and the U.S. House of Representatives for passing the "The Reducing Regulatory Burdens Act" on several occasions since 2011. This legislation would clarify that NPDES permits should not be required for the application of EPA-approved pesticides. We support the current bill, H.R. 897, and encourage Congress to pass the measure. Additionally, the impacts associated with NPDES permits are exponentially increased with the recent expansion of the Clean Water Act definition of *Water of the United States* (WOTUS) regulation promulgated by EPA and the U.S. Army Corps of Engineers. The new rule, will subject additional water bodies to NPDES permit requirements including man-made water bodies, irrigation canals, and ponds or other water bodies that have a "significant nexus" to a larger water body. Again, we appreciate the efforts of the Agriculture Committee, the House Transportation and the U.S. House of Representatives for passing legislation to compel the agencies to withdraw this rule.

Should the rule go into effect, state, county, city, commercial, professional and residential businesses and individuals will see an immediate impact to their ability to protect public health, safety and property. Currently, all applicators providing vector control services must acquire NPDES permits to apply larvicides in water defined by the CWA. These applications are vital to protecting people and pets from mosquito-borne diseases like Zika Virus, West Nile Virus, Dengue Fever, heartworm, Eastern and Western Equine Encephalitis, and Chikungunya. The rule will require more resources to comply due to the significant expansion of regulated

waters which will likely lead to a reduction of resources available for the actual work of public health protection.

We are also concerned that the rule will negatively impact our national security, power, highway, rail and waterway infrastructure. Delays due to the expanded cost and liability of the expanded definition of WOTUS may result in clogged waterways and shipping lanes from invasive species, improperly maintained utility rights of way, transmission and transformer sites, and degradation of species habitat and the environment from invasive and noxious species. As just one example, Oregon's Department of Environmental Quality had to halt invasive species treatments due to permitting costs and liability.

We encourage Congress to continue to look for opportunities to require EPA and the Corps to withdraw the rule.

EPA Policies Must Uphold FIFRA's Risk Based Standard

FIFRA establishes a risk-based pesticide regulation standard and is the gold standard world-wide. Recent EPA activities appear to undermine this standard, which is a concern requiring immediate and ongoing attention.

EPA's proposed mitigation measures for pesticides that are acutely toxic to bees are one such example. The agency's approach to pollinator mitigation departs from FIFRA's risk-based standard and simply applies a hazard-based standard. The proposed hazard classification is an indiscriminate trigger and a clear moving away from the statutory risk-based standard and Congressional intent. Additionally, we are concerned by EPA's proposal to add an additional 10× safety factor to certain products, despite previously determining that the additional factor was not needed based on data. The inappropriate imposition of these safety factors would impact many uses, including mosquito control.

Finally, we call your attention to the recent habit of the Office of Pesticide Program of sending pesticide registrants letters that outline new regulatory requirements, which appears to circumvent the rulemaking process.

We ask the Subcommittee to continue to conduct appropriate oversight to ensure that EPA does not circumvent the rulemaking process or abandon FIFRA's risk-based standard in favor of precautionary principle-driven policies.

Conclusion

Thank you again for your attention and leadership on the issues discussed today. We are committed to work with you and EPA to continue to provide the plant health and pest management solutions necessary to create inspiring and healthy places where we live, work and play.

RISE is the national not-for-profit trade association representing more than 200 manufacturers, formulators, distributors and other industry leaders of specialty pesticide and fertilizer products to both the professional and consumer markets. RISE member companies manufacture more than 90 percent of domestically produced specialty pesticides used in the United States, including a wide range of products used on lawns, gardens, sport fields, golf courses, and to protect public health.

SUBMITTED QUESTIONS

Response from Hon. Charles F. Conner, President and Chief Executive Officer, National Council of Farmer Cooperatives

Questions Submitted by Hon. Rodney Davis, a Representative in Congress from Illinois

Market Access Program

Question 1. Could you offer some examples of how the Market Access Program (MAP) has helped your members?

Answer. Many of our members rely on the Market Access Program (MAP) to assist them in marketing products overseas. One example of a co-op who has successfully utilized MAP is Blue Diamond Growers. Blue Diamond has used funding to support its branded export and promotion activities since 1986, the year the MAP program began. In 1986, the cooperative marketed 240 million pounds of almonds while today it sells more than 2 billion pounds. Over the same period, Blue Diamond has seen its exports grow to over $750 million in export sales, which represents over 62 percent of total sales for 2012. In recent years, Blue Diamond has supported export expansion in the United Kingdom and Chinese markets by utilizing MAP funds for product trials, grass roots consumer marketing, and participation at in-country consumer food shows by carefully targeting press outlets in the countries of interest.

In China and Hong Kong particularly, Blue Diamond successfully introduced its product to younger consumers. Blue Diamond's marketing strategy in this market included a focus on bold flavors and MAP funds were used to successfully introduce young Chinese and Hong Kong consumers to the brand.

Biotechnology

Question 2. How should we improve regulatory efficiency in a way that enables genetic innovation so that we, as a nation, are better able to meet global food security challenges?

Answer. NCFC supports policies that enhance the ability of producers to use new practices and technologies to produce their crops, so long as the practices are based on proven science, are economically and environmentally sound and ensure food safety. Additionally, we strongly support the safety and science-based risk assessments conducted as part of the regulation of biotechnology crops. Farmer cooperatives are stakeholders in the development, deregulation, and commercialization of biotechnology crops, and the actions taken by government agencies on these crops have a direct and indirect impact on timely access to future traits now under development.

Breeders have a long history of developing new crop varieties that are more efficient and precise at producing the same desired characteristics that would normally occur through traditional breeding techniques, which require longer development time. Furthermore, these new varieties have a proven track record of health and safety for over twenty years. However, unknown costs, approval delays, and ambiguity of regulatory scope can stymie investments in agricultural innovation. In our modern agriculture system, time is critical to meeting the mounting pressures of global food insecurity and an array of environmental challenges, while maintaining competitiveness in the global marketplace. The U.S. Government must establish a regulatory environment that facilitates efficient agricultural innovation to enable American farmers to overcome these serious hurdles.

When considering changes to the regulatory approval process of biotechnology products, APHIS should focus its attention within the boundaries of its statutory authority. Narrowly, regulatory oversight should focus on the specific outcome of a trait, regardless of the process used to achieve it, and the level of risk to plant health, while maintaining a clear and unambiguous process.

Question 3. It seems food companies are moving forward in an effort to comply with the Vermont GMO food labeling law. In doing so, doesn't this state law create a de facto mandatory labeling system for the rest of the country? What implications will that have for farm to fork? If the Vermont law stands due to inaction by Congress or slow action in the courts, what does this mean for your members?

Answer. If Congress is unable to pass a uniform framework for labeling foods containing biotech ingredients, Vermont's labeling law, a state with 600 thousand residents, essentially will place mandatory labeling requirements and will dictate food labeling policy for the 320 million people that live in this country. In effect, we have promoted the Vermont Attorney General as the most powerful voice dictating food policy—over this Committee or its Senate counterpart, over the Secretary of Agriculture. Meanwhile, we are denying farmers technology that has cut fuel use, reduced erosion, and cut greenhouse gas emissions, and adding over $1,000 per year per family in added food costs at the grocery store.

Furthermore, if food companies are forced to comply with Vermont's labeling requirements, many of them will likely choose to reformulate their products to avoid labeling and stigmatizing their products. As a result, food companies would have to rely on foreign imports to fulfill production since 90 percent of corn and soybeans in this country are grown using biotechnology. It would have a devastating impact on our nation's environment and economy.

Question 4. What are some newer breeding methods, in terms of biotechnology? Are they regulated by the government?

Answer. The fundamental goal of plant breeding is to solve problems. Today, with an increased understanding of how plants operate, plant breeders are able to more precisely improve a plant's characteristics by efficiently focusing on the underlying genetics. With processes such as gene editing, breeders are able to make specific changes in existing plants in a way that mimics the changes that occur in nature. Equally important, breeding improved varieties can be accomplished in far less time than ever before enabling plant breeders to keep up with rapidly evolving pests and diseases.

Different from GMOs, the newer methods used by plant breeders focus on using a plant's own genes to create a desired trait, such as disease resistance or drought tolerance. It is a more precise way of improving plants. The improved seed does not have any "foreign" DNA.

Question 5. It has been said that USDA is considering changing their biotechnology regulations. Does your organization support this?

Answer. We feel it is appropriate for USDA to revisit their biotech regulations based on the nearly 30 years of experience they have with regulating biotech products. These products have been hugely beneficial for farmers and are completely safe for consumers and the environment.

However, USDA is proposing sweeping changes and must do much more to consult with impacted stakeholders, other agencies, and international regulators before finalizing a proposed rule. They are considering completely changing what and how they regulate which would have significant unintended consequences both for innovation in U.S. agriculture and for U.S. agricultural exports.

Question 6. What are the opportunities for the next generation of innovative tools for farmers?

Answer. The overriding benefit to plant breeders, farmers and consumers is time. For breeders, it is essentially a race against the rapid evolution of diseases and pests and dealing with the weather.

Plant breeders know much more today about how plants function. They can use that knowledge to be more efficient and precise at making the same desired changes that can be made over a much longer period of time using traditional breeding methods. There are terrific opportunities for the use of precise breeding techniques, such as gene editing, to address the most serious pests and diseases confronting specialty crops and also to improve products for consumers with enhanced nutrition, colors, flavors, and shelf-life.

Because new methods like gene editing are efficient and economical, they are accessible to public and commercial plant breeders and can be used across all agriculturally important crops, including food, feed, fiber, and fuel crops.

Question 7. The headlines of major newspapers and many of the cable news shows cast American agriculture in a negative light—though many of those stories are rife with inaccuracies. Unfortunately, these stories drive policy such as what we see with mandatory biotech warning labels. What recommendations do you have for your colleagues in the industry to engage the public to counter these negative attacks? What is your group doing to avoid repeating history so we don't have the consumer distrust with these new technologies like we do with current biotech breeding techniques?

Answer. The food and agriculture industry is embracing the fact that today's consumers want to know more about how their food is produced. We welcome the opportunity to be the source of that information and share all the good things farmers are doing to provide safe, affordable food to the American consumer. In fact, several members of our coalition have committed to a new initiative giving consumers easy, instantaneous access to information about the ingredients in the foods they are purchasing through their website and other technologies. These are methods of reaching out to those consumers who desire the information in a meaningful, informative way—ways that an on-package symbol cannot provide.

Also, just recently the House included a provision in the FY 2017 USDA/FDA Appropriations act to provide $3 million for FDA and USDA to better inform the public about the application of biotechnology to food and agricultural production. NCFC applauds the appropriators for including the provision that will promote farmers' access to modern agricultural tools and advancements in plant and animal agricultural applications that are helping society meet current and future food production challenges.

Pesticides

Question 8. Many people who rely on pesticides to protect their health and property have stated that one or more of EPA's recent actions have taken away their access to important products needed to fight pests. What should EPA be doing to ensure that those producers will have the time-proven products and the new, effective products available to meet their needs?

Answer. Our members care about is the ability to defend against pest threats to their crops, food, homes, and health. For example, NCFC has reminded the Agency of the need for new, effective weed management tools. Prominent academics, farm group leaders, and many others have said multiple modes of action are the most effective way to deal with weed resistance issues while preserving environmentally beneficial cropping systems like no-till or conservation tillage. Yet, when it comes to crop protection product registrations at EPA, some innovative products that can help growers meet these goals have been either sitting at the Agency for several years, or in some cases, courts have intervened to vacate registrations. If EPA continues to fail to adequately calculate and/or consider the economic costs of these im-

pacts—and beneficial uses—in its regulatory proposals, the consequences could be devastating.

General Regulatory Impact

Question 9. Public policy has an enormous impact on the economic viability of farms. Can you offer a couple examples of recent regulatory actions that have had a negative impact? What about legislative actions at the state or national level?

Answer. We must ensure that our public policy does not hurt the economic viability of farm and ranch families across the country. Often these issues are outside traditional farm policy and come from corners of the Federal Government that may not understand production agriculture. Yet, a broad range of regulatory actions—those pending at Federal agencies or in the pipeline and coming soon to a farm near you—have the potential to increase the costs and reduce the margins of cooperatives and their farmer and rancher member-owners. Whether the regulations deal with the environment, immigration and labor, food safety, or financial reform, they can create an uncertainty that threatens to hold back investment and growth across the agricultural sector.

Farmers and ranchers deal with numerous government agencies; their regulatory burdens run the gamut. One example of a regulatory challenge currently facing farmers is the administration of the H–2A agricultural worker program which is creating a growing number of delays in the timely processing of applications and visa petitions. This breakdown is impacting growers and ranchers who are trying to hire workers in time for harvest and threatening millions of dollars in perishable agricultural products.

For instance, the Department of Labor's (DOL) Office of Foreign Labor Certification (OFLC) has a policy that is not supported by current regulations which requires all workers requested in any single petition be brought onto the job on the start date of the petition. With the current delays at both the OFLC and U.S. Citizenship and Immigration Services (USCIS), farmers and ranchers are unable to receive these workers by the date they are actually needed. Growers must be given the opportunity to provide a start date that is earlier than the actual anticipated start date as a "grace period" in an effort to combat the administrative delays.

Furthermore, the Validation Instrument for Business Enterprises (VIBE) program, as it is currently administered, is inappropriate for the H–2A program. VIBE requires an annual subscription to Dunn & Bradstreet which is an additional expense for growers. It is highly unusual for family farms to subscribe to Dunn & Bradstreet except to comply with the VIBE program.

Last, numerous employers have been receiving Notices of Deficiencies (DOL) or Requests for Further Evidence (USCIS) related to proving that agriculture is in fact seasonal in nature. These notices create an unnecessary delay in the process which jeopardizes the viability of large segments of the agricultural economy.

Question 10. Does your organization support passage of H.R. 897, the Reducing Regulatory Burdens Act of 2015? Do you believe the burden and liabilities of obtaining a water permit are limiting or delaying mosquito control applications that control viruses like Zika and protect human health?

Answer. Pesticides play an important role in protecting the nation's food supply, public health, natural resources, infrastructure, and green spaces. They are used not only to protect crops from destructive pests, but also to manage mosquitoes and other disease carrying pests, invasive weeds and animals that can choke our waterways, impede power generation, and damage our forests and recreation areas. However, pesticide users must now comply with the added requirement that certain pesticide applications—already stringently regulated under the FIFRA—obtain a Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA) or delegated states. Legislation is needed to clarify that Federal law does not require water permits for FIFRA-compliant pesticide applications.

Americans are at an increasing threat from vector-borne diseases. West Nile Virus and encephalitis have been serious problems for the last several years, but new diseases such as dengue fever and Chikungunya are now an increasing threat to Americans and particularly infants. Sadly, new vector-borne threats continue to emerge. In Mexico and South America, the mosquito-borne Zika virus is responsible for infants being borne with significant birth defects. NCFC strongly believes that such duplicative paperwork requirements like that of the pesticide NPDES permit stand to take scarce resources away from their intended use.

NCFC seeks legislative action to remedy counterproductive regulatory measures, resource burdens, and legal liabilities created by the new NPDES general permit for certain pesticide applications. Specifically, we urge Congress to pass H.R. 897, the Reducing Regulatory Burdens Act of 2015, in order to clarify that NPDES per-

mits are not required for FIFRA-registered pesticides when applied according to their product label.

Question 11. What do you believe will happen if H.R. 897 is not enacted and President Obama's WOTUS rule goes into effect?

Answer. This issue now takes on new importance in light of the unprecedented overreach by EPA in the recently-finalized regulation redefining what qualifies as a '*water of the United States*'. The number and nature of pesticide applications subject to permitting will see a significant increase due to the expansion of EPA's definition of what is considered a *water of the U.S.*

EPA took comments on an Information Collection Request (ICR) on the likely costs and burdens associated with the upcoming 2016 revisions to EPA's and states' NPDES general permits for pesticides applied into, over or near a "*water of the U.S.*" (WOTUS). Comments were filed highlighting the broad concurrence of state water agencies that no environmental benefits ensue from this double permitting, current economic and legal burdens, and the redundant compliance requirements of the NPDES permits given EPA regulation of such pesticide use under FIFRA.

Question 12. We've heard a lot about the need for oversight of the EPA's pesticide program. What are your organization's top priorities for regulatory oversight?

Answer. Specific to crop protection, Federal laws dictate that the U.S. Department of Agriculture (USDA) serve as an important advisor to EPA in the regulation of pesticides. Historically, USDA's expertise and advice have been evident in the actions EPA has taken to evaluate pesticides and their uses. USDA's perspective and knowledge of production agriculture is critical since we know that crop protection products can increase farm yields as much as 40 percent to even 70 percent depending on the crop.

It should concern this Subcommittee to hear the farm community expressing increasingly urgent concerns about the lack of seriousness with which EPA takes and incorporates USDA expertise, advice, and opinions, especially during formal interagency review. In particular, it is unclear to what extent USDA expertise was valued and included in recent actions, such as Endangered Species consultations, the revised Worker Protection Rule, and the recent benefits analysis for seed treatments on soybeans.

NCFC members have heard a lot about what actions EPA has or is planning to take that impact the use of pesticides. It would be very helpful for this Subcommittee to instruct EPA to develop a comprehensive list of all the agency actions (not just rulemakings) over the last 8 years and those planned thru the end of this year that restricted or have the potential to restrict existing or new uses of pesticides.

One such example occurred October 2015 when EPA proposed to revoke all tolerances for the important insecticide, Chlorpyrifos. In a huge departure from established scientific protocol and findings, EPA based this proposal on a decade's old, previously dismissed epidemiological study, known as the *Columbia Study,* that no one, perhaps even including EPA, has ever seen the actual data on to verify its validity. Further, EPA went so far as to impanel a special Scientific Advisory Panel to assess how to best use the epidemiological study during review.

Many parts of these actions are scientifically troubling, not least of which is the fundamental question of whether this particular study should be used at all, rather than figuring out how it should be used which is a presumption that runs afoul of previous expert recommendations. We are concerned that EPA has not been able to fully review all of the collected human epidemiology data because the authors of the studies in question have declined to provide the underlying data despite repeated Agency requests.

EPA currently bases its health and safety standards for pesticide regulation on robust studies following EPA-approved protocols. Exposures in these studies are known, effects are documented, human health impacts are determined, results can be replicated, and the underlying data are available for EPA evaluation. When data conflicts and decisions must be made, higher quality data must be used over data of lesser quality. Other data may form a basis for additional investigation, but it cannot not be accorded greater weight than high-quality guideline studies specifically designed for regulatory use. To do so would result in serious damage to the scientific credibility of EPA risk assessments.

Other recent activities by the Office of Pesticide Programs appear to circumvent the rulemaking process altogether by creating new 'internal' policies, 'interpretations' and 'assumptions,' or sending pesticide registrants letters that outline what are effectively new regulatory provisions. This "regulation by letter" procedure was used by EPA to mandate registrants include pollinator statements and a graphic on certain pesticide products, as well as for the Agency's pyrethroid labeling initiative.

In short, Congress also should conduct immediate and on-going oversight of EPA to ensure it stays within statutory boundaries.

Question 13. The United States has the world's most rigorous pesticide registration and review processes. Yet, when EPA's regulatory decisions are challenged in court, the Agency has not enjoyed many recent successes in defending its scientific process or decisions. Are these actions undermining EPA's credibility with the public?

Answer. FIFRA is a risk-based standard. Under the law, when pesticides are registered with EPA, the Agency determines the hazards associated with the product as well as any likely exposure. EPA is also supposed to take into account the benefits of a product, such as protection of the public health from disease-carrying pests, protection of our nation's buildings and infrastructure, protection of the food supply, *etc.* This is something EPA should be confident in and proud to defend. As a matter of fact, EPA does a great job defending the merits of our risk-based system when commenting on the European Union's precaution-based regulatory scheme. But, recently it seems when EPA regulatory decisions are challenged in the U.S., you seem reluctant to defend or, even more troubling, unable to properly provide evidence of the Agency's scientific decisions.

If the Agency is not robustly defending its regulatory decisions, they run the risk of encouraging public mistrust about the products that are used to protect public health, our infrastructure and the food supply. However, some recent EPA activities appear to focus only on the hazard aspect and ignore factors like exposure and benefits. EPA's proposed mitigation measures for pesticides that are acutely toxic to bees are one such example. We also saw backsliding on this point during the public debate on the Worker Protection Standard, where EPA seemed to question whether workers were at unreasonable risk even if properly trained and applying pesticides according to the label.

Food Safety Modernization Act

Question 14. You talk about the farm definition in FDA's produce safety rule. Can you explain what this definition is, and why it is important? Do you support revising the Farm definition?

Answer. The Preventive Controls for Human Food final rule contains a distinction between two types of farms: a Primary Production Farm and a Secondary Activities Farm. These definitions are important because operations that fall within these definitions are not covered under this rule. However, they may be covered under the Produce Safety final rule.

A Primary Production Farm is "an operation under one management in one general, but not necessarily contiguous, location devoted to the growing of crops, the harvesting of crops, the raising of animals (including seafood), or any combination of these activities. This kind of farm can pack or hold raw agricultural commodities such as fresh produce and may conduct certain manufacturing/processing activities, such as dehydrating grapes to produce raisins and packaging and labeling raisins." The definition is expanded to cover packing or holding raw agricultural commodities (such as fresh produce) that are grown on a farm that is under different ownership.

A Secondary Activities Farm is "an operation not located on the Primary Production Farm that is devoted to harvesting, packing and/or holding raw agricultural commodities. It must be majority owned by the Primary Production Farm that supplies the majority of the raw agricultural commodities harvested, packed, or held by the Secondary Activities Farm." This particular definition was included to account for farmers involved in off-farm packing to ensure their operations would fall under the definition of "farm."

Question 15. What does your group see as the most burdensome aspect of FSMA?

Answer. While it is hard to rank the most burdensome aspect of FSMA, many of our members feel like it is death by a thousand cuts. FDA recognized many of our complaints and altered the rules; however, there are still overly burdensome and duplicative aspects that do not actually result in a safer food supply. While not adding much to the food safety side, they will drive up costs and require additional staff time and record-keeping as operations adapt the way they do business and retain records.

For example, the Sanitary Transportation Rule may cause harm in the use of byproducts for cattle feed. Byproducts are the peels, stems, *etc.* that are removed during processing. Currently, working with third party dairies or ranchers, some of our members have a workable program for cattle feed or soil amendment. These byproducts are often sent off for immediate delivery and fed to animals within a short timeframe. Additionally, these products are commonly fed to grazing animals that regularly feed from the ground. Excessive regulations should not be applied during the transportation of an animal feed that is ultimately going to be deposited on the

ground and exposed to the elements. We do not wish to see a sustainable and cost-effective way to manage byproducts of processing facilities discontinued because of these regulations.

Research

Question 16. Can you highlight some specific benefits from USDA research that your members have experienced?

Answer. The Specialty Crop Research Initiative (SCRI) is a great example of a robust research program broadly supported by the sector. The SCRI program was established to meet the unique needs of the specialty crop industry by supplying grants to support research and extension. In particular, the SCRI Citrus Disease Research and Extension Program (CDRE) are of significant importance to our citrus cooperatives. The program was authorized by the 2014 Farm Bill and awards funds to conduct research, extension activities, and technical assistance to fight citrus diseases and pests, such as Huanglongbing (HLB), commonly referred to as citrus greening. Citrus greening is a serious concern to our citrus cooperatives with research on how to combat the disease remains a top priority. Citrus greening is responsible for devastating losses in the citrus industry, threatening its future viability. A solution is desperately needed as it has already destroyed millions of citrus acres across the U.S. Once a tree is infected, there is no cure; research must get out ahead of this disease before it is too late. This is just one of the many examples of the importance of agricultural research programs and its integral relationship to the success of farmer cooperatives and the agricultural industry as a whole.

Farm Bill

Question 17. What are your top priorities for Congressional oversight of programs affecting your members?

Answer. Given the diversity of NCFC's members, our interest in the farm bill go from beginning to end—whether that is examining the efficacy of new commodity title programs to the benefit of voluntary, locally-led conservation programs to the value of nutrition, trade promotion, and research programs.

Early action and an educational focus by the House Agriculture Committee will enhance prospects for completing new farm bill legislation when the time comes. Even though every farm bill takes its own unique path to final enactment, one fact of the process remains the same: it has to start somewhere and the sooner the educational process starts, the better.

As this work begins, it is imperative that Federal policies provided by the farm bill promote an economically healthy and competitive U.S. agriculture sector. These programs serve a variety of purposes, including: meeting the food, fuel, and fiber needs of consumers worldwide; strengthening farm income; improving our balance of trade; promoting rural development; and creating needed jobs here at home.

In examining the dynamics of the farm economy, we are reminded that numerous influences—some of which are out of our control—come into play. Extremely volatile weather and global markets result in equally volatile farm gate prices, yields, and costs of production. Today's margins for most agricultural commodities are tight, and farm income has retreated significantly from its highs just a few years ago. Our common, ultimate goal—and at the heart of the farm bill—is to preserve the productive capacity of our farms by maintaining a responsive and equitable safety net, combined with adequate funding, for all regions and commodities, as well as comprehensive risk management tools, such as a strong crop insurance program.

Congress must ensure that the marketplace, not the Federal Government, determines the cost of production for America's farmers and ranchers. If our farms, ranches, and cooperatives are weighed down with costs imposed by either regulatory actions or delays in the regulatory process, farm income will decrease and market share will be lost to our competitors.

Labor Regulation

Question 18. What costs will businesses incur as a result of overtime regulations?

Answer. These costs will be crippling for small businesses, such as many farmer co-ops. Two examples we can point to within our membership are a farm supply and marketing cooperative in Illinois and a diversified energy, grain, and food cooperative in Minnesota. Based on the Illinois Cooperative's initial calculations, the new threshold test could affect approximately 900 employees and add an additional cost of $4.5 million to the cooperative. Based on the Minnesota Cooperative's initial calculations, the new threshold test could affect approximately 270 employees and add an additional cost of $1million to the cooperative.

This is certainly a case of one size does not fit all. The average salary in many rural areas and small towns outside of major metropolitan areas and in certain lower-wage regions of the country is substantially lower than the national average.

Many, possibly most, current salaried managers and supervisors will probably revert from being salaried to hourly employees. DOL's aggressive move puts rural America at a huge disadvantage.

Question 19. Are you opposed to raising the salary threshold above the poverty level?

Answer. No, NCFC understands an update is needed since the salary threshold has not been updated since 2004, however, we believe that DOL should maintain the threshold at the 20th percentile. Maintaining this threshold using updated figures would achieve the desired outcome of increasing the effectiveness of the salary test, as well as bring the salary level above the poverty line.

Question 20. What are some of the extraneous impacts OSHA's July 2015 revised interpretation of Process Safety Management standards has on the agriculture community?

Answer. Do to the elevated cost requirements of compliance with PSM standards, many of our co-ops have decided to no longer sell anhydrous ammonia at their retail facilities. These actions have several trickling effects on the farming industry. Fewer locations selling the fertilizer means farmers will be forced to travel much further distance to purchase it and haul it back to their farms, increasing the amount of time the chemical spends on public roadways. Furthermore, if farmers don't have access to anhydrous ammonia, they will likely replace it with the next best fertilizer, urea, a less effective, more expensive dry fertilizer. Farmers would have to purchase new equipment to apply the dry fertilizer and they would need to apply more of it to the land to achieve the same results they had with anhydrous.

Question 21. How can this Subcommittee provide oversight on the Process Safety Management (PSM) issue?

Answer. It is clear that OSHA is not going to review its July 2015 memo or its unintended impacts on agriculture retailers and producers unless it is forced to do so by Congress. OSHA's response to Congress's directive contained in the report language of the 2016 Omnibus Appropriations to carry out a notice and comment rulemaking procedure, conduct a third-party cost benefit analysis and to establish a new classification at the Census Bureau specifically for farm supply retailers, was to delay enforcement through the end of the fiscal year. This Subcommittee could be most helpful by encouraging the Appropriations Subcommittee on Labor, Health and Human Services, Education and Related agencies to include statutory language in the 2017 Appropriations bill.

Response from Hon. Jeff M. Witte, Secretary/Director, New Mexico Department of Agriculture; Member, Board of Directors, National Association of State Departments of Agriculture

June 2, 2016

Hon. RODNEY DAVIS,
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.;

Hon. SUZAN K. DELBENE,
Ranking Minority Member,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

Re: **Questions for the Record: House Committee on Agriculture, Subcommittee on Biotechnology, Horticulture, and Research Public Hearing: *Focus on the Farm Economy—Factors Impacting the Cost of Production***

Dear Chairman Davis and Ranking Member DelBene:

The National Association of State Departments of Agriculture (NASDA) submits the following responses to the Questions for Record on behalf of The Honorable Jeff Witte, Secretary for the New Mexico Department of Agriculture, to the House Agriculture's Subcommittee on Biotechnology, Horticulture, and Research following the April 27, 2016 Public Hearing: Focus on the Farm Economy—Factors Impacting the Cost of Production.

NASDA represents the Commissioners, Secretaries, and Directors of agriculture in all fifty states and four territories. As elected and appointed officials, our members are strong advocates for American agriculture and are partners with a number of Federal agencies in regulating, marketing, and providing services to the agricultural community. NASDA appreciates the Subcommittee extending the invitation and opportunity to Secretary Witte to testify on our behalf, and upon your request,

NASDA is pleased to provide additional information or clarification regarding the following responses.

Questions Submitted by Hon. Rodney Davis, a Representative in Congress from Illinois

Market Access Program

Question 1. Could you offer some examples of how the Market Access Program (MAP) has helped your members?

Answer. MAP encourages the development, maintenance, and expansion of commercial agricultural export markets through public-private partnerships. The program especially helps small businesses in urban, suburban, and rural areas access foreign markets and increase export opportunities.

For example, NASDA produces the U.S.A. Pavilion at the Americas Food & Beverage Show in cooperation with the Foreign Agricultural Service (FAS) and with the support of MAP funds. At the 2015 Americas show FAS and NASDA supported a U.S.A. Pavilion with 132 U.S. exhibitors, mostly small and medium-size companies. Other FAS cooperator groups such as U.S.A. Poultry & Egg Export Council, U.S. Meat Export Federation, and the Southern U.S. Trade Association are regular exhibitors within the U.S.A. Pavilion and host educational seminars and receptions. U.S.A. Pavilion exhibitors reported on-site export sales of $4.625 million and projected an additional $31.02 million in sales of U.S. agricultural and food products over the next twelve months. 67% of the USA Pavilion exhibitors closed or expected to close new business in a new (to them) export market.

By contrast, foreign countries invest significantly more resources into promoting and marketing their respective agricultural products. For example, according to a 2013 study (*An Analysis of Competitor Countries' Market Development Programs,* Agralytica Consulting, June 2013) twelve countries and the European Union spent an estimated $1.8 billion, including $700 million in public funds, on export promotion for agri-food products. For comparison, the same study found in 2011 the total U.S. export promotion public expenditure was $256 million. Compared to agricultural production value, the U.S. public spending on export market development is among the lowest relative to these twelve nations.

Biotechnology

Question 2. How should we improve regulatory efficiency in a way that enables genetic innovation so that we, as a nation, are better able to meet global food security challenges?

Answer. NASDA supports our Federal agency partners' in revising and improving Federal regulations (consistent with the Coordinated Framework for the Regulation of Biotechnology) to better reflect modern technologies and to facilitate an informed and efficient regulatory framework that enables producers to meet the growing global demand for food while helping farmers and ranchers achieve the sustainability goals of their land and operations for generations to come.

NASDA recommends Federal agencies undertake a thorough and robust review of the current regulatory structure, in conjunction and consultation with partner agencies responsible for regulating products of biotechnology and the agricultural community, to enhance continued alignment, agency roles and responsibilities, and improve communication between the Federal, state, and agricultural stakeholders.

NASDA stands ready to assist our Federal partners and the agricultural community to ensure any improvements reflect and incorporate the best available science, provide a consistent regulatory framework, facilitate innovation, and enable our producers, growers, and other agricultural stakeholders to continue to produce our nation's food, fiber, and fuel in a collaborative and productive manner.

Question 3. It seems food companies are moving forward in an effort to comply with the Vermont GMO food labeling law. In doing so, doesn't this state law create a de facto mandatory labeling system for the rest of the country? What implications will that have for farm to fork? If the Vermont law stands due to inaction by Congress or slow action in the courts, what does this mean for your members?

Answer. NASDA is concerned that without a Federal solution, a patchwork of state labeling laws will add significant complications for food companies and disadvantage agricultural producers. We are already seeing food companies implementing national labeling decisions in order to comply with one state's law.

In addition, we are concerned with a patchwork of requirements that result in labels approved for use in one state not complying with the requirements of another state. In fact, this is already playing out. We are aware of at least one company's "Vermont compliant" label for a flavored dairy product that was rejected by another state's review for compliance with that state's dairy labeling requirements. This creates a regulatory nightmare for food producers who use flavored dairy products in

their recipes by creating the need for regionalizing stock keeping units (SKUs) or pulling their entire product line from a state. Until a national, uniform standard is enacted there will be a patchwork of state laws that threaten the prosperity of America's agriculture and unnecessarily complicate and frustrate the stream-of-commerce throughout the food industry. These costs and challenges will ultimately be passed onto the consumer. Congress must act now to avoid this economic impact.

Question 4. It has been said that USDA is considering changing their biotechnology regulations. Does your organization support this?

Answer. Please see response to *Question 2* above. In addition, we applaud Congressmen Newhouse's and Schrader's leadership in calling for a more thorough review of these sweeping regulatory changes to better identify any unintended consequences this proposal may bring before USDA proceeds further with this rulemaking process.

Pesticides

Question 5. Many people who rely on pesticides to protect their health and property have stated that one or more of EPA's recent actions have taken away their access to important products needed to fight pests. What should EPA be doing to ensure that those producers will have the time-proven products and the new, effective products available to meet their needs?

Answer. Regardless of the Agency's final registration decision, it is essential for EPA to comply with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA),[1] which requires these decisions be made on a scientifically-sound, risk-benefit basis throughout the Agency's registration and reregistration review process. Equally important is the need for EPA to ensure adherence to both the spirit and intent of the: Regulatory Flexibility Act;[2] Unfunded Mandates Reform Act;[3] Executive Orders 13132[4] & 13563[5]; and develop actuarially sound Economic Analysis with all of its proposed rulemakings.

Regulations must be based on the best available, sound, validated, and peer-reviewed science and rely on science-based risk assessments. Moreover, regulatory agencies must ensure policymakers do not misuse or inappropriately apply invalidated or unrelated scientific findings to policy determinations.

NASDA especially appreciates the work USDA's Office of Pest Management Policy (OPMP) executes to ensure policy or regulatory initiatives are based on scientifically sound positions. OPMP is an invaluable resource and advocate for including sound science in the development of regulatory actions impacting agriculture. NASDA encourages increased support for OPMP's activities, as well as ensuring OPMP's perspectives are advanced in the interagency review process.

In summary, EPA must adhere to the statutory guidelines and process requirements articulated under FIFRA and other controlling statutes as the Agency executes its science-based registration and review of these critical crop protection tools. NASDA appreciates the work of OPMP and the oversight of this Subcommittee to help ensure EPA complies with these obligations as it fulfills its mission.

Question 6. Public policy has an enormous impact on the economic viability of farms. Can you offer a couple examples of recent regulatory actions that have had a negative impact? What about legislative actions at the state or national level?

Answer. There are a number of regulatory actions negatively impacting, complicating, and frustrating agricultural production across the county, and to date, the economic impact of these initiatives are difficult, if not impossible, to quantify. In addition to the economic burden placed on producers, these regulatory policies also result in unfunded mandates to the state lead agencies tasked with conducting on the ground compliance and enforcement activities.

Those challenges include, but are not limited to: EPA's Agricultural Worker Protection Standards (WPS); EPA's proposed Certification of Pesticide Applicator Rule; EPA's *Waters of the U.S.* rule (WOTUS); EPA's National Pollutant Discharge Elimination System (NPDES) duplicative regulatory framework; and EPA's proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products.

One specific example illustrating the economic impact regulatory initiatives may have on producers and state lead agencies is found in EPA's Certification of Pes-

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[1] 7 U.S.C. § 136, *et. seq.*
[2] 5 U.S.C. § 601, *et. seq.*
[3] 2 U.S.C. § 1501.
[4] Executive Order No. 13132, *Federalism,* 64 FR 43255 (1999).
[5] Executive Order No. 13563, *Improving Regulation and Regulatory Review,* 76 FR 3821 (2011).

ticide Applicators proposed rule. Under this proposal, EPA's Economic Analysis[6] (EA) claims the rule changes will result in an estimated $80.5 million in monetized benefits with corresponding estimated costs to be $47.2 million; however, the Agency's EA significantly underestimated the costs of the proposed rule and overstated the anticipated economic benefits the proposed changes may bring. NASDA has urged EPA to republish an updated EA based on sound methodology that takes into consideration the numerous factors outlined in both the Small Business Advocacy Review Panel's (hereinafter "Panel") comments and the Texas A&M AgriLife Extension Service, Agricultural Economics, Agricultural & Environmental Safety's EA.

The Texas A&M AgriLife Extension compiled a comprehensive EA tool to assist states in determining an accurate depiction of the anticipated economic impact to the state lead agencies. This economic model demonstrated numerous shortfalls in EPA's EA. Following review and application of the Texas A&M model to their individual programs under the proposed rule changes, states found the estimated cost to their state program will actually increase by multiple factors of ten above what EPA's EA stated, and EPA's EA failed to identify the significant amount of funding states contribute to their own certification programs, which is not accounted for in cooperative agreement budgets. In several states, EPA funding contributes only five to ten percent of the state's total cost to conduct their certification program. In addition, the Agency's EA did not fully account for the significant internal administrative costs (including but not limited to information technology and tracking programs) state lead agencies will be required to absorb in order to implement these proposed rule changes. Many of these administrative operations require multi-year agreements and obligations, which cannot be unwound or altered without significant financial investment and/or penalties.

In addition to the significantly understated costs to the state lead agencies, the Agency's EA failed to account for a number of factors impacting the regulated community. For example, the SBA Panel noted "EPA did not estimate travel expenses for applicators to obtain training or take exams for certification or recertification," which will ". . . impose excessive costs in operating their businesses as a result of increased time away from the job, travel expenses to attend recertification trainings, and the class fee for attending the CEUs."[7] The SBA Panel also found "EPA's proposal will result in decreased training and education rather than the Agency's goal of increased training and education."[8] The SBA Panel's findings are greatly concerning and further demonstrate the significant oversight in the actual estimated costs of the proposed rule.

EPA's EA claims the primary economic benefits are monetized benefits from avoided acute pesticide incidents, qualitative benefits (including reduced latent effects of avoided acute pesticide exposures), and reduced chronic effects from lower chronic pesticide exposures (chronic diseases). To support this claim, EPA's EA cites estimates of poorly reported data and anecdotal evidence from poison control centers. EPA acknowledged the lack of economic integrity in these numbers, and it is inappropriate for EPA to indicate or imply a causal association between these data sources and any estimated benefits. EPA is intimately familiar with the routine and robust investigations state lead agencies conduct in response to alleged pesticide exposure incidents. NASDA is disappointed EPA drew various conclusions through unknown and unsubstantiated data to support the EA's estimated benefits associated with this proposed rule, and we want to contrast this dynamic with the reality that states provide EPA with volumes of data showing overwhelming compliance by the regulated community. It is disheartening, at best, to see EPA does not discuss or incorporate that information into its regulatory decisions.

The Agency cites a reduction in exposures and associated risks under the EA's estimated benefits to the proposed rule, but the Agency subsequently notes it is "not able to quantify the benefits expected to accrue from the proposed changes." NASDA considers it inappropriate to estimate benefits based on possible associations when there is no scientific evidence supporting such causal connections. EPA conducts a comprehensive and rigorous process for registering and re-evaluating pesticides, and EPA devotes significant resources to the regulation of pesticides to ensure each pesticide product meets the FIFRA requirement to not cause unreasonable adverse effects to the human health and the environment. NASDA fully supports EPA's scientifically-based review and registration approval process. However, the EA identi-

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[6] *Pesticides; Certification of Pesticide Applicators,* 80 FR 51356 (Aug. 24, 2015) (to be codified 40 CFR 171).

[7] *Panel Report of the Small Business Advocacy Review Panel on EPA Planned Revisions to Two Related Rules: Worker Protection Standards for Agriculture and Certification of Pesticide Applicators.*

[8] *Id.*

fies estimated benefits based on implied or causal connections not supported by scientific data. This is in direct conflict with the Agency's registration and reregistration review programs.

In reviewing the oversights of EPA's EA and applying the sound methodology of Texas A&M's model, it is clear the actual estimated cost of the proposed rule significantly understates the cost and burden to both the state lead agency and the regulated community without sufficient or comparable benefits. NASDA has requested EPA work with Texas A&M AgriLife Extension, the State Departments of Agriculture, and the regulated community to revise and republish an updated EA to better quantify the actual estimated costs and benefits, if any, of the proposed rule changes before the Agency takes any further action with this proposal.

Question 7. In the *National Strategy to Promote the Health of Honey Bees and Other Pollinators* and the EPA *Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products,* EPA offered support for voluntary stewardship methods to reduce exposures during the planting of pesticide treated seed. And, on January 4, 2016, EPA released its preliminary pollinator assessment for one pesticide indicating that it posed a low-potential risk to bees when used as a seed treatment. Do you have any specific concerns with the National Strategy document?

Answer. NASDA members, individually and collectively, have been actively engaged in identifying the various factors impacting pollinator health, and more importantly, developing public-private partnerships on the state level to bring forward sound solutions to protect and promote honeybees and other native pollinators. These public-private partnerships are commonly referred to as State Managed Pollinator Protection Plans, or "MP3s."

NASDA points to the scientific review of the 2007 National Academy of Sciences (NAS) report, Status of Pollinators in North America, and the 2013 U.S. Department of Agriculture (USDA)—U.S. Environmental Protection Agency (EPA) joint report, *National Stakeholders Conference on Honey Bee Health,*[9] which found there are numerous and complex factors associated with bee health, including: parasites and diseases, lack of genetic diversity, need for improved forage and nutrition, need for increased collaboration and information sharing, and a need for additional research on the potential impacts certain pesticides may have on honey bee health. The Report found the parasitic mite, Varroa destructor, a known cause for amplified levels of viruses and closely associate with overwintering colony declines, to be the single most detrimental pest of honeybees.

These complex factors do not lend themselves to a single, uniform regulatory solution. However, a state-by-state approach utilizing the State Departments of Agriculture as the vehicle to unify, discuss, and develop MP3s built on robust communication efforts, Best Management Plans (BMP), and Integrated Pest Management (IPM) programs specifically crafted to serve and support local agricultural practices and producers is already a proven formula in a number of states (California,[10] Colorado,[11] Florida,[12] Mississippi,[13] and North Dakota [14]). We appreciate the support and partnership we have received from our partners at EPA, to date, in identifying MP3s as a successful, non-regulatory vehicle to achieve risk mitigation and enhance collaboration across the agricultural stakeholder community, and we note the White House's *National Strategy to Promote the Health of Honey Bees and Other Pollinators* [15] recognizes the MP3 as a model for success.

At the same time, we do have significant concerns with a current policy proposal EPA published for public comment that is currently under review. In this policy proposal, EPA identified 76 active ingredients that will impact over 3,500 crop protection tools as potentially "acutely toxic to honeybees" and subject these tools and uses

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[9] *Report on the National Stakeholders Conference on Honey Bee Health* (March 2012). Retrieved from: *http://www.usda.gov/documents/ReportHoneyBeeHealth.pdf*.

[10] California Department of Food and Agriculture. 2014. *Bee and Beehive Information. http://www.cdfa.ca.gov/plant/pollinators/index.html*.

[11] Colorado Environmental Pesticide Education Program. *Pollinator Protection 2013. http://www.cepep.colostate.edu/Pollinator%20Protection/index.html*.

[12] Florida Department of Agriculture and Consumer Services. 2014. *Florida Bee Protection. http://www.freshfromflorida.com/Divisions-Offices/Agricultural-Environmental-Services/Consumer-Resources/Florida-Bee-Protection*.

[13] Mississippi Honeybee Stewardship Program. 2014 *http://www.msfb.org/public_policy/Resource%20pdfs/Bee%20Brochure.pdf*.

[14] North Dakota Department of Agriculture. 2014. *North Dakota Pollinator Plant.* A North Dakota Department of Agriculture Publication. *http://www.nd.gov/ndda/files/resource/NorthDakotaPollinatorPlan2014.pdf*.

[15] White House. (2015). *National Strategy to Promote the Health of Honey Bees and Other Pollinators.* Retrieved from: *https://www.whitehouse.gov/sites/default/files/microsites/ostp/Pollinator%20Health%20Strategy%202015.pdf*.

to enhanced label restrictions. We are concerned with both the process and the substance of this proposal; neither of which are FIFRA compliant or based on a sound, science-based risk assessment approach. So we ask this Subcommittee to help ensure EPA's regulatory proposals are compliant with their obligations under FIFRA and consistent with their role as regulatory partners with the State Departments of Agriculture.

As previously noted, the state department of agriculture in forty-three states and Puerto Rico is the state lead state agency responsible for the regulation of pesticide use under FIFRA. NASDA members are well versed in the robust scientific review and approval process EPA undertakes in reviewing and registering pesticides. EPA registered neonicotinoids as "reduced risk" alternatives to organophosphates and other older classes of chemistry, and EPA is currently undertaking a re-evaluation of clothianidin, imidacloprid, and thiamethoxam under its registration review program.

NASDA recommends the continued support and development of state-specific MP3s to achieve sound policy initiatives, ensure access to appropriate crop protection tools, and to protect and promote pollinator health before any further regulatory actions are considered.

Question 8. Does your organization support passage of H.R. 897, the Reducing Regulatory Burdens Act of 2015? Do you believe the burden and liabilities of obtaining a water permit are limiting or delaying mosquito control applications that control viruses like Zika and protect human health?

Answer. NASDA strongly supported passage of H.R. 897, the Reducing Regulatory Burdens Act of 2015, and NASDA supported the passage of H.R. 897, the Zika Vector Control Act.

This legislation is necessary to clarify that Federal law does not require this redundant permit for already regulated pesticide applications. NASDA is concerned the additional permitting burdens stemming from the *National Cotton Council* v. *EPA* decision have made it more expensive and presented increased risk of litigation for mosquito control districts and private applicators to conduct control activities. This has led to few applications and fewer private applicators willing to conduct these control activities.

Question 9. What do you believe will happen if H.R. 897 is not enacted and President Obama's WOTUS rule goes into effect?

Answer. Taken together, NPDES permitting requirements stemming from *NCC* v. *EPA* and the WOTUS rule present significant legal vulnerabilities for farmers and pesticide applicators. Because many ditches and ephemeral or intermittent features in or near farm fields, pastures, and woodlots are likely to become newly-jurisdictional under the rule, application in or around those features of terrestrial pesticides (those products lacking a FIFRA label explicitly allowing application into, over, or near "waters") might result in CWA violations and citizen suit vulnerabilities from inadvertent pesticide contact with these types of newly-jurisdictional waters.

For use of FIFRA-labeled aquatic pesticides, EPA's Pesticide General Permit (PGP) covers use patterns for: (1) mosquito and other flying insect pest control; (2) weed and algae control; (3) animal pest control; and (4) forest canopy pest control. Agricultural use patterns of terrestrial pesticides are not covered under the PGP.

This raises a number of questions and concerns: for example, would farmers and ranchers routinely making seasonal treatment of, noxious weeds in fields containing dry ephemeral conveyances or manmade ditches now also be required to comply with NPDES permit requirements? If so, would these producers need to secure individual NPDES permits, since terrestrial pesticide use is not covered by the PGP? Most applicators using terrestrial pesticides may not be aware that treatment areas they are treating may for the first time contain newly-jurisdictional "waters," and in addition to FIFRA label requirements, they might now also need to comply with NPDES performance requirements for "aquatic" pesticide applications. This would pose an extreme difficulty for commercial applicators applying terrestrial pesticides by air, when such ephemeral features could well be unmarked, dry or hidden by vegetation. These concerns also extend beyond pesticide use, and we are also concerned that the application of other agricultural inputs in a similar manner, such as fertilizer, would also be problematic under the proposed rule.

Question 10. The public is threatened by insect-borne diseases—West Nile Virus is a good example. Some of the critical products used to control mosquitoes are also the backbone of Integrated Pest Management plans. Can you tell us your thoughts regarding EPA's plans for OP's (organophosphates) used to protect public health against very dangerous and prolific pests?

Answer. NASDA notes pesticides (including organophosphates) are an important component of Integrated Pest Management (IPM) programs for both agriculture production systems and vector control activities to protect human health.

NASDA is intimately familiar with EPA's rigorous and exhaustive scientific review under FIFRA, and we support the development, approval, and use of various crop protection and vector control tools to better protect human health and to assist farmers in continuing to produce our nation's food, fiber, and fuel.

Question 11. We've heard a lot about the need for oversight of the EPA's pesticide program. What are your organization's top priorities for regulatory oversight?

Answer. As regulatory partners with EPA and other Federal agencies over significant aspects of the U.S. agricultural industry, NASDA has a particular interest in EPA's efforts related to reducing regulatory burdens, especially with respect to increased flexibility to state regulatory partners.

Last year, NASDA was pleased to participate in a series of meetings with other associations representing state and local government hosted by Shaun Donovan, Director of the White House Office of Management and Budget (OMB) and Howard Shelanksi, Administrator of OMB's Office of Information and Regulatory Affairs. These discussions focused on the Administration's efforts around improving regulatory processes and improving retrospective regulatory review.

As NASDA articulated in those discussions and reiterates here, the Administration should consider the following principles to minimize the impact of regulations on both state governments and the regulated community:

1. **Enhance Federalism Consultations:** Federal agencies should conduct robust federalism consultations early in the regulatory process, and include participation of a wide range of state regulatory agencies, including State Departments of Agriculture.
2. **Improve economic analyses that more realistically account for economic costs to states:** Federal agencies should engage state regulatory agencies and stakeholders to evaluate proposed regulations, availability of required resources, and whether expected outcomes merit those expenditures.
3. **Enhance public participation and greater transparency of the regulatory process:** Federal agencies should improve public participation and increase transparency of the regulatory process.
4. **Incorporate flexibility in state regulatory programs:** Federal agencies should engage state regulatory partners in creating programs that may provide local and state flexibility.
5. **Renew focus on utilization of best available science:** OMB should ensure agencies consistently and appropriately apply best available science to the regulatory system.
6. **Improve stakeholder outreach, especially to rural communities:** Federal agencies should enhance educational and outreach efforts to rural communities and provide teleconference access for oral comments, which can be submitted in the docket and become part of the official record.

In addition to these principles outlined above, it is essential for EPA to comply with its obligations under: FIFRA;[16] the Regulatory Flexibility Act;[17] the Unfunded Mandates Reform Act;[18] Executive Orders 13132[19] & 13563[20]; and develop actuarially sound Economic Analysis with all of its proposed rulemakings.

Question 12. In publishing the final worker protection standard rule, the EPA included a "designated representative" provision that had not been previously provided to the Committee as required in law. We have some questions about this provision . . .

Answer. EPA inclusion of the "designated representative" provision was implemented outside of the Federal rulemaking process, in conflict with the information and input from EPA's state regulatory partners and the regulated community, and in violation of the Agency's obligations under FIFRA;[21] the Administrative Proce-

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[16] 7 U.S.C. § 136, *et. seq.*
[17] 5 U.S.C. § 601, *et. seq.*
[18] 2 U.S.C. § 1501.
[19] Executive Order No. 13132, *Federalism,* 64 FR 43255 (1999).
[20] Executive Order No. 13563, *Improving Regulation and Regulatory Review,* 76 FR 3821 (2011).
[21] 7 U.S.C. § 136, *et. seq.*

dures Act (APA);[22] the Unfunded Mandates Reform Act (UMRA);[23] the Regulatory Flexibility Act (RFA);[24] and Executive Orders 13132[25] and 13563[26].

This provision places an extraordinary burden on growers to produce a full accounting of 2 years of application records to anyone who arrives on their farm with a piece of paper claiming to represent a worker who may have been on that establishment at some point over the past 2 years. If the agricultural employer does not produce these records they subject themselves to enforcement actions. If the agricultural employer does produce these records, the individual requesting them is free to use them for any purpose, propaganda, anti-marketing, litigious or otherwise that he or she sees fit.

EPA did not include the "designated representative" provision in the final rule it provided to Congress, as the Agency is required to do so under law. We have expressed our strong concern and disappointment with EPA's lack of consultation with their state regulatory partners, and we want to thank Chairman Conaway and Ranking Member Peterson for their attention and on-going engagement on this matter.

Also concerning is EPA's implementation of the WPS rule with all of these enhanced regulatory burdens and record keeping requirements, but the Agency has yet to provide educational resources or training materials to assist their state partners and the regulated community to understand the new requirements and how to comply with them.

Without a sound and transparent regulatory framework and the resources necessary to educate the regulated community on how to comply, all EPA has created is another economic burden on the men and women who produce our nation's food, fiber, and fuel. It is absolutely essential for EPA to correct the oversights in the WPS rule and provide their state partners and the regulated community the time and educational resources necessary to "educate before we regulate."

Question 13. The President has stressed the importance and value of transparency in EPA's action to ensure the use of sound science and reliable data. EPA is increasingly reliant on epidemiological and modeling data to essentially overrule volumes of actual 'hard science' laboratory and monitoring data. Was this fundamental change in policy put out for public notice and comment so that impacted stakeholders like you would have an opportunity to comment?

Answer. We are not aware of any public notice and comment regarding this policy change, but we continue to encourage EPA and all of our Federal partners to recognize the considerable expertise of State Departments of Agriculture through Federalism consultations early in the regulatory process.

Federalism consultations must be broad-based and include representatives from associations representing all relevant state agencies. Federalism consultations should occur early in the regulatory process and allow significant opportunities for robust participation. Throughout this process, it is important to emphasize that state regulatory agencies are not simply stakeholders, but are instead partners with Federal agencies in the implementation of a host of programs. States can—and should—be used more as resources for Federal agencies. Often states have a wealth of data, experience, and expertise that would help Federal agencies better develop and implement sound regulatory programs.

Unfortunately, the federalism consultations conducted by agencies are often perfunctory and do not allow regulator-to-regulator dialogue on issues of mutual interest. Additionally, on those occasions when consultation does occur, it is often limited to only a handful of associations representing state and local governments and does not necessarily include the representatives from associations representing the state agencies that will be most impacted by the proposed regulation. Though some Federal agencies include other state and local representatives in their consultation processes, additional focus on ensuring federalism consultations include the appropriate parties would be very beneficial.

One striking example of a regulatory initiative that would have greatly benefited from Federalism consultations with the states is the EPA and Army Corps of Engineers (Corps) *Rule to Define "Water of the United States*" Under the Clean Water

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[22] 5 U.S.C. § 500, *et. seq.*
[23] 2 U.S.C. § 1501.
[24] 5 U.S.C. § 601, *et. seq.*
[25] Executive Order No. 13132, *Federalism,* 64 FR 43255 (1999).
[26] Executive Order No. 13563, *Improving Regulation and Regulatory Review,* 76 FR 3821 (2011).

Act (Docket ID No. EPA–HQ–OW–2011–0880)[27] and the so-called *'Interpretive Rule' for Agricultural Conservation Practices* (EPA–HQ–OW–2013–0820).[28]

The WOTUS proposal will have tremendous impacts on state agencies, yet EPA and the Corps failed to consult with state agencies during the development of the proposal. While we appreciated the outreach the agencies engaged in following the release of the proposal, many of the rule's flaws identified during the post-release outreach could have been brought to light earlier, resulting in an improved proposal.

It is critical for OMB to require EPA (and all Federal agencies) to conduct robust federalism consultations early in the regulatory process and include participation of a wide range of state regulatory agencies, including State Departments of Agriculture.

Question 14. The United States has the world's most rigorous pesticide registration and review processes. Yet, when EPA's regulatory decisions are challenged in court, the Agency has not enjoyed many recent successes in defending its scientific process or decisions. Are these actions undermining EPA's credibility with the public?

Answer. As regulatory partners with EPA, NASDA members are well versed in the robust scientific review and approval process the Agency is required to undertake under FIFRA, and NASDA is concerned the potential impact and precedent various judicial decisions have had and may continue to have on current and future registrations of important crop protection tools.

We have significant concerns with the Judicial Branch's obvious lack of deference to the Agency's expertise and execution of its responsibilities under FIFRA, and the Courts are not the right vehicle to develop and implement policy. We note the importance of defending the Agency's robust scientific review process under FIFRA, and we stand ready to work with EPA to ensure the Agency's scientifically-sound decisions are recognized and defended. Enhanced consultations with the State Departments of Agriculture will assist EPA in this effort.

Food Safety Modernization Act

Question 15. Can you describe the consultation process that FDA engaged in with industry in developing the regulations under the Food Safety Modernization Act?

Answer. The magnitude of the rules needed to implement FSMA (seven major rules) has necessitated an enhanced level of engagement and dialogue beyond the traditional "public notice and comment" rulemaking process, and we appreciate FDA's Foods & Veterinary Medicine Deputy Commissioner Mike Taylor's leadership in identifying and facilitating this dialogue between Federal and state agency partners.

NASDA has encouraged and supported FDA's expanded engagement in undertaking a secondary review of several proposals, the supplemental publication of four of the major rules, additional "listening sessions," and several on-farm site visits within the states. These activities have resulted in significant improvements in the rule requirements, but there are three remaining areas of concern: (1) the magnitude of the rules are still overwhelming; (2) the means FDA proposes to regulate agricultural water are burdensome, costly, and go beyond the benefit to public health; and (3) the bifurcated regulation of packing houses, based on ownership rather than on risk.

Question 16. Prior to passage of the Food Safety Modernization Act, there was a great deal of debate surrounding the question of what authority the FDA should have over food production. Many Members present at the time raised questions about granting the FDA the power to tell farmers how to farm. From the standpoint of food safety, do you believe FDA has the resources and expertise, more so than the USDA and State Ag Departments, to regulate on farm production practices?

Answer. FDA has notable expertise in various food safety activities, but the Agency has little experience or institutional expertise related to agricultural practices. NASDA member agencies currently administer feed control programs in 47 states and human food safety programs in 19 states. NASDA is actively engaged in FSMA implementation, and forty State Departments of Agriculture have indicated intent to develop a state produce safety program.

NASDA submitted over 250 pages of testimony to the docket regarding the seven major rules, and after extensive, technical review NASDA has identified a minimal

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[27] National Association of State Departments of Agriculture. (2014, November 14). NASDA's Comments Regarding Proposed Regulatory Changes to the Definition of "*Water of the United States*" Under the Clean Water Act. *http://www.nasda.org/Policy/9617/10937/30804.aspx*.

[28] National Association of State Departments of Agriculture. (2014, July 7). NASDA's Comments Regarding Notice of Availability Regarding the Exemption From Permitting Under Section 404(f)(1)(A). *http://www.nasda.org/Policy/9617/10937/28232.aspx*.

need of $100 million annually to implement three major rules under FSMA: Human Food Preventive Controls, Animal Food Preventive Controls and Produce Safety. This necessary level of Federal funding is essential to enable State Departments of Agriculture to develop a produce safety program in the states.

Adequately funding imported food safety programs is of equal importance to ensure a balanced playing field for American farmers and to provide the necessary educational and training resources to facilitate regulatory compliance activities for both the regulatory agencies and the regulated community. The State Departments of Agriculture are best positioned to facilitate the education of our Federal partners on the broad and diverse agricultural practices across the country, and we stand ready to continue to assist FDA in this process.

Question 17. There was a great deal of concern when Congress passed the Food Safety Modernization Act that FDA's lack of resources and expertise would ultimately result in a "one-size-fits-all" approach to regulation. Do the final rules adequately account for the variation between crops, geographical growing locations, and even the associated risk profiles of the products produced in the U.S.?

Answer. The ability of the final rules to adequately account for variations between crops, geographical growing locations, and associated risk profiles of U.S. products remains an open question.

FDA has established a fairly flexible position through commitments to use alternatives and waivers as a part of the regulatory process. These are important means to reach reasonable solutions; however, the way in which "substitute" means of compliance are shared will make a difference in whether all producers may be aware of potentially less costly options to achieve compliance. Variances will be submitted by a state or foreign government and FDA will approve/deny these options, which should be publicly available. Alternatives under the rule are options believed by a grower to achieve the same level of public health protection as the FDA rule and will remain in a grower's file.

This is most relevant in the instance of the water standard and also potentially related to other issues addressed within the guidance, yet to be developed or published. If FDA is willing to remain flexible and seek additional ways to be flexible, it seems as though another category of flexibility will evolve—that of an alternative that becomes a part of guidance or some other mechanism to share alternatives between farmers—which farmers can access and choose rather than the published rule per se.

We likely do not yet know the extent of FDA's ability to accept a culture change; however, the future of American agriculture may depend upon the agency's ability to better understand food production. Farms are not factories, nor should—nor can—they become factories. How the agency chooses to deal with the variations listed in your questions will determine how flexible the rules are once they are implemented [including advice made available through guidance development].

NASDA has developed an implementation framework, which is a roadmap for states to consider as they develop a state produce safety program. One of the chapters within that document is a "dispute resolution" chapter. Precisely because of the premise of your question, and our own experience interacting with FDA (certainly the "enforcement culture" of FDA rather than the prevention/compliance culture of FDA), it is imperative state and FDA programs have a mechanism to sort through the differences between farming and food manufacturing. Achieving a "prevention culture" will hinge on achieving a balance between the requirements needed to achieve the dual goals of food production and food safety, where both public health and food security are important goals.

Question 18. How different are current food safety practices from what the Food Safety Modernization Act will require?

Answer. While moving to a prevention strategy is prudent and noting the expansion of those entities covered was anticipated in the passage of FSMA, the amount of requirements FDA created to comply with newly established standards and requirements is beyond "a tweak" in food safety policy. In moving to a "prevention" statute, FSMA expanded the regulated community to include many more entities: farmers that grow fruits and vegetables (generally consumed raw); packing houses on-farm and owned by farmers; packing houses mentioned above; animal feed mills; and pet food establishments, at a minimum, while codifying advanced food safety practices for the already regulated manufactured food arena.

Changes to the Human Food Preventive Control rule are consistent with the direction the program was progressing prior to the passage of FSMA, except more preventive controls are put in place under the new rules. Product testing, environmental monitoring and supplier verification are all new requirements. Good Manufacturing Practices (GMPs) are not new to the major processed food producers; how-

ever, small to medium sized facilities will likely find these requirements will require substantial changes in practices. FDA choosing to define packing sheds based on ownership rather than a foodborne risk has created another category of "facilities" that will now be regulated as a manufactured food location that were previously "farms," *per se.*

Water testing has been done by farmers under third-party audits, but FDA's Water Standards are substantially beyond any previous requirements. The other major standards include: use of manure as a soil amendment, intrusion of animals, worker sanitation and hygiene. It will depend upon what FDA includes in guidance to better understand the magnitude of expectation for these additional standards.

Continuing education is essential to helping producers adopt better agricultural practices and stay on top of what is known to have caused recent outbreaks and avoid the same practices that resulted in unsafe produce. A program initially developed by NASDA to assist in this effort is the "On-Farm Readiness Review," which is in the process of being pilot tested by NASDA, the states, Cooperative Extension (hereinafter "Extension"), and FDA.

Question 19. How do requirements under the Food Safety Modernization Act compare to existing industry requirements that are enforced through third-party audits?

Answer. There are substantial differences based on the likelihood FDA will require compliance with many of the actual requirements through guidance to the industry, which have yet to be published. USDA is planning to change its Good Agricultural Practices (GAP) program to adopt FSMA requirements. It is too early to tell whether FSMA implementation will reduce the number of audits/visits; however, farmers that produce fruits and vegetables already cite audit fatigue and on-farm visit fatigue as an existing burden on their time and resources.

Question 20. You talk about the farm definition in FDA's produce safety rule. Can you explain what this definition is, and why it is important? Do you support revising the Farm definition?

Answer. The definition of "farm" is important in determining which entities will be regulated under the Produce Safety rule and which ones may be partially regulated under the Human Food Preventive Controls (HFPC) rule. By FDA's definition, some packing sheds are regulated as farms; others, although identical in function, may be regulated as "facilities"—based on ownership, not based on risk-based practices.

More requirements exist for those regulated under the HFPC, including: registration requirements, product testing, environmental monitoring and supplier verification. Also, mixed-type facilities are by definition an establishment that engages in both: (1) activities that are exempt from registration under section 415 of the Federal Food, Drug, and Cosmetic Act; and (2) activities that require the establishment to be registered. As a result, mixed-type facilities will be regulated under both the HFPC rule and the Produce Safety rule. We believe improvements can be made in the definition of farm. Below are excerpts from NASDA's comments to the docket regarding definition of farm:

FDA's definition of a "farm" is as follows:

The definition of a 'farm' is clarified to cover two types of farm operations. Operations defined as farms are not subject to the preventive controls rule.

- **Primary Production Farm:** This is an operation under one management in one general, but not necessarily contiguous, location devoted to the growing of crops, the harvesting of crops, the raising of animals (including seafood), or any combination of these activities. This kind of farm can pack or hold raw agricultural commodities such as fresh produce and may conduct certain manufacturing/processing activities, such as dehydrating grapes to produce raisins and packaging and labeling raisins.

  The supplemental rule proposed, and the final rule includes, a change to expand the definition of "farm" to include packing or holding raw agricultural commodities (such as fresh produce) that are grown on a farm under a different ownership. The final rule also includes within the "farm" definition companies that solely harvest crops from farms.

- **Secondary Activities Farm:** This is an operation not located on the Primary Production Farm that is devoted to harvesting, packing and/or holding raw agricultural commodities. It must be majority owned by the Primary Production Farm that supplies the majority of the raw agricultural commodities harvested, packed, or held by the Secondary Activities Farm.

  This definition for a Secondary Activities Farm was provided, in part, so that farmers involved in certain formerly off-farm packing now fit under the definition of "farm," as the packing is still part of the farming operation. In addition

to off-farm produce packing operations, another example of a Secondary Activities Farm could be an operation in which nuts are hulled and dehydrated by an operation not located at the orchard before going to a processing plant. If the farmer that owns the orchards and supplies the majority of the nuts is a majority owner of the hulling/dehydrating facility, that operation is a Secondary Activities Farm.

- Primary Production and Secondary Activities Farms conducting activities on produce covered by the Produce Safety Rule will be required to comply with that rule.

Revise § 1.227 to read as follows: The definitions of terms in section 201 of the Federal Food, Drug, and Cosmetic Act apply to such terms when used in this subpart. In addition, for the purposes of this subpart:

Farm means:

1. Primary production farm. A primary production farm is an operation under one management in one general (but not necessarily contiguous) physical location devoted to the growing of crops, the harvesting of crops, the raising of animals (including seafood), or any combination of these activities. The term "farm" includes operations that, in addition to these activities:

i. Pack or hold raw agricultural commodities;

ii. Pack or hold processed food, provided that all processed food used in such activities is either consumed on that farm or another farm under the same management, or is processed food identified in paragraph (1)(iii)(B)(1) of this definition; and

iii. Manufacture/process food, provided that:

(a) All food used in such activities is consumed on that farm or another farm under the same management; or

(b) Any manufacturing/processing of food that is not consumed on that farm or another farm under the same management consists only of:

[I]. Drying/dehydrating raw agricultural commodities to create a distinct commodity (such as drying/dehydrating grapes to produce raisins), and packaging and labeling such commodities, without additional manufacturing/processing (an example of additional manufacturing/processing is slicing);

[II]. Treatment to manipulate the ripening of raw agricultural commodities (such as by treating produce with ethylene gas), and packaging and labeling treated raw agricultural commodities, without additional manufacturing/processing; and

[III]. Packaging and labeling raw agricultural commodities, when these activities do not involve additional manufacturing/processing (an example of additional manufacturing/processing is irradiation); or

2. Secondary activities farm. A secondary activities farm is an operation, not located on a primary production farm, devoted to harvesting (such as hulling or shelling), packing, and/or holding of raw agricultural commodities, provided that the primary production farm(s) that grows, harvests, and/or raises the majority of the raw agricultural commodities harvested, packed, and/or held by the secondary activities farm owns, or jointly owns, a majority interest in the secondary activities farm. A secondary activities farm may also conduct those additional activities allowed on a primary production farm as described in paragraphs (1)(ii) and (iii) of this definition.

Question 21. Can you talk a bit about the food safety training challenges associated with FSMA implementation?

Answer. **Delays:** FDA and USDA–AMS cooperated in 2010 to establish a Produce Safety Alliance (PSA) at Cornell University. NASDA commended this forward-thinking collaboration bringing Federal agencies together working towards a common good. The PSA developed train-the-trainer and producer training courses with input from a wide array of experts. Two of the program's goals have been to: (1) develop a standardized education program based on GAPs and co-management; and (2) to include the Produce Safety rule requirements, when available. The process for devel-

oping the entire training program, used by the PSA, has been transparent and inclusive.

Since the rule was published, FDA has requested to modify the education program. The PSA initial training program is a basic-level FSMA prerequisite requirement, and the desire to perfect this level of training misses the importance of the education and value of continuing education as a means to safer food. Long-term education is a key principle to achieving prevention, and even while the education is being postponed the compliance dates remain firm. It is imperative to provide state regulatory agencies and the regulated community the time, education, and resources necessary to facilitate implementation and compliance of these comprehensive regulatory changes.

Continuing Education: Prevention, as a policy, requires sustained opportunities to present "core and more" information to producers. Prevention will not occur if all that is accomplished is a perfected, basic-level enforcement-oriented training course. As time goes by, we will learn more about the cause of outbreaks, means to avoid contamination, practices that increase or mitigate risk, and more. We will not prevent outbreaks if we do not emphasize a long-term commitment to provide education to producers. On-Farm Readiness Reviews and inspections of farms will provide additional and valuable educational information. The guidance document, yet to be published, will also require another updated education program. While subsequent education programs may not be expressly required under the rule, the benefit of these opportunities should assure that producers will participate, especially as this relates to compliance with FSMA and facilitating market access.

Lack of guidance: FDA has made it clear that much of the policy producers need to comply with is contingent on the guidance the agency will publish in the coming months. It is also one of the key points FDA has apparently raised with the PSA. Much of the value of the education may derive from the requirements found in guidance; however, the guidance documents are months away from publication and will require additional, continuing education to keep producers abreast of the requirements.

While NASDA supports the education programs being developed by Extension for GAP and FSMA, we also recognize some of the GAP program audits have established practices that will not "pass muster" as food safety practices. To get through the transition, NASDA has been working on an "On-Farm Readiness Review" program. We are concerned farmers may have a false sense of security based on the use of audits over the past decade as a surrogate for inspections, and USDA and FDA's continued pronouncement that if farms are GAP certified, "they are most of the way there" (in compliance with FSMA). The rule FDA has promulgated is quite a bit more restrictive and enforcement oriented than the GAP requirements, and we believe farmers deserve an opportunity to know what is meant by "being most the way there."

We believe having Extension and state regulatory personnel perform a voluntary, non-regulatory review of farms can help assure farmers that the practices they are using meet/will meet the standards in FSMA and/or what changes need to be made to achieve compliance. This can help farmers know which practices they use on the farm are "FSMA compliant." The purpose of our collective actions should be to improve the likelihood that fruits and vegetables produced by American farmers are safe, and there should be an emphasis on ensuring farmers are doing it right (not looking to see if we can catch someone doing something wrong). The emphasis of training needs to be on helping producers meet the standards and providing oversight on farms. The On-Farm Readiness Review program should help to focus efforts on compliance and support food safety practices.

Question 22. What are the differences between FDA's Produce Safety rule and the Preventive Controls for Human Food rule?

Answer. The Produce Safety rule spells out what covered farms will be required to do (*i.e.,* identify reasonably foreseeable biological hazards and take appropriate science-based measures to minimize risks associated with growing, harvesting, packing and holding of raw agricultural commodities generally consumed raw). The HFPC rule regulates the processed food industry and incorporates the general requirements found in the pre-FSMA Food, Drug and Cosmetic Act while adding Preventive Controls—HACCP, risk-based hazard analysis, product testing, environmental monitoring and supplier verification to the requirements for most processed foods.

FDA's definition of "farm" and the agency's choice to regulate packing operations based on ownership rather than on risk means some packing house activities will be regulated under the Preventive Controls for Human Food rule while identical activities at other locations will be regulated as normal farm activities. Farmers growing produce will need to be versed in both rules in order to determine how FSMA

may apply to their farms. FDA could have chosen to establish one rule that governed the newly regulated produce industry.

Question 23. What does your group see as the most burdensome aspect of FSMA?

Answer. **The water standard in the Produce Safety rule** is based on a standard intended as a guideline for the unintended consumption of recreational water when swimming and establishes a frequency of testing based on statistical confidence of a scientific testing result rather than on a practical basis of: "do you test your water source(s)?"; "have you ever had a positive result?"; and "if you have, do you have a mitigation strategy?"

Some farmers have estimated the potential cost for testing to meet FDA's rule will be over $100,000. This approach seems more directed at assuming all water is contaminated until proven safe—a "precautionary principle" approach—rather than a preventive strategy, especially for those locations that have been testing for years without finding contamination. FDA justifies its position based on the flexibility the agency provides under alternatives and variances. However, alternatives are not pre-approved, so even though farmers believe they have an alternative means of assessing/characterizing water sources as safe (based on past experiences and the lack of any foodborne incidents), they won't know if that "alternative" is acceptable until after an inspection—an apparent "Catch 22."

Farmers, not wanting to be out of compliance, will likely adhere to the FDA's more costly way of showing compliance when other equally effective means may be just as available and a great deal more practical. Addressing and agreeing to pre-approval of alternatives, at least for the water standard, will enable farmers to evaluate alternative compliance means due to the projected costs associated with meeting FDA's published standard. FDA has indicated a willingness to discuss other means of achieving compliance with the water standard; perhaps we will see pre-approved "alternatives" take shape through guidance, continuing education, or some other mechanism.

Lack of available guidance: FDA has long supplemented its rules by providing non-binding guidance documents addressing the agency's current thinking on how the industry can comply.

FDA established a Technical Assistance Network (TAN) where "experts" respond to individual questions and develop "Frequently Asked Question" documents and searchable files for general reference. The TAN is a welcome advancement, but FDA needs to shorten its response time and improve response accuracy to assist the regulated community in amending its practices, evaluating costs, and amortizing necessary investments. TAN will only be effective if it provides producers enough time to understand and execute compliance activities, and this window of opportunity is quickly closing.

Issues with partnerships with Federal agencies: The Federal Government frequently seeks assistance from state agencies, and in many instances, states have concurrent and/or similar authorities. As regulatory partners with our Federal partners, FDA should not categorize State Departments of Agriculture as "stakeholders." Enhanced cooperation is clearly needed, and interactions between governmental partners can and should be improved.

FDA has a confidential information sharing systems requiring commissioning and/or credentialing, and no one questions the need for the protection of confidential information. Other Federal agencies have figured out ways to share information that does not require the same level of control and legal documentation FDA requires. FDA has improved this process with the use of signed agreements (20.88) for state agencies and association staff; however, FDA's procedures still include unnecessary bureaucratic processes that provide no enhanced protections of confidential information but interfere with "getting the job done."

Two rules—not one: FDA organized its Produce Safety rule around FDA's organizational structure rather than the regulated industry. This approach will make it more difficult for the regulated community to understand the regulations and how to comply with them. Rules that are clear, concise, and straightforward generally will result in higher rates of compliance. Rules that are complex, cumbersome, and difficult to find or follow will confuse the regulated community and minimize any regulatory benefits. Had FDA crafted one rule for producers of fruits and vegetables, the regulated community would have had a better chance of finding the rules and reaching a high level of compliance.

Heretofore unidentified hazards/risks: Compliance with the Produce Safety rule will require producers to: "determine hazards" within their operations, determine how they propose to mitigate them, and show they have actually accomplished that goal.

This sounds reasonable except when it comes to how to deal with previously unknown hazards/risks. If a previously unknown, unrecognized, unknowable, unrecog-

nizable hazard causes a foodborne outbreak, the responsibility for producers to have previously identified these and mitigate them creates an unreachable goal and establishes an enforceable/enforcement standard. This dynamic does not accomplish the "preventive" approach Congress passed under FSMA.

The goal of FSMA might better be realized by creating an incentive to identify these kinds of potential problems and focus on determining the likelihood of occurrence and the means to avoid them. While the way the rules are written allows them to be enforced (hold someone accountable), they do not necessarily stress prevention and the need for all parties—industry, educators, regulators and the public—to become partners in preventing foodborne illnesses. To have written the rules differently would have helped to support the culture change we believe FSMA envisioned.

Imported Food Parity: It is essential for FDA to require the same level of compliance for foreign producers as required for domestic producers. If FDA does not adequately address imposing the standards on foreign food imported into the U.S., the burden of FDA's expanded regulation of agriculture will adversely affect U.S. farmers and make some foods more costly to produce domestically than imported food from foreign countries—partially because of a lower cost to comply overseas.

We continue to observe and understand what criteria FDA will use in determining if a country's Food Safety System is deemed equivalent to the U.S. standard (FSMA compliant). If a country is approved and the cost burden (applying Food Safety Standards) is not the same, it will create a disadvantage in the market for domestically produced foods. This is especially true as it relates to water testing cost for the growing of fresh fruits and vegetables.

See below ***Appendix*** *for additional information on FSMA.*

Research

Question 24. Increasing availability of funds for research is a common goal. Recognizing fiscal constraints though, are we focusing our resources on the correct priorities?

Answer. NASDA believes increased public research funding is especially needed in the areas of positive agricultural economic viability, pollinator health, food safety, water quality and other emerging priority issues. Competitive research grant programs and support of land-grant universities are keys to accelerating this research and making it publicly accessible.

NASDA also believes research could benefit from a more focused approach on practical, modern solutions for agriculture that producers can use. This prioritization would benefit from increased stakeholder input and state outreach to help determine the need for on-the-ground solutions.

Farm Bill

Question 25. We have heard about the devastating impacts citrus greening has had on the citrus industry. Can you elaborate on the research being conducted to combat citrus greening?

Answer. One area for the Subcommittee to provide additional oversight is USDA's Specialty Crop Block Grant program (SCBGP). This program is a critical area of collaboration between the State Departments of Agriculture, the specialty crop industry, and USDA. Since 2009, the State Departments of Agriculture have distributed nearly $393 million in grants to 5,400 project partners that have enhanced the competitiveness of specialty crops in the United States. NASDA thanks Congress for the expanded funding of SCBGP and creation of the Specialty Crop Multi-State Program (SCMP) in the 2014 Farm Bill. These projects are not just increasing consumer access to safe and healthy food but are expanding economic opportunities across rural America. Unfortunately the program has become increasingly restricted by bureaucracy of USDA and the flexibility which has defined this program is eroding.

Citrus Pest/Disease and Pollinators

Question 26. What practices are in place to ensure that pesticides are not applied when pollinators may be present?

Answer. In addition to EPA's extensive registration review, label restrictions, and certified applicator training specific to pollinators, NASDA members, individually and collectively, have been actively engaged in developing public-private partnerships on the state level, known as "MP3s" (see response to *Question 7* above).

An MP3 is a set of recommendations and practices that facilitate a collaborative approach to implementing risk mitigation practices for beekeepers, growers, and applicators while allowing for the appropriate and necessary use of crop protection tools. MP3s account for the wide variation in regulatory authorities across the states

and territories by providing each respective jurisdiction the needed flexibility to develop plans based on their agricultural systems and regulatory authority.

The primary purpose of the MP3 is to establish a systematic and comprehensive method for beekeepers, growers, applicators, landowners, and agricultural stakeholders to cooperate and communicate in a timely manner allowing all parties to operate successfully, mitigate potential pesticide exposure to bees, and allow for the effective management of various pest stressors.

MP3s are tailored to the distinct and diverse agricultural operations in each respective state and region, and the plans in place have demonstrated success in reducing losses to bee production while allowing crop producers to retain and utilize important crop protection tools. MP3s bring forward sound solutions to ensure growers, applicators, beekeepers, and other agricultural stakeholders are able to continue to produce our nation's food, fiber, and fuel in a productive and collaborative manner.

Labor Regulation

Question 27. What are some of the extraneous impacts OSHA's July 2015 revised interpretation of Process Safety Management standards has on the agriculture community?

Answer. OSHA's July 2015 policy change that revoked the "retail exemption" for agricultural retailers drastically expands the number of retailers required to comply with Process Safety Management (PSM). This will harm agriculture through increased costs, limiting access to anhydrous ammonia, and continuing a cycle of regulatory overreach.

PSM compliance requires increased paperwork and structural business changes. Many of these changes would require outside consultants or additional staff to gather and create further safety information, conduct further analyses of facilities, and pursue new permits. One large retailer, who owns large facilities currently regulated under PSM has teams of 4–6 people who manage this regulation. This is unfeasible for small retailers that many producers in rural America rely on. OSHA told attendees during a public meeting at the North Dakota Department of Agriculture that they are worried about "mom and pop retailers" who were previously exempt. These are the retailers who will be put out of business by these increased burdens.

Further, OSHA did not conduct a formal economic analysis, so retailers are unaware of the estimated cost impacts. The agency estimates the cost of compliance is $2,100/facility. Industry estimates $30,000 for initial compliance, $12,000 for annual compliance, and $18,000 for a 3 year audit, an aggregate of $100 million.

As a result of increased costs, many agriculture retailers will be forced out of business. This will limit farmers' access to this necessary fertilizer and cause many farmers to buy their own anhydrous nurse (storage) tanks. Anhydrous ammonia is not regulated at the on-farm level. OSHA claims they issued the PSM policy change to increase safety, but the Agency has not demonstrated any safety impacts of the policy change, which will in-fact decrease safety.

Finally, OSHA issued this policy change with little public input and zero prepared guidance for the regulated community. OSHA first gave notice of this policy change in a *Request for Information (RFI)* (*https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=FEDERAL_REGISTER&p_id=24053*). Only thirteen comments addressed the issue and almost no industry stakeholders were aware of the change. This regulation will have widespread effects across the agriculture industry and exceeds the cost threshold of $100 million; thus OSHA should have pursued a formal rulemaking. In conjunction with numerous industry groups, NASDA, and Members of Congress have asked OSHA specific questions regarding implementation. NASDA members have received no formal response from OSHA. OSHA needs to pursue a formal rulemaking to provide answers and certainty to the regulated community.

Question 28. How can this Subcommittee provide oversight on the Process Safety Management (PSM) issue?

Answer. OSHA has communicated very little about this memo with the regulated agricultural community. We would appreciate any efforts by the Subcommittee to help identify what safety impacts OSHA believes this policy change will have, urge them to do a comprehensive economic analysis, and ultimately urge them to withdraw this poorly conceived change. Language was included in the omnibus bill last fall requiring OSHA to not enforce the policy change in FY 2016, and as a result, OSHA delayed implementation until October 1, 2016. We encourage the Committee to work with stakeholders and committees of jurisdiction on a permanent solution.

Questions Submitted by Hon. John R. Moolenaar, a Representative in Congress from Michigan

Question 1. Good morning and thank you for being here to discuss the important topic of the farm economy and factors which impact the cost of production. Agriculture is a leading industry in Michigan's Fourth District, and changes, such as proposed rules by USDA and the EPA, can have serious consequences for our producers.

USDA's Agricultural Marketing Service recently proposed a new rule to amend organic livestock and poultry practices, including poultry living conditions. After years of established rules under the National Organic Program, this rule would eliminate outdoor porches as an option for egg farmers. As we focus on the costs of production, I'm interested in the potential costs this proposed rule will have on organic egg producers. USDA has recognized that producers facing difficulty with compliance could choose to surrender their organic certification and transition to an alternate label, such as cage-free, which would reduce their annual profits.

In my home state of Michigan, commercial organic egg producers provide a strong market for feed from organic corn and soybeans. I've met with producers who have expressed how this proposed rule will effectively halt their organic farming operations.

Secretary Witte, with NASDA's work to provide growth for new markets, such as organic agriculture, how do you see this rule affecting markets for your farmers?

Answer. A number of NASDA members have expressed concerns with USDA's Organic Livestock and Poultry Practices Proposed Rule, and NASDA requested a 60 day comment period extension on April 28, 2016 citing the significant need to consult with growers, handlers, state veterinarians, environmental health officials, and other stakeholders in the organic community in order to provide informed comments.

Promoting our state's agricultural producers—including organic farmers, ranchers, and value-added food producers—is a key activity for NASDA members, and in fifteen states the NASDA member serve as the organic certifying agent under the National Organic Program (NOP).

We have heard reports of producers needing to reduce stocking rates by as much as 50% to meet the outdoor space requirements outlined in the proposal, and the proposal will require producers to make significant investments to either acquire new lands or replace barns, which may or may not be on schedule for replacement.

The proposal will effectively render almost ½ (45%) of all organic eggs in today's grocery store out of compliance with the proposed outdoor access requirements. This will cause an extensive shift in the marketplace resulting in reduced availability of organic eggs which will lead to increased costs to consumers.

Question 2. The proposed rule also requires organic hens to be directly exposed to the outdoors. In light of last year's Avian Influenza outbreak and the millions of dollars that State of Departments of Agriculture have spent to fight the spread of the outbreak, are you concerned that the USDA identifies increased mortality from disease as an effect of this proposed rule? Among NASDA members, are state veterinarians looking into this?

I understand this is a relatively new rule, and I would encourage NASDA, your members, and state veterinarians to look into some of these concerns further.

Answer. In the proposed rule, USDA acknowledges a 60% increase in hen mortality due to "increased predation, disease and parasites from greater outdoor access." As written, this proposal significantly compromises the biosecurity measures the poultry industry has been working to improve since last year's Highly Pathogenic Avian Influenza (HPAI) outbreak. Not only would eliminating porches seriously curtail the ability of organic egg producers to comply with the USDA-Veterinary Services' (VS) request to enhance biosecurity barriers to disease introduction from wild birds, but it will also make it difficult for producers to comply with the U.S. Food and Drug Administration's (FDA) requirements to prevent the introduction of *Salmonella enteritis* from wild birds and other sources. This proposal seems to be in direct conflict with other USDA agency requests to enhance biosecurity barriers to dampen disease introduction from wild birds. Allowing porches to remain as an acceptable organic practice will allow producers to maintain appropriate biosecurity measures for the sake of both animal health, food safety, and our farm economy.

NASDA members have engaged our state veterinarians and the National Association of State Animal Health Officials, an affiliate of NASDA, to conduct a thorough review of the proposal's implications on biosecurity and animal health activities, and we will continue to discuss this proposal throughout our regional meetings this summer to further identify and quantify the proposal's impacts on animal health. Addi-

tional time is needed to fully review, evaluate, and provide meaningful input on this proposed rulemaking.

APPENDIX

Producers Should Be Able To Find All of the Requirements Regulating Their Operation in One Rule

The goal should be to assure producers that they will find all regulations affecting them in one place.

FSMA is a historic law and the rules implementing the law are monumental. It appears that FDA has published the rules so the administration of them will fit within FDA's existing organizational structure. FDA must make every attempt possible to make complying with the law and rules crystal clear and easy to understand—even if that entails reorganizing its current organizational structure. In addition, producers should not have to hunt through myriad regulations to determine what rules cover their operations. If FDA intends to regulate producers beyond the requirements found in this rule, FDA should redraft these regulations to include those other provisions in this rule. This includes the mixed-type facilities regulations in the Preventive Controls: Food and Feed rules.

Redefine "Farm" and "Harvest"

The current definition of farm first appeared word for word in the *Federal Register* over 10 years ago on October 10, 2003 (68 FR 58961), under the definitions promulgated after the Bioterrorism Act of 2002. Accordingly, many farms have been operating outside the definition of a farm since that definition came into effect. Until now, the FDA has not actively pursued enforcement actions against farms that pack or hold RACs grown on another farm for a failure to register as a food facility. However, under the regulations that will apply to both produce growers (proposed Part 112) and to food facilities (proposed Part 117), FDA has an obligation to resolve the ambiguity. NASDA requests FDA take advantage of this opportunity to redefine "farm" in a manner that resembles modern agricultural contracting practices to permit effective and uniform enforcement of the proposed definitions in order to increase public health protection.

The definition of farm currently has little relationship to farming and the marketing of farm products in the modern U.S. agriculture industry. The original definition of farm created under the auspices of an exemption from the food facility registration requirement of the Bioterrorism Act of 2002 did not seek to define farming in a way that resembled farming practices for the purposes of food safety. The Bioterrorism Act of 2002 only sought to identify farming operations as a means to exempt farms from the food facility registration requirement under section 415 of the FD&C Act. In order to create an integrated food safety system, it is now critical that FDA create a definition that describes farming operations as they exist and operate, in order to properly regulate farm products under regulations designed for the farm.

Farms that handle farm products in their harvested form are not best addressed under the food facility regulation. The FDA should address farms handling farm products as farms under the produce rule rather than as food facilities. As currently written, the regulatory definition of farm in 21 CFR Part 1 places thousands of farms under the preventive controls rule on the basis of only minimal pack, hold, and harvest activities, none of which change the status of a RAC and that do not increase the food safety risk to the RAC.

The current definition of farm included in 21 CFR 1.227(b)(3) remains substantively unchanged from that proposed in the produce rule, which only moves the second sentence about washing into the proposed definition of *harvesting*. NASDA agrees with the FDA that this change to the definition leaves the definition of farm essentially unchanged.

Farm definition at present: 21 CFR 1.227:

> "(3) Farm means a facility in one general physical location devoted to the growing and harvesting of crops, the raising of animals (including seafood), or both. Washing, trimming of outer leaves of, and cooling produce are considered part of harvesting. The term 'farm' includes:
>
> (i) Facilities that pack or hold food, provided that ***all food*** used in such activities is grown, raised, or consumed on that farm or another farm under the same ownership; and
>
> (ii) Facilities that manufacture/process food, provided that ***all food*** used in such activities is consumed on that farm or another farm under the same ownership." (emphasis added).

Consequences Under the Current Definition

Under both the current and proposed definitions, pack and hold activities indicated under subparagraph (1) are considered activities of the farm, only if *all food* used in such activities is grown, raised, or consumed on that farm. Thus, if *any pack and hold* activities are performed on produce *not* grown on the farm, it appears that *all pack and hold* activities are excluded from the definition of farming. NASDA seeks clarification from FDA on the application and interpretation of subparagraph (1) for packing and holding activities.

As a result any farm that packs or holds a single RAC grown on another farm is outside the definition of a farm for *all* pack and hold activities. Consequently, the farm now changes from a farm to a mixed-type facility subject to:

1. Section 415 of the FD&C Act, Food Facility Registration;
2. Preventive controls regulations and likely the produce regulation;
3. Traceability requirements under record-keeping in 414(b) of the FD&C Act for the immediate prior and immediate subsequent source and recipient of food, and;
4. Potentially subject to the high-risk record-keeping requirements to be promulgated under section 204(d) of FSMA (21 U.S.C. 2223(d)).

Under current farming and food industry practices, it is common for a farmer to cover a produce contract if a harvest comes up short or is otherwise not ready by purchasing RACs from a neighboring farm and sending it through a washing system before packing the RAC. This is such a commonplace activity that most farmers do not separately track such transactions or treat the produce differently than their own RACs. In other circumstances, a farm participating in a community supported agriculture by aggregating products grown on various farms will be considered a mixed-type facility subject to additional regulation. This classification can have a devastating impact on community supported agriculture programs and other programs that support "locavore" movements.

Under the current definition, limited packing & holding of others' RACs would change the entire pack and hold operation from a farm into a food facility. The complexity of these regulations does not facilitate recognition of such an activity as one that triggers section 415 registration and subsequent regulations. In many cases, this activity has not been identified by regulators or industry as a mixed-facility activity. The current definition of farm does not fit the current farm functions.

Redefine "Farm" to Resemble Farm Practices

More importantly, FDA has the potential to clarify the definition of a farm without increasing risks to food safety by aligning farm activities with farm regulation. The new definition of farm would accomplish several major objectives:

1. More effectively separate farms from mixed-farm facilities (as farms that perform activities that change the status of a RAC) and facilities;
2. Maintain "facility" status for activities that changes the "status" of a RAC and maintain the "farm" status for businesses that perform activities that do not change the "status" of a RAC (*see* FR 3679, Table 2, for examples of "status" activities);
3. Extend the coverage of the produce rule over more produce than just products grown on an individual's farm or another farm under the same ownership; and
4. Reduce the ambiguities that mixed-type facilities face related to coverage under multiple regulations.

In order to better define farm, NASDA suggests that FDA change the definition of farm and harvest (and thereby expand the produce rule) to cover pack and hold activities of a farm to RACs not grown on the farm under a few limited conditions: (1) the expanded pack & hold activities performed on RACs grown on another farm do not exceed the sales of RACs grown on the farm over a 3 year rolling average; (2) RACs handled under the expanded pack & hold definition applies only to farms attempting to grow RACs in the same scientific *genus*.

> (3) *Farm* means a facility in one general physical location devoted to the growing and harvesting of crops, the raising of animals (including seafood), or both. The term "farm" includes:
>
> > (i) Facilities that pack or hold food, provided that the *primary purpose of the pack and hold activities are to pack and hold food* grown, raised, or consumed on that farm or another farm under the same ownership.

(A) A farm's primary purpose for packing and holding activities is to pack and hold food grown, raised, or consumed on that farm or another under the same ownership, if the average annual monetary value of sales (during the 3 year period preceding the applicable calendar year) of food packed or held at the facility grown, raised, or consumed on that farm or another under the same ownership exceeds the average annual monetary value of sales of food packed and held not grown, raised, or consumed on that farm or another under the same ownership; and

(B) The farm performing pack and hold activities grew or attempted to grow RACs of the same genus as those being packed or held.

(ii) Facilities that manufacture/process food, provided that all food used in such activities is consumed on that farm or another farm under the same ownership.

This definition follows the "primary function" limitation in the definition of a retail food establishment under 21 CFR 1.227(b)(11). The retail food establishment definition permits a retail food establishment to remain exempt from the food facility registration requirements if a majority of its food sales are directly to customers. Following the same reasoning, expanding the definition of farm would allow farms to treat RACs as products of their own farm for the purpose of pack and hold activities and for these activities to be subject to regulation under the produce rule.

This would be an important change because as the preventive controls regulation is currently written, the aforementioned pack and hold activities are exempt from subpart C for on-farm VSBs and SBs under 117.5(g)(4), (6), and (9). As currently written, the activities covered under 117.5(4), (6), and (9) are exempt from Subpart C because FDA recognizes they are a low-risk food/activity combination. These facilities are already subject to Part 112 for the pack and hold activities performed on RACs grown on the farm and have food safety processes in place for the facility. Expanding the farm-specific food safety processes to these additional RACs will not increase the risk to food safety.

The GMPs at 21 CFR 110.19 exclude establishments engaged solely in the harvesting, storage, or distribution of one or more 'raw agricultural commodities' as defined in section 201(r) of the Act. GMPs are not currently applied to farms performing any pack and hold activities. As such, no specific regulation currently exists that would apply to these activities. By redefining farm to include pack and hold activities performed on select RACs not grown on the farm, FDA has an opportunity to provide uniform and effective regulation of all farm pack and hold activities under farm-specific regulation.

Redefine "Harvesting" to Resemble Farm Practices

NASDA calls on the FDA to consider redefining "harvest" because many practices associated with harvesting are performed by third parties. The current definition of "harvesting" is "limited to activities performed on raw agricultural commodities on the farm on which they were grown or raised, or another farm under the same ownership." At first glance, this requirement is perfectly logical because it would follow that "harvesting" should only happen on a farm where a RAC is grown and harvesting is "for the purpose of removing raw agricultural commodities from the place they are grown or raised and preparing them for use as food." However, advanced farming practices, unique crop harvesting methods, and the incredible expenses of such systems make the sole ownership of such equipment not possible in all situations. As a result, it is common to perform job-sharing and equipment sharing for harvesting functions.

For example, drying grains for storage can be a necessary part of the harvest process in order to prevent mold, but only few farmers have the financial means necessary to have an individual grain drying setup. As a result, most farms take grain to a co-op or elevator for drying and often storage purposes. Another example, the shelling of hazelnuts or sunflower seeds is a routine step in the harvest for the purpose of storage and for the purpose of processing, but most farmers have hazelnuts or sunflower seeds shelled at a separate facility because the cost of ownership of a shelling machine is impractical.

There are over 400 different food products grown in the U.S. For climate, growing season and market purposes, these crops are often grouped in critical masses and the farms growing them often work cooperatively to grow, harvest, and market the products. While the farmers each operate independent businesses, their cooperation and resource sharing is an important part of cost efficiency. It is not a behavior that FDA should discourage, yet, the level of regulation that will result from such cooperative farming will do just that.

NASDA requests the FDA consider removing the sentence "[h]arvesting is limited to activities performed on raw agricultural commodities on the farm on which they were grown, raised, or another farm under the same ownership" from the definition of harvest. Removing this limitation will allow "harvesting" activities to remain part of "farm" activities. Moreover, NASDA's position is that a harvesting activity such as washing, cooling, shelling, drying, and husking are harvesting activities wherever performed and by whomever performs them and should be treated accordingly.

The rule does not consider the function of co-ops in performing "harvesting" activities which are commonly performed by a third party facility, not engaged in farming. Shelling and drying are considered low-risk food/activity combinations when performed by on-farm mixed-type facilities. NASDA's position is that these co-ops should also be exempt from regulation under Subpart C, because they also perform low-risk food/activity combinations on RACs which do not change their status.

Inconsistency Between Retail Establishment and Farm Definitions

Because the definition of a retail food establishment turns on the "primary function" of the facility rather than the strict confines of the "all activities subject to section 415 registration requirement," the FDA creates a double-standard where retail food establishments may process 49% of their sales as food not for direct sale to consumers and remain exempt from section 415 registration and the preventive control regulation. On the other hand, an on-farm mixed-type facility with a farm operation that sells blueberries grown on another farm constituting 1% of overall food sales would be subject section 415 registration requirement, the traceability provisions in section 306 of the Bioterrorism Act of 2002, and preventive controls currently proposed. This creates a significant and unequal burden on mixed-facilities which is avoided by retail food establishments selling up to 49% of food as wholesale. NASDA supports creating a similar safe haven that exists for retail establishments, applicable to those farm-mixed type facilities performing only limited packing & holding of RACs not grown on the farm. In particular, these activities should remain part of the farm definition because if the pack and hold activities are performed on the farm's own RACs, they would remain under the farming definition.

NASDA's request for redefinition of a farm based on the "primary function" for packing and holding remains consistent with the values of food safety, merely shifting whole produce of farms that perform packing and holding activities into the produce safety regulation specifically written to address safe produce production.

Define Crop for the Purposes of the Farm Definition

The definition of farm refers to, but does not define, crop. Food is broadly defined under the FD&C Act and NASDA believes it is also important that crop be defined because farming is not solely about the production of food. Crops are used in the production of biofuels, clothing, biodegradable household products and more. Accordingly, it is imperative that FDA distinguish between crops and food.

NASDA requests that FDA adopt a definition for "crop," and define crop as "edible or inedible cultivated or harvested plants;" realizing that FDA does not intend to regulate all crops or parts of crops.

Clarify Terms in Farm and Organization Size

Clarify "Same Ownership"

Under farm activities regulated by the proposed produce rule and the preventive controls rule, ownership of RACs is critical to determine the extent of regulation. Certain activities performed on a product grown on the farm or another under the same ownership is covered under the definition of "farm," while the same activity performed on a RAC not grown on the farm will be regulated under Part 117. For example, washing RACs is treated as a harvest activity, but only if performed on products grown on the farm.

For example, if a RAC is grown on the farm or "another under the same ownership," it is more likely the action such as washing will be covered under the definition of "farm" and be exempt from the preventive controls rule. On the other hand, the same activity performed on a RAC not grown on the farm or "another under the same ownership," is no longer an activity of the farm and is regulated under Part 117.

NASDA seeks clarification of how FDA will interpret "same ownership" and suggests FDA consider streamlining distinctions between products of a farm and not of the same farm on the basis of control, rather than on a false-distinction of "same ownership." Within the agriculture industry, farms are often owned under several different names, but operated as a single farm using the same equipment. This is commonly the case with multi-generational farms. The farm operation will likely consist of several divisions of ownership but all under management as a single farm.

For example, some properties may be owned by one LLC owned by the parents, other property owned by another LLC owned by the younger generation, and jointly owned properties. Many states have programs geared at supporting young farmers that require the property be in the name of the young farmer, even if the property is farmed collectively.

NASDA suggests FDA adopt a more flexible interpretation of farm than "same ownership" by considering a definition that considers the *operational function* of a farm such as "common" ownership or "operational management."

NASDA also seeks clarification on how FDA will treat farm agreements between farms that are owned by an individual, but are jointly farmed and controlled under an agreement based on output shares. It is not uncommon for farmers to explore farming a new commodity by jointly farming it. For example, farmers may do this by using land owned by one farmer, equipment owned by another farmer, and labor or resources owned by a third. This arrangement could result in a 30/30/40 ownership of the RACs produced. NASDA requests that FDA permit any farmer in a jointly pursued venture to treat the RACs as the farm's "own RAC" for the purposes of harvesting, packing and holding.

In addition, although not considered a joint venture, many produce packing operations will use a facility as a shared space either owned by one or owned by several farmers. NASDA requests FDA clarify how ownership or responsibility for these facilities will be established for the purpose of facility registration or whether facility registration is unnecessary if all farmers using the facility have ownership shares in all of the produce. NASDA requests that FDA develop and share guidelines for how these types of determinations will be made, as the current proposed definitions leave these businesses uncertain as to their status and the appropriate path to compliance.

Response from Kate Woods, Vice President, Northwest Horticultural Council

Questions Submitted by Hon. Rodney Davis, a Representative in Congress from Illinois

Market Access Program

Question 1. Could you offer some examples of how the Market Access Program (MAP) has helped your members?

Answer. I will give you three examples of how MAP has helped our members. First, the Washington Apple Commission invested $10,000 in MAP funds to participate in a Global Shopping Festival with TMall, China's largest online shopping platform, last November. This was only 7 months after the United States gained access to China's market for all apple varieties, and the event led to the sale of approximately 416,000 pounds of apples. Beyond the actual sales, this event helped expose thousands of Chinese consumers to Washington apples, with an estimated 300,000 click-through hits on our product. It is conservatively estimated that 30 consumers were reached for every MAP dollar spent.

In the sweet cherry realm, Northwest Cherry Growers used $40,775 in combined MAP and grower dollars in 2014 to conduct in-store sampling, product introduction, and best practices training in Danang and Can Tho City in Vietnam. This helped lead to a 39.4 percent increase in sales over 2013 in this growing market.

For pear growers, MAP funds invested in the United Arab Emirates (UAE) by Pear Bureau Northwest in 2014 on training seminars, reverse trade missions, and trade merchandising have helped enhance importers' confidence in handling pear varieties like Green Bartlett and Red Anjou, which were previously not prevalent in the UAE market. This market has grown exponentially from being only a minor market for Pacific Northwest pears to the third largest in only a few years.

Pesticides

Question 2. Public policy has an enormous impact on the economic viability of farms. Can you offer a couple examples of recent regulatory actions that have had a negative impact? What about legislative actions at the state or national level?

Answer. As I noted in my opening statement, government policies and regulations have had an increasingly significant—and often negative—impact on growers and packers in recent years. My first example would be the H–2A program. The regulation underlying this farm-labor program makes it very burdensome and costly, to the point of putting it out of reach for many small- and medium-size growers. Even worse, the Department of Labor is administering the program in a way that makes it even more unworkable. Visa applications are often processed far beyond the time limit set by the regulation, leading to delays of days or weeks in workers arriving

in the orchard. As I noted in my testimony, even a 1 day delay can mean a significant drop in fruit quality for our members.

My second example is the Food Safety Modernization Act. Through FSMA, Congress directed a Federal agency with no experience in farming to regulate on-farm practices for the first time for produce ranging from apples to cabbage. The agency developed a set of final rules so complex that over ½ of our industry's packinghouses are defined as farms, while the others must follow a completely different rule, and so confusing that, even with implementation dates rapidly approaching, FDA has been unable or unwilling to provide even basic guidance on how to implement the rules on the farm.

Food Safety Modernization Act

Question 3. Can you describe the consultation process that FDA engaged in with industry in developing the regulations under the Food Safety Modernization Act?

Answer. I cannot speak to their engagement with other industries, but will tell you how they engaged with the Pacific Northwest tree fruit industry during this period for the Produce Safety rule. As required by law, FDA published its initial draft regulatory proposals in the *Federal Register* for public comment. The Northwest Horticultural Council provided comprehensive comments that outlined serious concerns with several of the rules, including the Produce Safety rule. FDA Deputy Commissioner Michael Taylor and other agency officials then visited several Washington state orchards and packinghouses. We appreciated the field trip by FDA, and the agency's interest in learning more about our industry.

In September of 2014, FDA released an updated draft of the Produce Safety rule for public comment that, while including some improvements over the previous version, still did not fully address the industry's most serious concerns with the proposed rule—primarily dealing with unworkable water testing requirements and what rule packinghouses would fall under. The Northwest Horticultural Council provided additional comments on this newer version. When the final version was released in November of 2015, it again included minor improvements, but still did not fully address industry concerns.

Question 4. Prior to passage of the Food Safety Modernization Act, there was a great deal of debate surrounding the question of what authority the FDA should have over food production. Many Members present at the time raised questions about granting the FDA the power to tell farmers how to farm. From the standpoint of food safety, do you believe FDA has the resources and expertise, more so than the USDA and State Ag Departments, to regulate on farm production practices?

Answer. With the longtime role of USDA and State Departments of Agriculture in working directly with growers on issues ranging from on-farm practices to marketing, I believe that the personnel at these agencies would have been better equipped than FDA to regulate produce safety practices on the farm. Also, FDA Deputy Commissioner Michael Taylor has been emphasizing his intent to take an "educate before regulate" approach to FSMA implementation. With a traditionally enforcement-oriented culture at FDA, this will be a much more difficult task than it would be at USDA.

Question 5. There was a great deal of concern when Congress passed the Food Safety Modernization Act that FDA's lack of resources and expertise would ultimately result in a "one-size-fits-all" approach to regulation. Do the final rules adequately account for the variation between crops, geographical growing locations, and even the associated risk profiles of the products produced in the U.S.?

Answer. When these rules were being drafted, the Northwest Horticultural Council advocated for a risk-based, more commodity-specific approach to food safety that recognizes the different growing practices and risks of, for example, a vegetable grown on the ground *versus* an apple grown on the tree. While the final Produce Safety rule is an improvement over previous versions and does attempt to provide limited flexibility in the form of variances and alternatives to some of the provisions, I do not believe that the rule adequately addresses the diversity of crops, growing conditions, or risk, in a grower-friendly way.

Question 6. How different are current food safety practices from what the Food Safety Modernization Act will require?

Answer. The vast majority of Pacific Northwest tree fruit growers and packers have been required by their retailer customers for years to meet certain food safety standards. These standards are verified by audits, such as the Good Agricultural Practices (GAP) program administered by the Agricultural Marketing Service or private audit schemes such as GlobalGAP and SQF. Some retailers require a particular private audit, plus a unique "add-on" particular to their company.

In the case of the Produce Safety rule, the majority of tree fruit growers likely already do about 90 percent of what FSMA requires. The biggest differences will be the water testing requirements—existing audit schemes have water quality requirements, but don't require the number of tests and specificity of a standard that the Produce Safety rule does.

In addition, there are changes in how growers will need to prove, or report, how Produce Safety rule requirements are met. For example, like FSMA, most third party audit schemes require that all employees receive hygiene training. However, FSMA requires that growers have documentation certifying when this training, required annually, took place. This could be challenging when workers travel from farm to farm during the harvest season.

In terms of the Preventive Controls for Human Food rule, most packinghouses already have a food safety plan of some sort due to current audit requirements. However, because this rule is written for processor facilities, it includes requirements and terminology that our industry is not familiar with. In my mind, the biggest challenge for packers falling under the Preventive Controls for Human Food rule will be explaining how current food safety practices achieve what the rule requires, and validating and verifying these practices in a way FDA will accept.

Question 7. How do requirements under the Food Safety Modernization Act compare to existing industry requirements that are enforced through third-party audits?

Answer. As stated in my previous answer, the vast majority of tree fruit growers and packers already must comply with third party food safety audits due to retailer customer requirements. In the case of the Produce Safety rule, most tree fruit growers likely already do about 90 percent of what FSMA requires. The biggest differences will be the water testing requirements—existing audit schemes have water quality requirements, but don't require the number of tests and specificity of a standard that the Produce Safety rule does.

In addition, there are changes in how growers will need to prove, or report, how Produce Safety rule requirements are met. For example, like FSMA, most third party audit schemes require that all employees receive hygiene training. However, FSMA requires that growers have documentation certifying when this training, required annually, took place. This could be challenging when workers travel from farm to farm during the harvest season.

Also as stated previously, in terms of packinghouses that must comply with the Preventive Controls for Human Food rule, most already have a food safety plan of some sort due to current audit requirements. However, because this rule is written for processor facilities, it includes requirements and terminology that our industry is not familiar with. In my mind, the biggest challenge for packers falling under the Preventive Controls for Human Food rule will be explaining how current food safety practices achieve what the rule requires, and validating and verifying these practices in a way FDA will accept.

It is also important to keep in mind that FSMA regulations are now Federal law, as opposed to voluntary contractual standards. Growers can be fined and imprisoned for violations.

Question 8. You talk about the farm definition in FDA's produce safety rule. Can you explain what this definition is, and why it is important? Do you support revising the Farm definition?

Answer. The Preventive Controls for Human Food rule identifies a farm as either a Primary Production Farm or a Secondary Activities Farm. A Primary Production Farm is defined as an operation under one management in one general, but not necessarily contiguous, location devoted to the growing of crops, the harvesting of crops, the raising of animals (including seafood), or any combination of these activities. This kind of farm can pack or hold raw agricultural commodities, such as fresh produce, and may conduct certain manufacturing or processing activities, such as packing and labeling fruit. A Secondary Activities Farm is an operation not located on the primary production farm that is devoted to harvesting, packing and/or holding raw agricultural commodities. The main challenge for our industry is the requirement that the Secondary Activities Farm must be majority-owned by the Primary Production Farm that supplies the majority of the raw agricultural commodities harvested, packed, or held by the facility.

The farm definition is important because a packinghouse or storage facility that meets this definition must follow the Produce Safety rule, while one that does not must comply with the Preventive Controls for Human Food rule. This latter rule was written for food processing facilities, and FDA has acknowledged that it should be applied differently to fresh, whole produce packinghouses. For example, FDA has stated that the Good Manufacturing Practices included in the rule should be emphasized and that packers should look to the Produce Safety rule requirements when

drafting food safety plans. Unfortunately, the official guidance has not been released, and the curriculum developed by the Food Safety Preventive Controls Alliance and FDA does not reflect these differences.

The Northwest Horticultural Council submitted comments supporting placing all tree fruit packing and storage facilities under the Produce Safety rule during the public comment period when the rule was in draft form, and continues to support that position.

Question 9. Can you talk a bit about the food safety training challenges associated with FSMA implementation?

Answer. Yes. I will explain our experience in attempting to provide applicable training to tree fruit growers, and packinghouse and storage facility operators. When the Preventive Controls for Human Food rule was released last September, produce groups expressed significant concerns with some packinghouses and storage facilities falling under this rule while others would be required to follow the Produce Safety rule. FDA responded that they acknowledged this problem and assured us that they would work to enforce the Preventive Controls rule on packinghouses as similarly as possible to what those falling under the Produce Safety rule would be required to do. Examples provided by the agency included an emphasis on the Good Manufacturing Practices in the rule and encouragement for packinghouses to look toward the Produce Safety rule requirements in writing their food safety plan.

However, when the curriculum was released for the training required under the rule, it included none of this information. With 6 months before the rule is scheduled to be implemented, the Northwest Horticultural Council worked with our sister organization, the Washington State Tree Fruit Association, as well as a qualified trainer from the Washington State Department of Agriculture, to put on what was initially intended to be a "train-the-trainer" course for some of our most highly qualified food safety professionals within the industry. The intent of this course was both to identify areas to strengthen the curriculum so that fresh produce packinghouse operators would know what they will be required to do to be in compliance with the rule, and to ensure that we had qualified trainers who actually understand the realities of a tree fruit packinghouse.

Unfortunately, only two out of twelve applicants were approved to become lead trainers. Two of those rejected have been handling food safety—and providing extensive food safety training—for some of the largest and most sophisticated tree fruit firms in the world for decades, because they did not have degrees in education or science.

This is a problem because, not only is the curriculum not effective in educating packinghouse operators on what is required of them under the rule, but now we can't even gain access to trainers who understand tree fruit packinghouse operations.

We opted to move forward with the training, even though the Food Safety Preventive Controls Alliance refused to allow anyone who took the course—including the two that were approved as lead trainers—to be certified as lead trainers. The group identified several areas within the curriculum that need to be strengthened in order to ensure that fresh produce packinghouse staff taking the course understand what will be required of them. This includes workbook examples for a non-processed product without a "kill" step, explaining some of the terminology that is common for processing facilities but not for packinghouses, and explaining how to identify, monitor, and verify process controls, *versus* the critical control points that most of our facilities are used to.

The curriculum for the Produce Safety rule isn't expected to be released until at least September of this year. While the Produce Safety rule does not begin going into effect until 2018, should growers take advantage of the full 4 years provided by the rule to conduct the 20 water samples on each water source at or near harvest before 2020 (a costly process), they would need to begin this year. For Pacific Northwest cherry growers, harvest is expected to start in May.

The Produce Safety rule is vague on the definition of "each water source," and when, how, and where on the water system growers are required to sample. FDA has responded to questions on this topic by saying the agency will address the issues further in guidance. Since the curriculum will not be out until after cherry, apple, and pear harvest begins this year and we have received no information on when guidance is expected, the Washington State Tree Fruit Association has brought up three scientists from the Western Center for Food Safety at University of California-Davis who have been contracted by FDA to conduct research on water sampling, to provide training to industry and irrigation districts. The hope is that, since these scientists have been funded by FDA to conduct research on water sampling, they will have a better understanding than most of what the agency will ultimately require.

However, it is still a guessing game. Growers are left with the choice of waiting until further information is provided by FDA on the agency's expectations for water sampling and therefore condensing these costly tests into a shorter time period, or move forward with sampling and risk the agency not accepting the data.

Question 10. What are the differences between FDA's Produce Safety rule and the Preventive Controls for Human Food rule?

Answer. The rules take completely different approaches to food safety. The Produce Safety rule identifies six specific routes to contamination and identifies preventive and monitoring actions that must be taken. The Preventive Controls for Human Food rule takes a process approach, where each facility must identify any possible hazard, one or more preventive controls to control that hazard, and then steps to validate, verify, and monitor the preventive control, as well as corrective actions should something go wrong. While the Produce Safety rule encourages a food safety plan and a recall plan, the Preventive Controls for Human Food rule requires it.

Question 11. What does your group see as the most burdensome aspect of FSMA?

Answer. Due to the third party food safety audits that the vast majority of growers and packers are required to comply with by their retail customers, the tree fruit industry already meets about 90 percent of FSMA's requirements. I believe that the most burdensome aspect of this law for Pacific Northwest tree fruit growers and processors will be proving that current food safety practices adequately protect public health and meet FSMA standards. This ranges from figuring out how FDA expects individual growers to conduct water sampling on their unique farms, to determining how to validate that a particular water treatment or sanitation practice is an effective preventive control for a packer.

Research

Question 12. Can you highlight some specific benefits from USDA research that your members have experienced?

Answer. As the Subcommittee is aware, access to an adequate labor supply to grow and harvest the crop has become an increasingly significant problem. During the first year of the Specialty Crop Research Initiative program, a grant was provided to a group led by Carnagie-Mellon that developed a machine vision system that is a critical component of an automated robotic harvester that is now being developed and tested by a California company with support from the Washington Tree Fruit Research Commission.

Another example is the RosBREED program, which is delivering non-GMO DNA tools to accelerate the commercialization of tree fruit varieties with enhanced disease resistance and superior consumer attributes—reducing production costs and increasing returns.

The Specialty Crop Block Grant program has also allowed for collaboration with groups like the Center for Produce Safety to combine private and public resources from different states to fund top-priority projects to enhance food safety for produce.

Response from Richard L. Guebert, Jr., President, Illinois Farm Bureau; Member, Board of Directors, American Farm Bureau Federation

Questions Submitted by Hon. Rodney Davis, a Representative in Congress from Illinois

Biotechnology

Question 1. How should we improve regulatory efficiency in a way that enables genetic innovation so that we, as a nation, are better able to meet global food security challenges?

Answer. American Farm Bureau addressed this question in our written testimony and in response to this question would refer the Committee to our written submission.

Question 2. Many companies have tens of thousands of stock keeping units (SKUs), which are generally used nationwide. How would this system be disrupted by a patchwork of state-by-state labeling requirements for biotechnology if the Senate minority will not allow a vote on national uniformity regarding voluntary marketing labels?

Answer. In response to obstacles erected in the Senate, several major food companies made the decision to label foods nationally to comply with Vermont's GMO mandate. Companies are being forced to label to comply with Vermont, which ultimately could compel some of these companies to reformulate their products and dispense with ingredients developed using biotechnology. While larger food companies have been very focused on this issue for some time now, thousands of smaller companies are now faced with the reality of complying with a very costly Vermont law.

Small companies have significant compliance concerns that are only made worse without a national GMO labeling standard in place.

The Vermont law creates major disruptions in the nationwide food supply, a result that is bad for American consumers because GMO labeling at its heart is intended to mislead. A substantial portion of consumers perceive mandatory on-package label disclosures of GMO use to mean that there is a health, safety, or nutrition difference between bioengineered food and other food, which scientific reports and our regulatory agencies have repeatedly stated is not the case.

To respond to consumers misled by the pejorative nature of mandatory GMO labeling, a growing number of food products will be reformulated to avoid GM ingredients, at substantial expense to consumers and at the risk of losing innovations that hold enormous environmental, nutritional and food security benefits. The trend to reformulate away from GM ingredients will be accelerated by the threat of another state imposing its own GMO labeling requirement, since the differences between the two state laws would require a second set of new separate product labeling and distribution systems at substantial expense. At the expense of consumers nationwide, Vermont is dictating the country's food labeling policy.

Question 3. Last year, several celebrity chefs were in town to lobby for mandatory biotech warning labeling. However, in the same breath used to advocate for mandatory warning labels these celebrity chefs said they would **Not** label their menus for biotech because it would be difficult to certify and would take up too much space on the menu. These chefs were not alone in their hypocrisy. We can find the same level of inconsistency in the Vermont statute. Can you comment on the various exemptions in the Vermont law, as well as the conflicts between Vermont and other state laws?

Answer. Below are some examples of the inconsistencies between state laws:

Vermont:

- covers "food."
- Exemptions:
  - animal products and foods bearing USDA labels,
  - "certified" as non-GE and organic,
  - processing aids,
  - alcoholic beverages,
  - minimal GE content (no more than 0.9%),
  - food for immediate consumption (broader than restaurants; guidance says this covers all sandwiches, for example),
  - medical food.
- labels:
  - "produced with genetic engineering."
  - "partially produced with genetic engineering."
  - "may be produced with genetic engineering."

Maine:

- covers "food" and "seed stock."
- exemptions/exceptions: "restaurants," alcoholic beverages, medical food, food products derived from animals fed GE feed (does not address GE drugs);
- law initially exempts minimal GE content (no more than 0.9%), but exemption expires 7/1/2019;
- label: "produced with genetic engineering."

Connecticut:

- covers food intended for human consumption and seed or seed stock that is intended to produce food for human consumption; adds "infant formula" to the definition of food.
- exemptions:
  - alcoholic beverages,
  - food intended for human consumption,
  - farm products sold by a farmer at a pick-your-own farm, roadside stand, on-farm market, or farmers' market,

- food consisting of or derived entirely from a non-GE animal, regardless of whether fed or injected with GE food or drug that was produced through means of genetic engineering,

- label: "Produced with Genetic Engineering."

Question 4. It seems food companies are moving forward in an effort to comply with the Vermont GMO food labeling law. In doing so, doesn't this state law create a de facto mandatory labeling system for the rest of the country? What implications will that have for farm to fork? If the Vermont law stands due to inaction by Congress or slow action in the courts, what does this mean for your members?

Answer. It means our members' products will be stigmatized by a meaningless label while also stifling future agricultural innovation.

Question 5. What are some newer breeding methods, in terms of biotechnology? Are they regulated by the government?

Answer. Precision breeding techniques (sometimes referred to as new breeding techniques) comprise a collection of tools and methods that allow plant breeders to change a specific plant gene (to induce genetic variability), to silence (turn down or stop) expression of a specific plant gene or to introduce a specific gene from a wild relative or older variety into a modern, commercial plant variety. An underlying common denominator for these techniques is that they more rapidly and precisely achieve the same result that could be achieved through more traditional plant breeding methodologies. In other words, breeders are utilizing the plant's (or its wild relative's) own genetic makeup to create genetic variability, leading to improved or new plant characteristics. Most of these techniques, particularly those techniques sometimes referred to as "gene editing," result in a plant variety that does not contain any "foreign" DNA from a non-sexually compatible species. They all result in a new plant variety with characteristics that could have been achieved, albeit much more slowly, through more traditional methodologies.

Yes, plants and seeds are comprehensively regulated by USDA under at least two Federal statutes. The Federal Seed Act (FSA) regulates the interstate shipment of agricultural and vegetable seeds. The FSA requires that seed shipped in interstate commerce be labeled with information that allows seed buyers to make informed choices. Seed labeling information and advertisements pertaining to the seed must be truthful and cannot be misleading. The FSA helps promote uniformity among state laws and fair competition within the seed trade.

The Plant Protection Act (PPA) provides USDA with sweeping authority to regulate the movement of any plant or seed if necessary to prevent the introduction or dissemination of a plant pest or noxious weed that might harm agriculture, the environment, or the economy of the United States. This includes authority to require permits for the movement or introduction, including importation, of plants and seed. USDA is also given the authority to require and take whatever remedial measures, including quarantine, treatment and destruction, that the agency determines are necessary to prevent the spread of plant pests and noxious weeds. The PPA also includes significant inspection and enforcement authorities for violations including the authority to seek court injunctions and to impose civil and criminal penalties, with fines as high as $250,000 per violation and imprisonment of up to 1 year.

Gene editing is fundamentally different from the GMOs we have seen so far. Plant breeding techniques such as gene editing are indistinguishable from techniques that plant breeders have been using for decades—inducing genetic variability utilizing the plant's own genome. These techniques are being used by plant breeders at universities, in small and medium-sized seed companies and by the larger technology companies. They are not only important to row crops but are particularly important to the vegetable sector. How products of these techniques are characterized will be as important as whether they are subject to a premarket approval process. We have asked the relevant agencies to regulate only things that science says need close examination and leave the rest to the market. If we all stick to the science and avoid irrational fear, everyone will benefit.

Question 6. It has been said that USDA is considering changing their biotechnology regulations. Does your organization support this?

Answer. We are supportive of APHIS's efforts to take a hard look at its regulations, to ensure that they are up-to-date with the best-available science and utilize the more than 20 years of experience APHIS has in reviewing the safety of these crops. However, because the options that APHIS is considering include potential major departures from the current regulatory framework, it is critically important that APHIS not lose sight of the importance of agricultural innovation.

APHIS will be best able to successfully improve its pre-market agricultural biotechnology regulatory system by making, as needed, smart, "surgical" changes, strategically focused on addressing specific issues, rather than by immediately recom-

mending a radical new approach. The current regulatory system has operated quite successfully for decades and has resulted in no adverse plant health impacts to U.S. agriculture. In the end, making targeted, strategic improvements to the current regulatory system will engender broader support, prove easier to implement, and have a much more immediate impact with fewer unintended consequences.

APHIS should build on the strengths of its current regulatory system and propose narrowly tailored modifications that address specific shortcomings. There is no need for the agency to replace a mature, well-functioning regulatory system with an entirely new one, in the absence of a clear justification.

APHIS's regulatory proposals should narrowly define the scope of regulation, limited to only those products for which APHIS has a legitimate, science-based justification for oversight. Whether and how to regulate products developed through precision breeding tools that are similar to or indistinguishable from products resulting from more traditional breeding tools should be carefully considered. Just as importantly, the government should not stigmatize products through the definition of biotechnology.

As APHIS considers regulatory improvements, it should also examine how regulators can achieve the USDA's stated goals of efficiency without major regulatory changes. Opportunities exist within the current regulatory framework. For example, the agency could make much broader use of the extension process to remove from oversight classes of products for which the agency has a great deal of familiarity. The agency could also publish guidance clarifying which products are, or are not, subject to the current regulations.

APHIS could propose regulatory revisions to incorporate a new, efficient and risk-assessment-based mechanism for adding and removing new categories of organisms from its current scope of regulation. This mechanism should be clear, transparent, predictable and peer reviewed by external experts. APHIS could use this new mechanism to identify new categories of organisms that do not need pre-market regulatory review more efficiently than with current tools. If APHIS has a reason to believe that certain products *not* captured by the current regulations *do* pose a risk to plant health, APHIS could use the same mechanism to add specific new categories of organisms to regulatory oversight.

Throughout the process of considering a new pre-market agricultural biotechnology regulatory system, APHIS should work closely with a broad range of scientific experts, stakeholders and other government agencies to clarify, improve and (as needed) modify and supplement the regulatory alternatives the agency is considering before publishing a proposed rule, with an eye to improving clarity, transparency, predictability and ease of implementation.

Question 7. What are the opportunities for the next generation of innovative tools for farmers?

Answer. The opportunities are great and with the potential of losing agricultural innovation the risk is huge. Without all the options on the table for farmers to utilize, our challenges will be even greater. Farmers need all the help they can get to tackle the variabilities of what Mother Nature throws our way along with meeting the moral imperative of feeding over nine billion people in the upcoming decades.

Question 8. The headlines of major newspapers and many of the cable news shows cast American agriculture in a negative light—though many of those stories are rife with inaccuracies. Unfortunately, these stories drive policy such as what we see with mandatory biotech warning labels. What recommendations do you have for your colleagues in the industry to engage the public to counter these negative attacks? What is your group doing to avoid repeating history so we don't have the consumer distrust with these new technologies like we do with current biotech breeding techniques?

Answer. We continually encourage our members to speak up and engage the public on what we do in agriculture. We have a variety of venues to accomplish that, but we must be at the table. As organizations, we will continue to work with groups like GMO Answers and the U.S. Farmers and Ranchers Alliance. Farm Bureau has more recently been engaged with corporate advocacy, where we invest in different companies to provide a voice to our members during shareholder opportunities.

Pesticides

Question 9. Many people who rely on pesticides to protect their health and property have stated that one or more of EPA's recent actions have taken away their access to important products needed to fight pests. What should EPA be doing to ensure that those producers will have the time-proven products and the new, effective products available to meet their needs?

Answer. Protecting crops from diseases and pests is a critical component of farming, and Congress has recognized this fact through enactment and revisions of the

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Farmers expect EPA to adhere to the law and to Congressional intent: we neither want to use chemicals that do not meet the statutory test laid out in FIFRA, nor do we seek to use legal chemicals in ways that are prohibited through the label. But it is paramount that EPA not undermine the statute or allow a 'precautionary principle' to creep into its regulation of pesticides. If the agency follows the science and the law without prejudging the outcome, we believe scientists, regulators, farmers, environmental activists and all affected stakeholders can be assured of a safe, reliable outcome.

Question 10. Public policy has an enormous impact on the economic viability of farms. Can you offer a couple examples of recent regulatory actions that have had a negative impact? What about legislative actions at the state or national level?

Answer. Certain rulemakings by EPA have had negative impacts on farmers and ranchers:

- EPA's WOTUS rule, if implemented, will unquestionably raise regulatory costs and burdens for farmers, ranchers and other landholders;
- EPA's regulation implementing the Spill Prevention, Control and Countermeasures rule has increased costs for farmers and ranchers;
- EPA's recent worker protection standards (WPS) rule has increased recordkeeping and other requirements for farmers without any attendant worker benefit;
- We fully anticipate that EPA's Chesapeake bay TMDL will have a negative impact on agriculture in that watershed;
- We are greatly concerned that EPA appears to be on a path to restricting critical crop protection tools for farmers, most notably chlorpyrifos.

Question 11. In the *National Strategy to Promote the Health of Honey Bees and Other Pollinators* and the EPA *Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products,* EPA offered support for voluntary stewardship methods to reduce exposures during the planting of pesticide treated seed. And, on January 4, 2016, EPA released its preliminary pollinator assessment for one pesticide indicating that it posed a low-potential risk to bees when used as a seed treatment. Do you have any specific concerns with the National Strategy document?

Answer. Farm Bureau members include beekeepers and we support efforts to promote beekeeping and to ensure that pollinators are not unduly vulnerable to pesticides or other environmental challenges. We support EPA's initiative on promoting state managed pollinator protection plans (MP3s). At the same time, we believe it is critical that EPA, when evaluating neonicotinoids, not be swayed by public or political pressure and rely instead on sound science in reaching its judgments. Neonicotinoids are a valuable tool for farmers as a seed treatment, and they are virtually indispensable for citrus growers in fighting citrus greening.

Question 12. Does your organization support passage of H.R. 897, the Reducing Regulatory Burdens Act of 2015? Do you believe the burden and liabilities of obtaining a water permit are limiting or delaying mosquito control applications that control viruses like Zika and protect human health?

Answer. Farm Bureau strongly supports H.R. 897 and is actively working for its enactment into law. While we have heard anecdotal reports of the negative impact the existing regulatory regime has had on mosquito control, we do not have direct evidence to share with the Committee.

Question 13. What do you believe will happen if H.R. 897 is not enacted and President Obama's WOTUS rule goes into effect?

Answer. Farmers are immensely concerned about the impact of WOTUS implementation; on top of that, should H.R. 897 not be enacted it could have an enormous impact on agricultural activities across the country. As long as the threat of a CWA NPDES permit is required for pesticide applications, farmers face the possibility of litigation and fines—simply for following FIFRA when they manage their crops. This is an unacceptable situation and should be rectified by Congress.

Question 14. The public is threatened by insect-borne diseases—West Nile Virus is a good example. Some of the critical products used to control mosquitoes are also the backbone of Integrated Pest Management plans. Can you tell us your thoughts regarding EPA's plans for OP's (organophosphates) used to protect public health against very dangerous and prolific pests?

Answer. In FIFRA, Congress set out a clear standard for EPA to follow. The agency is charged with ensuring that when registering a pesticide it does not pose 'any unreasonable risk to man or the environment, taking into account the economic, social and environmental costs and benefits of the use of any pesticide.' We are increasingly concerned the agency is departing from that standard and imposing its

own value judgments, tending more toward a precautionary principle which could threaten the availability of many products.

Question 15. We've heard a lot about the need for oversight of the EPA's pesticide program. What are your organization's top priorities for regulatory oversight?

Answer. We would like to see the Committee rigorously review EPA's implementation of Congressional intent to ensure that it is following the standard established in FIFRA; is not using a precautionary principle approach; is conducting itself in an open, transparent fashion; is using sound and well-established science; and is not manipulating the process to restrict farmers' access to critical crop protection tools.

Question 16. In publishing the final worker protection standard rule, the EPA included a "designated representative" provision that had not been previously provided to the Committee as required in law. We have some questions about this provision.

If a designated representative had information related to pesticide use on a farm and wanted to use that information publicly to pressure the farm to stop using that pesticide, is there anything in the regulation to prevent that from happening?

Answer. In Farm Bureau's reading of the regulation, there is no restriction whatsoever on the use a 'designated representative' may make of farm-specific pesticide data. Thus, a 'designated representative' would be free to use the information publicly in a manner to put pressure on a farmer to halt using a particular pesticide.

Question 16a. Does the provision grant a right for designated representatives to obtain certain pesticide information used on a farm upon presentation of a written, signed authorization by a worker?

Answer. Yes.

Question 16b. Once a farmer is presented with the written, signed authorization, does he or she have a legal obligation to provide the information?

Answer. It is our understanding of the regulation that a farmer would have a legal obligation to provide information. However, the agency has not been able to clarify a farmer's legal responsibility if the information provided does not agree with the farmer's records.

Question 16c. Once the designated representative has the information, are there any restrictions on what the designated representative can do with the information?

Answer. Our reading of the regulation is that there are no restrictions on what a 'designated representative' may do with the information.

Question 16d. Is there any provision in the WPS to require the designated representative to share the information with the worker who signed the form?

Answer. We have found no language in the WPS that would require a 'designated representative' to share the information with the worker on whose behalf the information was purportedly sought.

Question 16e. Are there any restrictions on who may be a designated representative (*e.g.,* an anti-pesticide activist group or legal services group)?

Answer. EPA has prepared an "FAQ" document which explicitly states that a designated representative must be designated in writing by the worker or handler, and can be anybody including but not limited to a relative, friend, another worker or handler, someone from a nonprofit organization, or a legal representative.

Question 16f. If a designated representative had information related to pesticide use on a farm and wished to publish that information broadly, is there anything in the WPS to prevent that from happening?

Answer. We do not see any restrictions in the WPS that prevents broad public dissemination of farm-specific pesticide data.

Food Safety Modernization Act

Question 17. Can you describe the consultation process that FDA engaged in with industry in developing the regulations under the Food Safety Modernization Act?

Answer. Over the past 5 years, FDA had numerous avenues for stakeholders to engage. Most notably, the agency held multiple public meetings and issued proposed and supplemental rulemakings for public comment. Farm Bureau also participated in smaller stakeholder meetings with FDA where we could discuss varying concerns. We are also aware of FDA representatives visiting farms and discussing issues with farmers. While the final rules are not perfect and certainly more stakeholder involvement can always be done, Farm Bureau does appreciate FDA's openness in this process.

Question 18. Prior to passage of the Food Safety Modernization Act, there was a great deal of debate surrounding the question of what authority the FDA should have over food production. Many Members present at the time raised questions about granting the FDA the power to tell farmers how to farm. From the standpoint

of food safety, do you believe FDA has the resources and expertise, more so than the USDA and State Ag Departments, to regulate on farm production practices?

Answer. Farm Bureau supports USDA being the primary agency regulating food safety in America. It is our policy that USDA is better equipped to regulate on-farm activities and therefore should have jurisdiction over FSMA implementation. In FSMA's current form, Farm Bureau supports FDA partnering with the State Ag Departments to assist in training and enforcement. While we believe FDA has done outreach, there are still grave gaps in its understanding of on-farm practices and methods. These gaps could force FDA to have a reactionary response to food safety issues and ultimately undermine the Congressional goal of a preventative food safety system. Therefore, we are encouraged to see that, assuming appropriate funding, most on-farm FSMA implementation and enforcement will be performed by the relevant state agency.

Question 19. There was a great deal of concern when Congress passed the Food Safety Modernization Act that FDA's lack of resources and expertise would ultimately result in a "one-size-fits-all" approach to regulation. Do the final rules adequately account for the variation between crops, geographical growing locations, and even the associated risk profiles of the products produced in the U.S.?

Answer. Farm Bureau supports a science and risk-based approach to food safety. The final rules err on the side of inclusivity rather than taking a risk-based approach that would have analyzed the risk associated with different types of produce and growing conditions. Farm Bureau opposes this approach taken by FDA. If FDA had evaluated specific raw agricultural products and growing conditions, the regulation would better-tailored to meet the objective of public safety without unduly burdening farmers.

Question 20. You talk about the farm definition in FDA's produce safety rule. Can you explain what this definition is, and why it is important? Do you support revising the Farm definition?

Answer. The farm definition is perhaps the most critical component to the FSMA rules. It dictates what operations are brought under the Produce Safety rule and Preventative Controls for Human Food rules, and what operations may fall under both. Farm Bureau strongly believes farms must be treated as farms, not facilities, and that overlap of the rules must be limited to the extent possible.

In the final rule, FDA created two types of farms. A Primary Production Farm is defined as an operation under one management in one general, but not necessarily a contiguous, physical location devoted to the growing of crops, the harvesting of crops, the raising of animals, or any combination of these activities. A primary production farm can also pack or hold raw agricultural commodities (regardless of who grew or raised them) or manufacture/process, pack, or hold processed foods so long as: all such food is consumed on that farm or another farm under the same management; or the manufacturing/processing falls into limited categories. A Secondary Production Farm is defined as an operation not located on a primary production farm devoted to harvesting, packing, and/or holding RACs that is owned or jointly owned by a Primary Production Farm(s).

While there have been vast improvements in the farm definition throughout the rulemaking process, the arbitrary distinction drawn between primary and secondary farms based on ownership is neither science- nor risk-based. FDA cannot show any reasonable justification related to public safety for drawing this distinction and it places many farms that have off-farm packing housing under both the Produce Safety and Preventative Controls rules. Farm Bureau would support modifying this definition to account for the fact that there is no greater risk for RACs packed on-farm *versus* off-farm.

Question 21. Can you talk a bit about the food safety training challenges associated with FSMA implementation?

Answer. Pre-compliance training and education is vital to the success of FSMA. Currently, farmers are concerned about the rules and what they mean for their farms—whether because they have a unique farm structure, a variety of crops farmed under a variety of farming practices, irrigation water that likely doesn't meet the standards, or the distinction between FSMA and GAP, Global GAP, Leafy Green or other industry driven standards. FSMA was intended to be a preventative systematic approach, **Not** reactionary enforcement. Currently, Farm Bureau is very concerned about the delay in releasing guidance and the Produce Safety Alliance curriculum. Large farms will need to be in compliance starting in January 2018—a short 20 months away. Farm Bureau and other organizations want to assist FDA in this training component; however, we need this information to ensure we conduct useful and accurate trainings. Farm Bureau urges the Committee to engage FDA to expedite this process.

Question 22. What does your group see as the most burdensome aspect of FSMA?

Answer. FSMA is an incredibly complicated regulatory system. While there are numerous parts of the rules that Farm Bureau sees as burdensome, the technical water standards, testing, and die off periods are likely going to require farmers to hire third party experts to assist in conducting testing, determining whether the water meets the stringent water standard that FDA failed to show was reasonably necessary, and then determining in what ways, when, and for how long they can use that water on their farms. Moreover, the increased record keeping throughout the supply chain is going to be incredibly expensive and time consuming.

Research

Question 23. USDA has begun implementing a two stage review process for competitive grants under the Specialty Crop Research Initiative. These two separate reviews take into account both relevancy to the industry and scientific peer review. Though not yet implemented, the law makes it clear that the relevancy review process should be applied to other competitive grants programs such as the Agricultural and Food Research Initiative—particularly for applied research grants. Do you think that producer support for these programs would grow if relevancy review were a component of the grant awards process?

Answer. A critical review of the NAREE Board is in order because that board is authorized to match producer priorities with scientific feasibility to achieve what is termed 'relevancy.' If that function is failing, a new approach is in order.

Producer support for USDA research and development has always been strong. While relevancy review is one important way for USDA to ensure producers' voices are heard throughout the grant making process, there are much more significant challenges that must be addressed in order to grow support not only among producers, but among the general public as well. For example, agency-level collaboration between ARS and NIFA could be more systematic to reduce duplicative research and make the best use of limited agricultural research resources. In addition, a greater emphasis needs to be placed on ensuring that external communication conveys results in a simple and easy to understand manner that resonates in the mainstream. Emphasis must be placed also on improving technology transfer and better educating the public about the good work USDA research is doing. A modernized Extension service should be equipped to carry out this mission.

Question 24. Increasing availability of funds for research is a common goal. Recognizing fiscal constraints though, are we focusing our resources on the correct priorities?

Answer. Competitive grants are widely recognized as having greater innovation potential than grants based on other mechanisms, yet the proportion of funding for competitive agricultural research remains far below the proportion of funding for competitive research in other science agencies. Moreover, we believe streamlining dozens of different extramural research programs will dramatically improve resource allocation. AFBF President Zippy Duvall highlighted the importance of research for our members *in an April 2016 op-ed* (*http://thehill.com/blogs/congress-blog/economy-budget/276427-agricultural-research-is-the-farmers-ultimate-antacid*) [*Attachment*] published in *The Hill.*

Question 25. Can you highlight some specific benefits from USDA research that your members have experienced?

Answer. Since our members represent a broad range of commodities, there are numerous examples where USDA-funded research is making a difference in the field. Some examples include:

- AFRI-supported research on plant breeding is leading to the development of new cultivars for many critical crops. Fifteen percent of U.S. wheat acreage is planted using cultivars resulting from AFRI investments.
- AFRI-supported research at North Carolina Agricultural & Technical University has led to the development of a hypo-allergenic peanut. This product will ideally be available in the market soon.

Given that AFRI is a young program, we have only scratched the surface of what it can produce for America's farmers.

Question 26. Is information about research and technology advancements readily available and communicated within the agriculture community?

Answer. USDA's Office of Technology Transfer (OTT) is responsible for ARS' technology transfer program and is delegated the authority to administer the patent and licensing program for all intramural research conducted by USDA. The OTT helps move ARS research discoveries to the marketplace. However, USDA lacks a similar structure dedicated to extramural research and moving NIFA-funded discoveries to

the marketplace. Doing more for tech transfer also provides opportunities to create greater awareness for our members and the public of the benefits of federally funded research.

Question 27. To the extent that there are possible improvements in the way research information is disseminated, what suggestions would you have for USDA's research agencies to improve communication with producers?

Answer. We believe the Extension Service, at least in part, was designed to carry out this task. A modernized Extension Service should be empowered to effectively serve as USDA's voice communicating clear and understandable results to the producer community and the general public at large. A more user friendly grants database would also be a great tool for better understanding what projects are being supported and in what topic areas. We also think that more could be done to spotlight specific research success stories as a means of our members, policymakers and the general public.

Question 27a. Is the money being spent through the Agriculture and Food Research Initiative and the Specialty Crop Research Initiative going towards industry supported research?

Answer. To the extent that highly ranked projects are funded, yes. Due to inadequate funding, proposals within AFRI have an 11% success rate. In spite of this, AFRI-funded research projects are already making strides in defending agriculture against climate variability, water supply, food safety and major threats to plan and animal health such as emerging pests and pathogens. It should be noted that AFRI was created to also fund the types of basic research that can create a pipeline of innovation to serve the agricultural industry well into the future.

For example:

- A multi-state research team is developing novel nutritional, genomic, and genetic improvement technologies to help producers use less feed resources to produce beef for human consumption.
- AFRI-supported research is resulting in new tools that better monitor, prevent, control and manage future outbreaks of avian flu.

Labor Regulation

Question 28. What are some of the extraneous impacts OSHA's July 2015 revised interpretation of Process Safety Management standards has on the agriculture community?

Answer. OSHA's expansion of Process Safety Management standards will likely have dramatic downstream impacts on farmers utilizing anhydrous ammonia. A joint study done by the Ag Retailers Association and The Fertilizer Institute estimates that this change costs a minimum $27,500 per facility. If the facility can come into compliance, this cost will be passed downstream to farmers. If the facility is forced to stop selling anhydrous ammonia due to the increased cost, farmers will have limited access to this key nitrogen input.

Question 29. How can this Subcommittee provide oversight on the Process Safety Management (PSM) issue?

Answer. It would be very helpful for the Subcommittee to engage with Labor-HHS appropriators to ensure that the following FY16 report language be placed in the FY17 legislative text.

> "The revised enforcement policy relating to the exemption of retail facilities from coverage of the Process Safety Management of Highly Hazardous Chemicals standard (29 CFR 1910.119(a)(2)(i)) issued by the Occupational Safety and Health Administration on July 22, 2015, shall not be enforced nor deemed by the Department of Labor to be in effect in Fiscal Year 2017, or future years, until: the Bureau of the Census establishes a new North American Industry Classification System code under Sector 44 or 45 Retail Trade for Farm Supply Retailers; the Secretary of Labor, acting through the Assistant Secretary of Labor for Occupational Safety and Health, has carried out all notice and comment rulemaking procedures and invited meaningful public participation in the rulemaking; and the Secretary, acting through the Assistant Secretary of Labor for Occupational Safety and Health, arranges for an independent third-party to conduct a cost-benefit analysis of such proposed rule, and the Secretary includes such analysis in the publication of the proposed rule."

ATTACHMENT

The Hill

Agricultural Research Is the Farmer's Ultimate Antacid

April 18, 2016, 11:16 a.m.
By Vincent "Zippy" Duvall

As a poultry farmer, I was worried when avian flu began popping up around the country last year. **Almost 50 million birds** (*https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/avian-influenza-disease/sa_detections_by_states/hpai-2014-2015-confirmed-detections*) were culled in an effort to limit the outbreak, even though only slightly more than 200 birds were actually sick.

Since I also raise cattle on my land, I was concerned in 2014, when a single case of mad cow disease was discovered in Texas. The disease was isolated and eliminated, however, and our food supply was protected.

That's what it's like to be a farmer. Taking care of our animals is our top priority, but we have every-day worries that go beyond providing our animals access to feed, water and shelter. While we do our best to prepare for what we can control, we also want to be ready for the uncertainties that are thrown our way.

Whether our challenge of the day stems from a new government edict that affects how we farm, another nation's decision to ban our products or an unforeseen disease outbreak, there is really only one solution on which we hang our collective hat—cold, hard science.

Research has helped us increase yields, decrease inputs, and ward off plant and animal diseases. Research has made us more productive on fewer acres and has decreased our environmental footprint. This supports the fact that U.S. families spend a lower percentage of their incomes on food than citizens in any other nation.

But times are changing. The expiration date for the scientific findings that underpin our day-to-day work and boost the quality of life for all Americans is fast approaching. And you don't need a Ph.D. to see that.

Take avian flu, which laid havoc to Iowa's egg industry last year. Killing tens of millions of birds because several hundred contracted the flu may seem like an overreaction, but it was the only way we knew how to stop the disease before it reached the "broiler belt" in the South. We need a more effective and modern way of ending these outbreaks.

Scientists at Ohio State and the University of Cincinnati are answering this challenge by analyzing the flu virus and how it jumps from poultry to people to pigs. This collaboration, funded by the USDA's Agriculture and Food Research Initiative (AFRI), is one of many exploring new ways to better identify and control future outbreaks.

AFRI is a relatively new program. Its grant proposals are developed by potential researchers and reviewed and ranked by an expert board. The program's current budget, however, sits at $350 million—½ of what Congress authorized in the 2008 Farm Bill—and as a result, only a small portion of the best research projects get funded.

The Administration has proposed doubling AFRI's budget to fund the program at the level authorized by Congress. To farmers, this feels like a good move. We need to find immediate answers to challenges like citrus greening. We also need to make sure researchers can fight the bugs that will eat into our yields 10 years from now. And we need advanced technologies to keep foodborne bacteria from reaching people's plates.

Agricultural scientists can take on these challenges, but they need support. **In the past 10 years,** (*http://www.nsf.gov/statistics/fedfunds/*) the total budget for all of the USDA's research programs has grown by only 0.2 percent. In the same timeframe, the Department of Energy's research budget has grown by 23 percent.

I am all for keeping the lights on in the dining room, but the American people also need a steady supply of safe and healthy food for the dinner table.

Every dollar spent on agricultural research generates **$20 for our economy,** (*http://www.apsnet.org/members/outreach/ppb/blog/Lists/Posts/Post.aspx?ID=23*) and we see those returns in safer, more nutritious and more plentiful food. But I also see those returns in a quite personal way—in fewer worries for my fellow farmers and me. We're in a difficult time right now—prices are down, costs are up—and we need all the solutions science can discover. Publicly-supported research pays dividends to all Americans, and it is an investment we all must embrace.

Duvall, a third generation farmer from Greene County, Georgia, was elected President of the American Farm Bureau Federation in January 2016.

Response from Dale Murden, President, Texas Citrus Mutual
June 7, 2016

Hon. RODNEY DAVIS,
Chairman,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.;

Hon. SUZAN K. DELBENE
Ranking Minority Member,
Subcommittee on Biotechnology, Horticulture, and Research,
House Committee on Agriculture,
Washington, D.C.

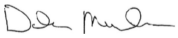
Re: Questions for the Record: House Committee on Agriculture, Subcommittee on Biotechnology, Horticulture, and Research Public Hearing: Focus on the Farm Economy—Factors Impacting the Cost of Production

Dear Chairman Davis and Ranking Member DelBene:

Below are my responses, on behalf of Texas Citrus Mutual, to your questions for the record from the House Agriculture's Subcommittee on Biotechnology, Horticulture, and Research public hearing, "Focus on the Farm Economy—Factors Impacting the Cost of Production," held on April 27th, 2016. I greatly appreciated the opportunity to testify in front of your Committee and share a grower's perspective on these issues.

Again, thank you for the opportunity to participate in the hearing and respond to your questions. Please do not hesitate to contact me if you have any further questions.

Sincerely,



DALE MURDEN,
President, Texas Citrus Mutual.

Questions Submitted by Hon. Rodney Davis, a Representative in Congress from Illinois

Biotechnology

Question 1. How should we improve regulatory efficiency in a way that enables genetic innovation so that we, as a nation, are better able to meet global food security challenges?

Answer. U.S. agriculture is innovative and stands willing to adopt new developments but negative consumer sentiment and regulatory burdens will impede that adoption. The oversight of new plant products derived through biotechnology offers us an opportunity to produce more with less. It brings the opportunity for increasing yields, reducing inputs, and further minimizing food waste all through the development of new crop traits. However, if the regulatory burdens are too strict or are structure in a way that invites litigation from anti-modern agriculture groups, then the vast majority of commodities will be forced to the sidelines.

Question 2. What are some newer breeding methods, in terms of biotechnology? Are they regulated by the government?

Answer. Right now, practices like doubled haploids, cell fusion, and embryo rescue are common practices that have been used for decades. However, the Part 340 Notice of Intent from USDA–APHIS suggested that these techniques could be regulated under a new regulatory approach the agency is considering, despite the fact that these techniques have been used safely, with tremendous benefits to growers and consumers, and without evidence of negative environmental impacts. Some of the new techniques like gene editing, CRISPR techniques, and zinc fingers are being pursued for new variety development now. Under current regulations these plant products would not be regulated unless the resulting product was deemed a noxious weed under CFR 360 (USDA–APHIS). This is because the plant product would be the result of working within the genome of the plant of interest. It is essentially a more direct and efficient means of developing a new variety that would otherwise be developed using more expensive and time consuming traditionalbreeding.

Question 3. It has been said that USDA is considering changing their biotechnology regulations. Does your organization support this?

Answer. We support updating the coordinated framework in a manner that creates a more transparent and efficient process for the three regulatory agencies (EPA, FDA, USDA) engaged in the oversight of genetically engineered crops. There is a need for oversight in the development of new traits that could not otherwise

occur in nature. However, we oppose the USDA's interest in expanding their authorities to regulate traits that can otherwise be developed using traditional breeding or found in nature. This would require the agency to regulate based on the process rather than the product, which is antithetical to science and not supported by the National Academy of Sciences. It would only serve to stigmatize the technology and not add any new safeguards to the environment or human health.

Question 4. What are the opportunities for the next generation of innovative tools for farmers?

Answer. Genetically modified crops (GMOs) have been largely focused on pest and herbicide resistance with pretty straightforward transformation of a single gene or two into the crop of interest. However, these new techniques offer great promise with the potential to make multiple small changes or tweaks within gene families that can impact things like drought, cold, and heat tolerance, improved photosynthetic efficiency, greater fruit durability, *etc.* The opportunities are potentially boundless but what is certain these techniques and their ability to do in months what might otherwise take decades will allow farmers to grow more with fewer inputs and reduced waste. This is the only way we will be able to feed our growing population in a sustainable manner.

Question 5. The headlines of major newspapers and many of the cable news shows cast American agriculture in a negative light—though many of those stories are rife with inaccuracies. Unfortunately, these stories drive policy such as what we see with mandatory biotech warning labels. What recommendations do you have for your colleagues in the industry to engage the public to counter these negative attacks? What is your group doing to avoid repeating history so we don't have the consumer distrust with these new technologies like we do with current biotech breeding techniques?

Answer. We must be transparent about the techniques, why they are used, and what they accomplish. We must highlight the reports from EPA, USDA, FDA, and the most recent National Academy of Sciences report, which document the safety and the importance of these new breeding techniques.

In addition, we are in the unfortunate situation where we must more regularly counter the false and deceptive claims of other groups. Some of these organizations have built up a level of credibility by making unsubstantiated, but unchallenged, claims. The agriculture community must do our part to reveal them as the charlatans that they are.

Pesticides

Question 6. Many people who rely on pesticides to protect their health and property have stated that one or more of EPA's recent actions have taken away their access to important products needed to fight pests. What should EPA be doing to ensure that those producers will have the time-proven products and the new, effective products available to meet their needs?

Answer. The must immediately stop the use of their new and untested modeling formulas used in water, expected environmental concentrations, and safety factor calculations. It is my understanding that in the last 2 years or so EPA has moved their modeling to a much more conservative approach which consistently includes the most extreme of circumstances in nearly every instance and is not reflective of what occurs in the environment. While there is nothing inherently wrong with using models, the inputs and assumptions used have the ability to create results with tremendous disparities from what is observed through monitoring. The EPA has created and has now deployed the statistical equivalent of the precautionary principle. This must be halted and they should return to using the previous models until they can show that their new models are more reflective of what happens in nature.

Question 7. In the *National Strategy to Promote the Health of Honey Bees and Other Pollinators* and the EPA *Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products,* EPA offered support for voluntary stewardship methods to reduce exposures during the planting of pesticide treated seed. And, on January 4, 2016, EPA released its preliminary pollinator assessment for one pesticide indicating that it posed a low-potential risk to bees when used as a seed treatment. Do you have any specific concerns with the National Strategy document?

Answer. While I am generally supportive of protecting pollinators and doing what we can to improve their habitat and forage opportunities, the EPA's "Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products" was the antithesis of what is supposed to be done under FIFRA. The proposal listed 76 Active Ingredients (approximately 3,500 products) that would be banned from use when a crop is under pollination contract. They made that proposal on a hazard number and not a risk assessment and, certainly, with no consideration of benefits. Furthermore,

those requirements have caused a breakdown in communication and collaboration between beekeepers and growers where before they worked out arrangement through their customer/provider relationship (pollination services).

Question 8. We've heard a lot about the need for oversight of the EPA's pesticide program. What are your organization's top priorities for regulatory oversight?

Answer. We need Congress to dig in deeper to gain a better understanding of the drastic changes EPA has made in its modeling approach. It was not done in a transparent manner, it is *not* science based—despite their claims—and has drastically reduced the products we will have access to and the new tools that will be developed, unless something is done about it.

Question 9. Did the EPA ignore important facts in expressing concern about bees and citrus crops?

Answer. EPA did in fact ignore two very important facts.

1. Citrus does not require managed bees for pollination services. In many cases they are a pest in the production process.
2. Concentrations of neonicotinoids identified by EPA in the nectar could be easily mitigated by making minor changes in the timing of the applications. The report provided useful information that growers can learn from but EPA decided to use the opportunity to paint citrus in a poor light and further empower activist organizations.

Question 10. The President has stressed the importance and value of transparency in EPA's action to ensure the use of sound science and reliable data. EPA is increasingly reliant on epidemiological and modeling data to essentially overrule volumes of actual 'hard science' laboratory and monitoring data. Was this fundamental change in policy put out for public notice and comment so that impacted stakeholders like you would have an opportunity to comment?

Answer. The greater emphasis on modeling and specifically the change in model used was not made available, opened for comment, or demonstrated to stakeholders. It was an internal decision, which only became apparent after it was put in use and resulted in moving the agency to a more precautionary position.

Question 11. The United States has the world's most rigorous pesticide registration and review processes. Yet, when EPA's regulatory decisions are challenged in court, the Agency has not enjoyed many recent successes in defending its scientific process or decisions. Are these actions undermining EPA's credibility with the public?

Answer. Absolutely. However, where did the erosion begin? Some of the recent actions taken by EPA have undermined their scientific credibility, which is being reflected and reinforced in the courts.

Question 12. If the tools used to manage weeds and pests continue to be restricted, taken away, or prevented from getting to the market altogether, how does that benefit the economic and environmental viability of your members' operations?

Answer. These decisions by EPA are a drag on the rural economy and will likely drive more individuals of the next generation away from agriculture.

Research

Question 13. USDA has begun implementing a two stage review process for competitive grants under the Specialty Crop Research Initiative. These two separate reviews take into account both relevancy to the industry and scientific peer review. Though not yet implemented, the law makes it clear that the relevancy review process should be applied to other competitive grants programs such as the Agricultural and Food Research Initiative—particularly for applied research grants. Do you think that producer support for these programs would grow if relevancy review were a component of the grant awards process?

Answer. I believe producer support will grow as will a greater diversity of academic research participation if the two-stage process is adopted more broadly. The two-stage review has helped improve stakeholder and academic relations and we believe much stronger projects.

Question 14. Increasing availability of funds for research is a common goal. Recognizing fiscal constraints though, are we focusing our resources on the correct priorities?

Answer. The specialty crop programs developed and supported through the last farm bill were exactly what we needed and continue to support.

Question 15. Is the money being spent through the Agriculture and Food Research Initiative and the Specialty Crop Research Initiative going towards industry supported research?

Answer. We have great confidence in the funding being spent on citrus research, especially with the formation of the CDRE through the 2014 Farm Bill. Funds supporting research in HLB resistance development, marker assisted breeding, and improved rootstocks will serve the industry in overcoming HLB, as well as, set us on a course for generally improved fruit quality and more robust citrus varieties.

Farm Bill

Question 16. What are your top priorities for Congressional oversight of programs affecting your members?

Answer. Our first priority is greater oversight of EPA–OPP. There has been a fundamental shift in EPA's risk assessment approach and greater light must be shined on their process.

Citrus Pest/Disease and Pollinators

Question 17. We have heard about the devastating impacts citrus greening has had on the citrus industry. Can you elaborate on the research being conducted to combat citrus greening?

Answer. A tremendous amount of work is currently being done on many fronts to battle HLB, which is threatening our industry. Scientists at the University of Florida and Washington State University are trying to culture HLB, which has never been done before. Part of the difficulty in studying the disease and identifying it's weaknesses is our inability to isolate the organism in culture. These researchers are looking to overcome that.

Another project at the University of Florida is looking to develop bactericides that would reduce the pathogens transmission and, potentially, cure infected trees. Research at the University of California is using virulence proteins from the pathogen to detect its presence before symptoms appear and to develop strategies for creating citrus rootstocks that are immune to HLB.

We have great confidence that this multi-pronged approach will lead to effective mitigations and the eventual elimination of HLB as a major threat to the U.S. citrus industry.

Question 18. Do you have any particular recommendations on how to expedite the development and implementation of citrus greening control technologies and strategies?

Answer. Limiting the regulatory hurdles in biotechnology and crop protection tools will allow us to innovate our way out of this issue if we can do it quickly. Unfortunately, the regulatory environment is currently working against us.

Question 18a. Considering the recent revocation of pesticide product registrations, has industry's ability to combat the spread of citrus greening been affected?

Answer. The loss of Sulfoxaflor (Closer) has been a tremendous loss to the citrus industry and has undoubtedly led to the increased spread and impact of HLB and its vector, the Asian Citrus Psyllid. In addition, the general messaging from EPA has been one of highlighting risk—to pollinators in particular—without recognition of benefits. This messaging has made it more difficult for the citrus industry to encourage homeowners who have citrus trees in their yards to treat for the disease and its insect vector. The result of EPA's tone has been to diminish our ability to limit citrus production from exposure to HLB.

Question 19. Getting and keeping pesticide uses for individual specialty crops like citrus is especially challenging for growers and manufacturers. Has EPA expressed concern about pesticide residues on citrus trees as problem for bees?

Answer. EPA highlighted their concerns about imidacloprid residue in citrus specifically in their January announcement. In fact, they highlighted their concerns in the lead statement of the press release, despite the fact that the report was largely positive and showed little concern in most crops and the mitigation for reducing potential imidacloprid exposure to bees was simple and just involved a small change in the timing of the application.

Question 20. Do citrus crops rely on pollinators?

Answer. Citrus *does not* rely on contract pollination. In the case of our seedless varieties like seedless mandarins, bees are a pest, causing the development of unwanted seeds through pollination and outcrossing.

Response from Jay Vroom, President and Chief Executive Officer, CropLife America

Questions Submitted by Hon. Rodney Davis, a Representative in Congress from Illinois

Pesticides

Question 1. Many people who rely on pesticides to protect their health and property have stated that one or more of EPA's recent actions have taken away their access to important products needed to fight pests. What should EPA be doing to ensure that those producers will have the time-proven products and the new, effective products available to meet their needs?

Answer. EPA should return to operating within the legal boundaries and Congressional intent of FIFRA, including FQPA. In recent years, EPA has shifted away from risk-based assessment toward reliance on hazard-only based precaution in taking actions on the review of several crop protection products. Pesticides stakeholders ask that Congress conduct aggressive oversight of EPA in order to correct the Agency's misguided overreach.

Question 2. Public policy has an enormous impact on the economic viability of farms. Can you offer a couple examples of recent regulatory actions that have had a negative impact?

Answer. While CropLife America cannot speak personally for farmers, we do know that, in registering pesticides and uses, EPA plays an important role in protecting the economic viability of farms and farm families. Predictable, transparent process based on risk-based assessment is a crucial component to providing the crop protection tools needed by American farmers. The balance of the questions that follow that will detail several examples of regulatory actions that we believe demonstrate a systemic breakdown in EPA's adherence to Federal law, established process and sound science.

Question 2a. What about legislative actions at the state or national level?

Answer. Unfortunately, due to mixed signals from EPA, several states are considering, and in some cases have adopted anti-pesticide related laws, including product bans, on products reviewed and strictly regulated at the Federal level. Some of these state level actions and activism are based on EPA's reluctance to defend its own science and regulatory process, and nearly all of the actions are founded in misinformation and unsound science. Simply banning the use of a pesticide product can seem like an easy option to be perceived as doing "something" on pollinator issues. However, given the multitude of stressors affecting pollinators, banning a product that is regulated and used according to label language will not solve the problem.

Question 3. In the *National Strategy to Promote the Health of Honey Bees and Other Pollinators* and the EPA *Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products,* EPA offered support for voluntary stewardship methods to reduce exposures during the planting of pesticide treated seed. And, on January 4, 2016, EPA released its preliminary pollinator assessment for one pesticide indicating that it posed a low-potential risk to bees when used as a seed treatment. Do you have any specific concerns with the National Strategy document?

Answer. In May of 2015, the White House's Pollinator Health Task Force issued its, "National Strategy to Promote the Health of Honey Bees and Other Pollinators" (the National Strategy). The three goals of the response are repeated often as a guide about what the multitude of Federal agencies are collectively striving for: (1) reduce honey bee colony losses, (2) protect monarch butterflies, and (3) increase pollinator habitat acreage.

Dozens of programs in multiple agencies across the Federal Government address some aspect of pollinator protection and awareness. It is not readily apparent to observers in industry, agriculture and the private-sector that these multiple Federal efforts are effective, coordinated, financially responsible, and not duplicative. We would like to see greater evidence of coordinated, directed research to solve the concerns for managed pollinators—protection from parasites, predators, diseases; thorough understanding of the effects of management practices on hive health; and the basics and intricacies of nutritional needs. Other livestock industries (beef, dairy, poultry, swine, wool, *etc.*) generally have a precise understanding of nutritional needs, disease protection, and management practices necessary to achieve consistent high-level production. Most of this is a result of, or has benefited greatly from, Federal research efforts and funding. This is what the honey bee industry needs.

Regarding pesticides specifically, EPA's approach to the possible impacts of pesticides and pollinators has been inconsistent with established policies for risk assessment and individual product evaluation against an established, and scientifically valid, set of regulatory criteria. EPA has asked for and received significant

volumes of additional studies which they have requested from pesticide companies but it is not clear how or whether this information has been used as the basis for whatever latest policy approach.

Pollinator policies have been characterized by pronouncements which truncate the procedures otherwise required by FIFRA when EPA seeks to change label requirements, especially when there may be issues of dispute between the registrant and the agency. These pronouncements may prevent new products which could reduce risk to pollinators from reaching the market, and could impose unnecessary additional restrictions on products or uses which will not reduce any current risk to pollinators. A hazard based, one-size-fits-all approach is not consistent with established policies and past practices of EPA, and the regulation-by-letter approach violate procedures in FIFRA where they may be a disagreement between EPA and the registrant about a specific registration.

The open-ended nature of EPA's "uncertainties" as described in "EPA's Proposal to Mitigate Exposure to Bees from Acutely Toxic Pesticide Products" released shortly after the National Strategy raises some concerns that in the name of "pollinator protection" EPA will continue to expand its reach to products and uses about which the underlying data do not support new restrictions.

Question 4. Does your organization support passage of H.R. 897, the Reducing Regulatory Burdens Act of 2015? Do you believe the burden and liabilities of obtaining a water permit are limiting or delaying mosquito control applications that control viruses like Zika and protect human health?

Answer. Along with over a hundred other organizations, CLA strongly supports H.R. 897, the Zika Vector Control Act, and its current inclusion in H.R. 2577. We urge conferees to accept the provision as a part of the final conference report on the measure, and we also request that the sunset provision for H.R. 897 be removed as significant public health threats from mosquito-borne diseases are likely to remain well beyond 2018.

Pesticide users, including those protecting public health from mosquito-borne diseases, are now subjected to the court created requirement that lawful applications over, to or near '*waters of the U.S.*' obtain a Clean Water Act (CWA) National Pollutant Discharge Elimination System (NPDES) permit from the Environmental Protection Agency (EPA) or delegated states. H.R. 897, which is a provision included in the House passed version of H.R. 2577, would clarify that Federal law does not require this redundant permit for already regulated pesticide applications.

Question 5. What do you believe will happen if H.R. 897 is not enacted and President Obama's WOTUS rule goes into effect?

Answer. Under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), all pesticides are reviewed and regulated for use with strict instructions on the EPA approved product label. A thorough review and accounting of impacts to water quality and aquatic species is included in every EPA review. Requiring water permits for pesticide applications is redundant and provides no additional environmental benefit.

Compliance with the NPDES water permit also imposes duplicative resource burdens on thousands of small application businesses and farms, as well as the municipal, county, state and Federal agencies responsible for protecting natural resources and public health. Further, and most menacing, the permit exposes all pesticide users—regardless of permit eligibility—to the liability of CWA-based citizen law suits. In a number of instances, applicators, local and municipal governments and homeowner associations can't afford the costs or risk of frivolous litigation and have refrained from conducting public health applications.

The water permit threatens the critical role pesticides play in protecting human health and the food supply from destructive and disease-carrying pests, and for managing invasive weeds to keep open waterways and shipping lanes, to maintain rights of way for transportation and power generation, and to prevent damage to forests and recreation areas. The time and money expended on redundant permit compliance drains public and private resources. All this for no measurable benefit to the environment. We urge Congress to eliminate this unnecessary, expensive, and duplicative regulation by ensuring the Zika Vector Control Act, minus any sunset provision, remains in any final conference agreement for H.R. 2577.

Question 6. The public is threatened by insect-borne diseases—West Nile Virus is a good example. Some of the critical products used to control mosquitoes are also the backbone of Integrated Pest Management plans. Can you tell us your thoughts regarding EPA's plans for OP's (organophosphates) used to protect public health against very dangerous and prolific pests?

Answer. The Federal Insecticide, Fungicide, and Rodenticide Act is a risk-benefit statute. EPA must consider the benefits of pesticides as part of its approval and on-

going regulation of pesticides. Consideration of product benefits must be integral to its risk assessment equation. One example is the intersection of public health pesticides and the recently-released Endangered Species Act Draft Biological Evaluations the organophosphates diazinon, malathion and chlorpyrifos—the latter two being important pesticides in mosquito control. The benefits of effective vector control are obvious, especially with Zika virus-carrying mosquitos anticipated to enter the U.S. this summer.

EPA must fully consider the intersection of its ESA biological evaluation and essential role malathion and chlorpyrifos play in effective mosquito control and deliver a risk-benefit based evaluation. We are concerned the benefits aspect of the risk-benefit equation has been receiving less and less consideration over time as EPA moves toward hazard-only risk assessments. The mosquito control tool box is a small one with only a handful of products available for adult and larval treatments. What we have today works very well and we must ensure those few products remain registered for use. If EPA instead makes a hazard-only risk assessment in its final biological opinion for the three OPs, we run the risk of losing essential products in the vector and public health protection tool box.

Question 7. When evaluating pesticide benefits, is EPA following established protocols for consultations with CDC and other Federal agencies with public health expertise?

Answer. EPA follows Food Quality Protection Act-established protocols for consultations with Centers for Disease Control and Prevention, Department of Defense, and Health and Human Services before making product use cancellation decisions relevant to public health pesticide uses. Our industry is satisfied with this process. To date, we do not see a role for CDC, DOD, or HHS in consultations for new products and new uses.

Question 8. We've heard a lot about the need for oversight of the EPA's pesticide program. What are your organization's top priorities for regulatory oversight?

Answer.

FQPA

CLA is very troubled by EPA's proposal to apply the additional 10X margin of safety to many well studied existing pesticide, including many organophosphates used on farms and to protect public health from vector borne disease. EPA now using precautionary models and unreliable data to suggest that 'uncertainty' exists where sound science and established process say otherwise.

In establishing drinking water exposure limits—a component of FQPA "risk cup"—EPA has begun using a new ultra-conservative water modeling approach which ignores actual water monitoring data and which threatens to severely limit uses of products.

EPA & 'Services' Process for Endangered Species Act Consultations

In 2013, a panel of the National Academy of Sciences (NAS) published a report providing guidance to EPA and the Services on six key scientific issues at the heart of the agencies' disagreements regarding the ecological risk evaluation of pesticides. Since then, the agencies have been working to address the NAS report's recommendations, and have begun a process for engaging stakeholders and seeking public input. EPA is currently scheduled to complete 744 "registration review cases", involving 1,166 pesticide active ingredients, by 2023. This must include a review of potential impacts to the over 1,500 listed threatened and endangered species in the U.S. Over 700 additional species could be listed as endangered within the next 2 years. Meeting EPA's requirements under FIFRA and the Services' requirements under ESA add further work to an already demanding administrative burden.

A 2013 report by Summit Consulting entitled, "Analysis of Cost Estimates and Additional Resources Required for Timely FIFRA/ESA Pesticide Registration Review", found that providing the Services with the additional resources they would need to meet their ESA obligations regarding registration review would cost the taxpayers an additional $474 million. This would represent a potential 13-fold and 25-fold budget increase in the National Marine Fisheries Service and Fish and Wildlife Service budgets, respectively, in order to open and review these pesticide dockets.

The government's proposal for addressing the ESA–FIFRA issue has not stopped the litigation. New lawsuits challenge new product registrations, leading to additional regulatory uncertainty. Ironically, and contrary to the views expressed by the activist groups bringing these legal challenges, this development may have a chilling effect on the introduction of new pesticide products that are being developed to reduce potential exposures to threatened and endangered species and their habitats. The Services do not have adequate resources and EPA faces continued litigation under the ESA as it carries out its duties under FIFRA. Further, the ESA liti-

gations have diverted the restricted Services' resources away from conservation efforts that would be more beneficial to the protection and recovery of threatened and endangered species.

Question 9. In publishing the final worker protection standard rule, the EPA included a "designated representative" provision that had not been previously provided to the Committee as required in law. We have some questions about this provision.

If a designated representative had information related to pesticide use on a farm and wanted to use that information publicly to pressure the farm to stop using that pesticide, is there anything in the regulation to prevent that from happening?

Answer. No, the designated representative provision opens up *unlimited* intrusion onto private farm properties to anyone self-declaring themselves a worker "designated representative".

Question 9a. Does the provision grant a right for designated representatives to obtain certain pesticide information used on a farm upon presentation of a written, signed authorization by a worker?

Answer. Yes, the WPS grants the designated representative access to all pesticide use and application records to which the employee which otherwise be have access.

Question 9b. Once a farmer is presented with the written, signed authorization, does he or she have a legal obligation to provide the information?

Answer. Potential frivolous liability exposure for farmers is unlimited. New rule grossly miscalculated estimated cost impacts to farm economy—a cost legacy burden farmers will not fully feel for months/years after the end of this Administration.

Question 9c. Once the designated representative has the information, are there any restrictions on what the designated representative can do with the information?

Answer. No, the WPS does not state any restrictions on the use of such information or prevent the pesticide use and application from being made public.

Question 9d. Is there any provision in the WPS to require the designated representative to share the information with the worker who signed the form?

Answer. The WPS is not specific to that detail. There is no actual requirement that the information grant be in turn shared back to the employee granting the status.

Question 9e. Are there any restrictions on who may be a designated representative (*e.g.,* an anti-pesticide activist group or legal services group)?

Answer. No, the WPS does not restrict who may be designated by an employee.

Question 9f. If a designated representative had information related to pesticide use on a farm and wished to publish that information broadly, is there anything in the WPS to prevent that from happening?

Answer. No, the WPS in no way restricts, limits or precludes any information accessed from being released publicly or even used against the operation by activists.

Question 10. Did the EPA ignore important facts in expressing concern about bees and citrus crops?

Answer. See responses to *Questions 17* to *27,* below.

Question 11. For years, EPA relied on hundreds of high quality studies evaluating all aspects of human susceptibility to pesticides. These included studies designed to make sure that children would be protected. Even though EPA used those high-quality assessments for 20 years, EPA now relies primarily on epidemiology studies and some journal articles. To what extent has EPA sought stakeholder input on this policy change?

Answer. Epidemiology can be useful in identifying associations among environmental factors and health conditions (*i.e.,* correlations). However, epidemiology cannot establish cause and effect between a given factor and a given health condition (*i.e.,* causation). Thus, epidemiological data cannot be used at a rational basis for establishing regulatory endpoints leading to final decisions.

For instance, by sheer chance, associations discovered by epidemiology may have no practical meaning or effect. The very nature of epidemiological research produces results fraught with uncertainty. But, the inherent uncertainty of the discipline should *not* be confused with creating regulatory doubt where other more reliable forms of date are available (*e.g.,* toxicological and laboratory data), nor does it provide sufficient reason to question decisions based on the more substantial data. Determining "cause and effect" requires objective, reliable research (which may include consideration of the correlations suggested by epidemiology studies) to establish plausibility, mechanisms and endpoints.

To date, EPA has not welcomed input from stakeholders on what we see as a systemic shift in science and process using questionable science. We are very trouble

by the consequence of EPA's growing willingness to allow preliminary results of epidemiology studies to redirect fundamental regulatory policies and trump a large body of well-established scientific data. It calls into doubt the entire pesticide regulatory framework built on systematic toxicity and exposure studies, followed by rigorous risk assessment.

Question 12. Approximately how many new products or product uses have been brought onto the market, and, how many products and uses have been restricted or effectively lost in the past 7 years?

Answer. Products are brought onto and taken off the market for many reasons: some for business purposes by a manufacturer, and others compelled by EPA due to product use concerns.

Most recently, our industry can point to the following as examples of where we believe EPA led or allowed actions that led to the inappropriate removal or restriction of a pesticide:

- Sulfoxaflor—litigation led to [temporary] withdrawal of registration, shortly after initial approval of the active ingredient.
- Enlist Duo—initial registration for use on 2,4-D tolerant soybeans in 2014 was limited to just six states, because of overly cautions [endangered species and drift] concerns. The following year, it was expanded to total of 15 states. That still leaves 35 states without access to this technology.

Additionally, since 2008, EPA has reported all registration actions on agricultural active ingredients on the OPP website.

Question 13. EPA is legally obligated to weigh the benefits of pesticide products, such as protection of the public health from disease-carrying pests, protection of our nation's buildings and infrastructure, and protection of the food supply. However, recent EPA activities appear to focus disproportionately on the hazard side of that assessment while discounting factors like exposure and benefits. What additional data can crop protection companies provide EPA in order to better account for pesticide benefits?

Answer. We are pleased that EPA robustly defended the use of risk assessment in the face of the European Commission's hazard-based approach to the regulation of endocrine disruptors. There, EPA specifically opposed banning products that may pose a theoretical hazard, but which, in reality, pose negligible risks because people are not exposed to these products at levels that could cause adverse impacts. *http://www.usda-eu.org/wp-content/uploads/2015/01/United-States-Submission-Endocrine-Disrupters-2015-01-20.pdf* at p. 4. We have also seen recent instances where EPA is focusing too heavily on the potential hazard of crop protection products, without a meaningful discussion of exposure or benefits.

On the exposure side, members are trying to provide more refined information on the location of crops, and therefore crop protection uses, in relation to listed species, because early examples of pesticide use/listed species co-occurrence are vastly overestimating the potential for pesticide exposure to these species.

We have seen models that vastly overestimate exposure to our products. For example, although we've supplied EPA with real world examples of water monitoring data, which has been routinely ignored for overly conservative modeling that cannot be validated and does not reflect conditions in the real world.

FIFRA requires that EPA's benefits analysis be undertaken in the context of the risk assessment—the registration standard is a balance of risk and benefit. But recently, EPA stood that standard on its head by publishing a portion of an incomplete benefits assessment for public comment before the risk assessment was completed, without first requesting, receiving, or reviewing all available relevant data; and without incorporating those data into its analysis. This has resulted in a tremendous amount of confusion among growers and the public on the relative risks and benefits of neonicotinoid seed treatment for soybeans. It was unnecessary and counterproductive.

Growers understand the benefits of pesticide use, and they don't buy products that do not need or that will not work—the marketplace is an effective regulator of product efficacy. For that reason, EPA has long declined to review the efficacy data that the statute requires and that pesticide developers produce and maintain. Our members are proud of the products they produce and the benefits they provide to farmers. We continue to offer to work with EPA to help them develop and implement ways that they can help the public better understand the benefits these products provide not only to growers, but to the public at large, and help put the legitimate risks that pesticides may pose in the proper context.

Question 14. The President has stressed the importance and value of transparency in EPA's action to ensure the use of sound science and reliable data. EPA is increas-

ingly reliant on epidemiological and modeling data to essentially overrule volumes of actual 'hard science' laboratory and monitoring data. Was this fundamental change in policy put out for public notice and comment so that impacted stakeholders like you would have an opportunity to comment?

Answer. EPA's did not clearly vet or seek public/stakeholder input prior to make the recently observed shift to *reliance* on the use of epidemiological data (*i.e.,* observational data) over existing, verified laboratory and monitoring data.

We are additionally concerned that the position for an expert and senior level epidemiologist within the Office of Pesticides Program (OPP) has yet to be filled. In order to fully evaluate the quality and most appropriate use of epidemiological data, EPA should ensure OPP has the expertise specific to that data's value and usefulness in the review of pesticides.

Question 15. The United States has the world's most rigorous pesticide registration and review processes. Yet, when EPA's regulatory decisions are challenged in court, the Agency has not enjoyed many recent successes in defending its scientific process or decisions. Are these actions undermining EPA's credibility with the public?

Answer. While it is true that there has been at least one court decision that has called into question how EPA documents its scientific processes in regulatory decisions, court decisions are complicated and often nuanced and should not undermine EPA's credibility with the public. However, certain environmental activist groups adamantly against any pesticide use have misconstrued and sensationalized such decisions to an extent that they may negatively affect how the public views EPA's credibility when regulating pesticides. Unfortunately, EPA has done little to combat these misperceptions and has, in some instances, taken actions that could further fuel public misconception.

For instance, despite determining in a preliminary risk assessment that the pesticide imidacloprid poses little risk to bee health, the EPA press release on that preliminary risk assessment paints a very different picture. See "EPA Releases the First of Four Preliminary Risk Assessments for Insecticides Potentially Harmful to Bees," available at: *https://www.epa.gov/pesticides/epa-releases-first-four-preliminary-risk-assessments-insecticides-potentially-harmful*. The title alone makes it seem as though imidacloprid may likely cause harm to bees, a conclusion not supported by EPA's own scientific conclusions. As another example, on April 29, 2016, EPA posted on its website an in-depth 87 page Cancer Assessment Document that concluded glyphosate is not likely to be carcinogenic to humans. Without any explanation, however, that document was taken down from the website on May 2. (See *http://monsantoblog.com/2016/05/02/monsanto-statement-once-again-epa-concludes-that-glyphosate-does-not-cause-cancer/*.) EPA's removal of this final document does nothing but cause unnecessary speculation on the validity of EPA's decision.

In sum, while it may be impossible to convince certain activists of EPA's credibility in regulating pesticides, EPA must stand behind its own scientific review processes and conclusions. EPA's recent failures in this respect do more harm to its credibility with the public than any recent court decision.

Question 16. To what extent is EPA working with the regulated industry to improve EPA's ability to defend its pesticide registration requirements?

Answer. It is important to note that all pesticides sold and distributed in the United States are regulated by the EPA under FIFRA and are registered (licensed) for use according to a safety standard that precludes any ". . . unreasonable adverse effect on the environment." For pesticides that will be used on food or feed crops, the Federal Food Drug & Cosmetic Act (FFDCA) requires that EPA determine there is a reasonable certainty that no harm from exposure to pesticide residues. These standards are the strictest in the world and are a benchmark for regulation in other countries.

To meet these standards, EPA conducts science-based risk assessments prior to registration of a pesticide active ingredient. EPA requires over 120 tests that examine the toxicity and environmental impacts of the pesticide. It then reviews the data for environmental, human health, and dietary risk. In addition to approving the use of the pesticide, EPA approves the label for the pesticide, which provides directions for use of the product to achieve effective pest control and to minimize environmental and human exposures. Once registered, a pesticide may be used only according to the label directions.

EPA is required by law to review a pesticide registration every 15 years, in a process that (1) requires current data using state-of-the art protocols and scientific techniques; (2) reviews studies available in the published literature; and (3) requires new risk assessments to ensure the registered pesticide complies with all modern policies and practices.

All throughout this process, industry and EPA personnel work together to ensure that EPA has the information it needs to assess and determine whether a pesticide meets both the requirements of FIFRA and the FFDCA. Unfortunately, however, OPP has not been immune to EPA budget cuts and currently is severely understaffed and without necessary resources. Limited OPP resources has resulted not only in registration decisions being delayed well beyond Congressionally-imposed deadlines, but also in decisions that may not robustly lay out the scientific reasoning EPA used in making its decisions. Consequently, providing OPP additional resources to timely and robustly document registration decisions is the key to EPA's ability to defend its decisions. At a minimum, Congress should not cut the resources EPA has now, either through appropriations or the renewal of the Pesticide Registration Improvement Act, which directly funds OPP's registration process.

Question 17. If the tools used to manage weeds and pests continue to be restricted, taken away, or prevented from getting to the market altogether, how does that benefit the economic and environmental viability of your members' operations?

Answer. Unless EPA returns to operating within the legal boundaries and Congressional intent of FIFRA, including FQPA, pesticide users in agriculture, forestry, public health protection and others will lose access to existing products and uses, as well as see a decline in the number of new technologies coming into the market.

Without regulatory process predictability and scientific transparency, we expect that EPA's shifted away from risk-based assessment toward reliance on hazard-only based precaution with compel the agency to continue limiting access to existing and new crop protection products. For CropLife members, that lack of business certainty negatively impacts our industry's ability to bring new, improved products to the market to address ever evolving pest threats.

Research

Question 18. USDA has begun implementing a two stage review process for competitive grants under the Specialty Crop Research Initiative. These two separate reviews take into account both relevancy to the industry and scientific peer review. Though not yet implemented, the law makes it clear that the relevancy review process should be applied to other competitive grants programs such as the Agricultural and Food Research Initiative—particularly for applied research grants. Do you think that producer support for these programs would grow if relevancy review were a component of the grant awards process?

Answer. Yes. However, the SCRI Focus Area Priorities should also include improvements in regulatory processes and risk assessment. The application of scientific discoveries to agriculture is delayed, and often prevented, by overly-complex, unpredictable and often unnecessary regulatory requirements. In fact, the current regulatory system is a major threat to the ability of producers to access new innovations needed to remain competitive in the global market place and feed a growing world population. Improvements in regulatory systems for agricultural technologies should be a focus area for government research.

Question 19. Increasing availability of funds for research is a common goal. Recognizing fiscal constraints though, are we focusing our resources on the correct priorities?

Answer. Much of research funding is allocated based on peer review of competitive grants. By design, the process of awarding grants focuses more on rewarding novel scientific ideas, including basic research, and less on research with direct benefits to agriculture and food supply.

The government should prioritize research funding for improving regulatory systems for pesticides and biotech traits. Currently, grower access to critically-needed technologies is delayed unnecessarily by overly complex and lengthy regulatory requirements.

The government should increase funding for research that is aimed directly at increasing agriculture productivity. Further, we believe the return of research funding is maximized when it is focused on a defined set of priorities with defined targets and metrics for success.

The government should increase funding for research aimed at providing growers with the broadest possible array of productivity tools including seed, traits, and pesticides.

Question 20. Can you highlight some specific benefits from USDA research that your members have experienced?

Answer. The USDA plant introduction stations have worked to expand genetic diversity of priority crops and facilitated their conservation and utilization in research and crop improvement.

The USDA Plant Germplasm Preservation Research Unit conducts critical research on the preservation of genetic resources, including breeding lines for future generations, and shares its findings with a global network of gene-banks. These gene banks, including the "doomsday seed vault" in Svalbard, Norway, will ensure that genetic diversity, in public and private domains, is protected in the event of natural and man-made disasters.

USDA ARS researchers continuously collaborate with their colleagues in the seed and pesticide industry to evaluate new product offerings for efficacy and value to growers. ARS research has helped understand interactions between pests and their host plants, and conducted valuable research to help delay pest resistance to pesticides and biotech traits.

Question 21. Is information about research and technology advancements readily available and communicated within the agriculture community?

Answer. There is significant room for improvement in this area. Much of the research conducted by ARS scientists is published in technical scientific journals, following the academic model. For many ARS scientists, career advancement is dependent on numbers of publications in scientific journals, just like their academic counterparts.

For the most part, the agricultural community, including growers, does not seek information from technical articles in scientific journals since these tend to be difficult to understand and more focused on fundamental or basic research.

Government scientists should be encouraged and rewarded for disseminating information to the agricultural community via face to face interactions, radio interviews and practical tools such as extension publications.

The pesticide and seed industries have a tradition of reaching out directly to growers with information about new technologies. Examples of effective communications include grower winter meetings, summer field days, hands-on demonstrations, booths are farm shows and short technical bulletins.

Question 22. To the extent that there are possible improvements in the way research information is disseminated, what suggestions would you have for USDA's research agencies to improve communication with producers?

Answer. USDA's researchers should leverage existing communication channels between industry and producers to increase face to face interactions with farmers. The agriculture industry has a long and successful tradition of communicating with producers via winter meetings, field days and demonstrations. These interactions would provide local USDA staff with opportunities to get to know producers personally and would go a long way towards reducing the sense of mistrust that many producers feel towards government agencies. Also, producers have a lot to gain from receiving research information from industry, local extension agents and the USDA is one setting.

Question 22a. Is the money being spent through the Agriculture and Food Research Initiative and the Specialty Crop Research Initiative going towards industry supported research?

Answer. Even though for-profit organizations are eligible to receive Federal research funding including AFRI and SCRI, as far as we know, private companies do not seek such funding. However, many public institutions receive major research funding from Federal granting agencies. In many instances, university research programs are supported by multiple funding sources which may include private industry and Federal grants.

Question 23. Many of the regulatory challenges highlighted in the hearing seem to be exacerbated by limitations in public understanding of risk. Are there ways Federal agencies and our land-grant universities can improve risk communication to consumers?

Answer. Yes, the disconnect between science and the public's understanding of risk is fueling a mistrust of technology and an unfounded fear of safe and effective agricultural innovations. Some land-grant universities are at the forefront of improving the public's understanding of risk and debunking myths about agricultural innovations. However, there are too few scientists in universities or Federal agencies who are trained in communications or possess the needed tools.

Federal agencies have a key role to play by funding efforts to increase public awareness of the safety and nutritional value of products of American agriculture. Funding should be targeted at educational programs aimed at combining communication and science training.

Agencies and universities should also reach out to consumers via social media and respond to the steady barrage lies about the safety of our food. Agencies should do more to inform consumers that: (1) our food supply is among the safest in the world, (2) U.S. consumers spend a lower portion of their income on food than those in most

countries, (3) U.S. consumers enjoy year-round access to an ever-expanding array of diverse and nutritional foods and ingredients, and (4) these benefits would not be possible without current and future agricultural innovations in pesticides and biotechnology.

Farm Bill

Question 24. What are your top priorities for Congressional oversight of programs affecting your members?

Answer. Regulatory burdens on American agriculture have continued to grow over the past several years. While pesticide law and regulation have not been a traditional component of farm bills past, it is nevertheless clear that the regulatory burdens in this space have also escalated and numerous recent Agency actions with respect to pesticide regulation call into question the Agency's transparency and adherence to sound science within the framework of risk-based regulation as defined in the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Consequently, the prospects for the next farm bill oversight and negotiation provide a critical platform for review and debate on this specific topic.

Stakeholder input, Agency transparency, grower impacts and consequences, and the very foundations of adhering to current law (FIFRA) with respect to risk-based regulation are all ripe for Agriculture Committee oversight and engagement within the scope and context of the next farm bill. We welcome the opportunity to work closely with the Agriculture Committee to ensure that future Agency actions protect human health and the environment AND that a predictable process for bringing new chemistries to the market is preserved to ensure that American agriculture has the critical and necessary tools for modern agricultural practices.

Citrus Pest/Disease and Pollinators

Question 25. We have heard about the devastating impacts citrus greening has had on the citrus industry. Can you elaborate on the research being conducted to combat citrus greening?

Answer. The impact of the Asian citrus psyllid-vectored phloem-limited bacteria *Candidatus Liberibacter asiaticus* (Clas) has been the subject of a focused research program managed by the Citrus Research and Development Foundation in Florida. This foundation was created in response to recommendations of a National Academy of Sciences Study commissioned by the Florida industry when this disease was first discovered in Florida in 2005. The research program is an internationally coordinated and focused process to leave no stone unturned as the Industry searches for solutions to management of this devastating disease. The industry's production in Florida has decreased by almost 50% since the 2007 crop season. (159 Million boxes to less 80 Million boxes). Coupled with this loss of production has been increased costs of management attempts to control the spread of the disease and delay of the decline in infected tree. The CRDF Process has been a very effective process in developing the targeted lines of research to date. The Federal Government has been supportive of this effort through targeted funds directed toward several of the lines of research being developed.

The spectrum of research goes from basic production practices to maximize production while minimizing the impacts of the disease through cutting edge developments in genomics and advanced breeding techniques to confer resistance or tolerance to the disease or genetic tools to modify the capacity for vectoring the disease. A complete list of funded research is available on the CRDF website.

While this is a Florida based organization it does not limit the scope of its programs to Florida. Researchers from all global production regions are engaged. A national Citrus Research Coordinating Committee is one of the advisory committees involved in the review and decision process to assure all bases are covered.

Since 2005 a biannual international conference on HLB has been held in central Florida to bring the global research community together to build a networked and coordinated research program to expedite movement of solutions from the research lab to the field.

Question 26. Do you have any particular recommendations on how to expedite the development and implementation of citrus greening control technologies and strategies?

Do you see any particular road blocks that are slowing progress in combating citrus greening?

Considering the recent revocation of pesticide product registrations, has industry's ability to combat the spread of citrus greening been affected?

Answer. The regulatory agencies in the U.S. have for the most part been very supportive of removing barriers to the development commercialization of tools to manage the pest vector and the disease. There are newly emerging technologies that

may provide a measure of support in managing or controlling this devastating pest complex. Some of these are nanotechnology, RNAi technology, and genomic targeted technology based breeding techniques that will need to be sheparded through the process of regulatory oversight and regulatory decision making.

The major road blocks that become apparent over the past few years have been mainly litigation driven and were not specifically directed toward the uses and regulatory approvals associated with use in Citrus. These unintended results of policy changes and proposed mitigation programs developed in response to litigation have created uncertainties over tools that are important in management of the Asian Citrus Psyllid.

Question 27. Getting and keeping pesticide uses for individual specialty crops like citrus is especially challenging for growers and manufacturers. Has EPA expressed concern about pesticide residues on citrus trees as problem for bees?

Answer. Citrus has been specifically identified by EPA and USDA as a Bee attractive crop. This is primarily due to the concentrated bloom and ready source of nectar that serves as a source of "Orange Blossom" honey. This results in many hives of managed honey bees being placed in proximity to citrus during this bloom period. With some of the proposed mitigation practices associated with EPA's recent announcement for mitigation of acutely toxic compounds could have significant impacts depending on how these practice mitigation proposals are implemented.

Question 28. Do citrus crops rely on pollinators?

Answer. No, citrus crops produce abundant fruit without pollination by honey bees. For some varieties of tangerines, pollination by honey bees is actually undesirable, as it leads to seed production in the fruit, which consumers do not want. Honey produced by bees that forage in citrus orchards is of high quality and commands a premium price from consumers. Thus, beekeepers need the citrus orchards to produce this premium honey, but citrus growers do not need the honey bees to produce a crop.

In Florida, there are some indications that for certain specialty citrus varieties yield may be enhanced through the presence of managed hives in the grove. The relationship between Beekeepers and Citrus producer in Florida has traditionally been informal at best. This process has come under a more formal process in the past 3 years. Both industries have regulatory oversight through the Florida Department of Agriculture and Consumer Services.

Question 29. What practices are in place to ensure that pesticides are not applied when pollinators may be present?

Answer. Where pesticide application to crops while honey bees are present would be a problem, the pesticide product label carries the appropriate instructions and precautions that the applicator must follow to protect the bees. Such instructions take into account the time of season when pertinent pest problems occur, relative to flowering; the toxicity of the product to bees; the persistence of the product on the crop foliage; and other production practices. As necessary, application of the pesticide may be prohibited while the crop is in flower, or it may be limited to evening and night-time when bees are not foraging in the fields.

For example, a voluntary program was initiated in Florida by FDACS in 2015; it is based on the Citrus Health Management Areas implemented under the recommendation of the NAS report that encouraged the coordinated large area applications of insect control measures for Asian citrus psyllid to limit the movement and spread of infected psyllids and the registration requirements for managed hives in Florida managed under the State Apiarist office within the Division of plant industries. It is based on the presence of bloom for attractiveness to bees with a process utilized that was recommended by the beekeepers to determine the bloom period. It is defined by 10% bloom to 90% petal fall and during this period pesticide applications are controlled. The voluntary program depends on establishment of a dialogue pathway between beekeepers and growers with in the production areas. The primary focus of these programs is the prevention of direct applications to concentrated of hives in the production areas. It also provides recommendations for timings of applications to preclude exposure to large numbers of foraging bees.

FOCUS ON THE FARM ECONOMY
(FOOD PRICES AND THE CONSUMER)

THURSDAY, APRIL 28, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON NUTRITION,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 2:00 p.m., in Room 1300 of the Longworth House Office Building, Hon. Jackie Walorski [Chairwoman of the Subcommittee] presiding.

Members present: Representatives Walorski, Gibbs, Hartzler, Benishek, Davis, Abraham, Moolenaar, Conaway (*ex officio*), McGovern, Adams, Ashford, and DelBene.

Staff present: Callie McAdams, Jadi Chapman, Mary Nowak, Mollie Wilken, Stephanie Addison, Lisa Shelton, and Nicole Scott.

OPENING STATEMENT OF HON. JACKIE WALORSKI, A REPRESENTATIVE IN CONGRESS FROM INDIANA

The CHAIRWOMAN. Good afternoon, and welcome to today's Nutrition Subcommittee hearing. Thank you to everyone today for taking the time to be here and a special thanks to our witnesses for lending us their expertise. Today's hearing is the fourth in a series, held by each Subcommittee, taking a look at the state of the farm economy. This Subcommittee is focusing, in particular, on food prices and how every consumer is impacted by the economic conditions in farm country.

The United States has the safest, most abundant, most affordable food supply in the world. There are many factors that contribute to this. We are blessed with a large amount of fertile land to farm, innovative minds that have pioneered technologies to increase yields, and an infrastructure network that gets products to market quickly and efficiently.

One factor that tends to be overlooked is the role of effective farm policies in keeping prices affordable and stable for consumers. While the average American spends 9.8 percent of their disposable income on food, those with lower incomes, who are already estimated to spend 34 percent of their disposable income on food, are much more susceptible to swings in food prices. For them, an increase in the price of food means foregoing other needed purchases.

So what goes into determining the price of the food we buy? From the farm to your plate, what costs are incurred along the way? And how much of what you pay at the grocery store for that corn from Indiana or rice from Arkansas flows back to the farmer?

Today, we will examine the whole food supply chain from a high level. We will look at the role of farm policy in keeping prices stable and at factors that are threatening that stability. Finally, we will consider the relationship between food prices and disposable income, especially as it relates to low-income Americans. We are all well aware that the farm bill expires next Congress. As we gear up for that process, it is crucial to arm ourselves with facts that will help inform our decisions in this Committee and educate our colleagues on the importance of farm policies when the time comes for a vote in the full House.

I look forward to hearing from our distinguished panel today. Before I conclude, I want to extend a warm welcome in particular to a fellow Hoosier that will be testifying today, Dr. Jason Henderson from Purdue University. Dr. Henderson is an Associate Dean at the College of Agriculture and the Director of Purdue Extension. He previously served as Vice President at the Federal Reserve Bank of Kansas City, where he tracked the agricultural and rural economies. He is an asset to Purdue and the State of Indiana and I am thrilled you are here as we explore this topic.

[The prepared statement of Mrs. Walorski follows:]

PREPARED STATEMENT OF HON. JACKIE WALORSKI, A REPRESENTATIVE IN CONGRESS FROM INDIANA

Good morning and welcome to today's Nutrition Subcommittee hearing. Thank you to everyone for taking the time to be here and a special thanks to our witnesses for lending their expertise.

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I look forward to hearing from our distinguished panel.

The CHAIRWOMAN. I would now like to recognize Ranking Member McGovern for his opening statement.

OPENING STATEMENT OF HON. JAMES P. MCGOVERN, A REPRESENTATIVE IN CONGRESS FROM MASSACHUSETTS

Mr. MCGOVERN. Well thank you very much, Chairwoman Walorski, and I want to thank all the witnesses for being here today. I am looking forward to hearing from each of you.

Today's topic, food prices, is an important one, and it is one that we really haven't discussed much in previous hearings. It is important for us as Members to understand the entirety of the food system. It is a complex system, but by and large, it is an efficient and effective system. It really is a testament to the resiliency and hard work of our farmers and ranchers, processors and retailers that we have such a strong farm economy, stable and affordable food prices, and such a depth of choice and diversity when it comes to the food that we eat.

But it is important to keep in mind that what many of us here often take for granted, easy access to big supermarkets, specialty markets, and even farmers' markets is not available to everyone in this country, particularly to low-income and rural communities. And low-income households are particularly sensitive to even minor fluctuations in food prices, as they think about how to stretch their food dollar further. During the last farm bill, there were attempts to split the nutrition title and SNAP from the rest of the farm bill. But I always remind people that it is our farmers who grow the food we eat, and you can only use SNAP to buy food. So there is a close link between our farmers and our Federal food assistance programs. It is important that we recognize that relationship.

So with that, I look forward to your testimony, and I yield back my time.

The CHAIRWOMAN. The chair would request that other Members submit their opening statements for the record so the witnesses may begin their testimony, and to ensure that there is ample time for questions.

The chair would also like to remind Members that they will be recognized for questioning in order of seniority for the Members who were here at the start of the hearing. After that, Members will be recognized in order of arrival. I appreciate Members' understanding.

Witnesses are reminded to limit their oral statements to 5 minutes. All of the written statements will be included in the record. Before I introduce our distinguished panel, I want to welcome the Chairman of the Agriculture Committee, Chairman Conaway. Thanks for being here today.

OPENING STATEMENT OF HON. K. MICHAEL CONAWAY, A REPRESENTATIVE IN CONGRESS FROM TEXAS

Mr. CONAWAY. I thank you, and I thank our panelists for being here. I look forward to their testimony.

The CHAIRWOMAN. I would like to welcome our panel of experts to the table.

Dr. Jason Henderson, as I said before, Associate Dean and Director of Purdue Extension, College of Agriculture, West Lafayette, Indiana; Dr. Ephraim Leibtag, Assistant Administrator, Economic Research Service, U.S. Department of Agriculture, Washington,

D.C.; and Mr. Andrew Harig, Senior Director of Sustainability, Tax, and Trade, Food Marketing Institute, Arlington, Virginia.

Dr. Henderson, please begin when you are ready.

STATEMENT OF JASON R. HENDERSON, PH.D., ASSOCIATE DEAN AND ASSISTANT VICE PRESIDENT OF ENGAGEMENT, COLLEGE OF AGRICULTURE, PURDUE UNIVERSITY; DIRECTOR, COOPERATIVE EXTENSION SERVICE, PURDUE UNIVERSITY

Dr. HENDERSON. Chairwoman Walorski, Ranking Member McGovern, and Members of the Subcommittee, thank you for this opportunity to speak with you today. As a representative of Purdue Extension, our ability to provide life enhancing, research-based educational opportunities hinges on our Federal, state, and local partnerships, and these partnerships are delivering positive impacts.

A recent study finds that cooperative extension through the Smith-Lever Act kept almost 140,000, or 28 percent more farmers from disappearing in U.S. agriculture over the past 3 decades. In addition in Indiana, funding for SNAP-Ed and FNEP has allowed Purdue Extension to deliver the Nutrition Education Program, which has reduced food insecurity by 25 percent for program participants. I thank you for your support of USDA, NIFA, land-grant universities, and the cooperative extension system, which allows us to partner and to enhance lives and livelihoods across the nation.

My comments today will focus on the farm economy and its impact on food prices, consumers, particularly those in rural communities.

The combination of sluggish global export demand, flat domestic ethanol consumption, burgeoning global supplies, and elevated production costs is a recipe for plummeting farm revenues and profits. Although farm cycles are common, each cycle is unique, and one of the unique features of this cycle is the farm safety net. Past farm support often emerged in the form of price-related subsidies and supply management, which were often criticized, in part, for their impacts on consumers. Today, a more market-oriented strategy based on crop insurance is the foundation of the safety net, and although crop insurance programs have existed since the 1930s, farm crop insurance subsidies have increased sharply, raising questions about who benefits. And a recent study indicates that while taxpayers pay, U.S. farm consumers benefit and would lose $2.5 billion in economic value if crop insurance subsidies would disappear.

U.S. consumers could also benefit from more stable food prices. Low-income consumers who spend a large portion of their income on food could benefit the most. However, the benefits could be muted for those households living in food deserts, locations with limited access to retail stores, such as grocery stores. These households could face higher food costs and have additional challenges achieving better health outcomes.

Educational programs for low-income households do help them access food and reduce food insecurity. As previously mentioned, the Nutrition Education Program reduced food insecurity by teaching people how to stretch their food dollar and eat healthier food on a limited budget. The Healthy Food Systems, Healthy People

Initiative of the APLU is another example of how partnerships between Federal, state, and local agencies, academia, industry, community organizations, and local health practitioners can help people make better food choices and deliver better health outcomes.

Declining farm profits cast a ripple effect on the rural consumer. Farm capital spending has plummeted, and farm households are spending less on Main Street. If poverty rates follow those during the 1980s farm crisis, rural poverty rates could rise even further. And what is most alarming to me is that even during the current farm bill, rural poverty rates rose, even in the Midwest, where child poverty rates reached 20.4 percent in 2013, the peak of the farm bill. Child poverty is a multi-dimensional challenge, often rooted in economic, social and family issues. Building local and regional capacity for economic development is crucial, and through USDA's Strengthening Economies Together program, Purdue Extension is partnering to help identify community assets that can be leveraged into seizing emerging opportunities in rural communities. This is just one example in rural development.

One social issue that we are tackling at Purdue Extension is teen drug abuse. We are addressing it by launching the Strengthening Families program for parents and youth 10 to 14 that have been proven to reduce teen drug abuse by strengthening parent/teen relationships. In fact, for every dollar spent on this program, communities receive almost $10 in benefits in the form of less time and treatment, less jail time, and less time off work. And youth programs are increasingly focused on career readiness. The partnerships with government agencies, industry, and nonprofits, Indiana 4–H has increased its focus on science education, healthy living to prepare youth for future opportunities. For example, in 2013, most of the 4–H youth that graduated high school plan to continue their education, and 26 percent of them were first generation college students. So when you think about dealing with rural economies and rural consumers, it is about the economy, it is about social issues, it is about the family.

So in sum, U.S. farmers are facing substantial declines in farm profits and crop insurance is the primary safety net for U.S. agriculture, and it also appears to benefit U.S. consumers. More stable food prices will benefit consumers, especially those in low-income households. Yet, those living in food deserts may be at a disadvantage, which makes Nutrition Education Programs critical. And finally, plummeting farm incomes are going to strain rural poverty rates, which are already high. And so these approaches often require partnerships between government agencies at all levels, academic institutions such as land-grants, nonprofits, philanthropic entities, industry.

And on behalf of Purdue Extension, thank you for allowing us to be at the heart of many of these partnerships, and I am pleased to address any questions that you may have.

[The prepared statement of Dr. Henderson follows:]

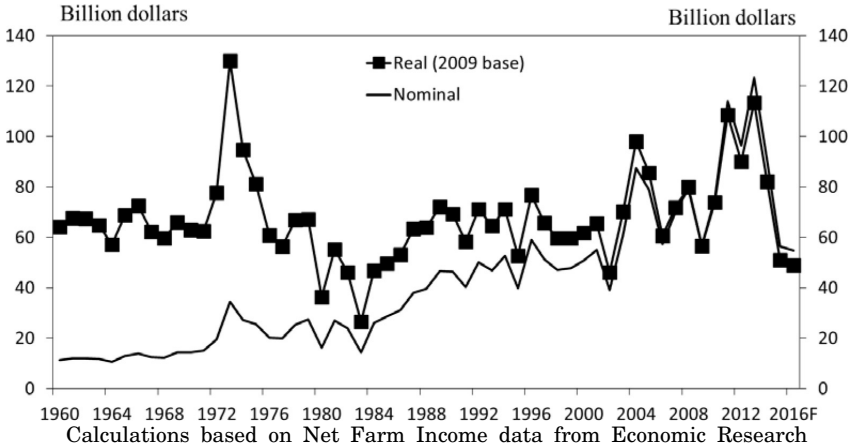
PREPARED STATEMENT OF JASON R. HENDERSON, PH.D., ASSOCIATE DEAN AND ASSISTANT VICE PRESIDENT OF ENGAGEMENT, COLLEGE OF AGRICULTURE, PURDUE UNIVERSITY; DIRECTOR; COOPERATIVE EXTENSION SERVICE, PURDUE UNIVERSITY

Chairwoman Walorski, Ranking Member McGovern, and Members of the Subcommittee, thank you for the opportunity to speak with you today. As a representative of Purdue Extension, I am privileged to work for an institution that provides research-based educational opportunities that enhance the lives and livelihoods of farmers and consumers throughout Indiana, the U.S. and the world. Our ability to provide life enhancing educational opportunities hinges on our Federal, state, and local partnerships. I thank you for your support of USDA, NIFA, the land-grant university system, and Cooperative Extension. Through your support, Cooperative Extension service has been able to provide educational opportunities that have kept farmers on the farm[1] and reduced food insecurity in U.S. households.[2] My comments today will focus on the farm economy, food prices, and the consumer.

Farm Profitability

Profitability in the U.S. farm economy has fallen sharply in recent years. In 2016, U.S. farm profitability, as measured by net farm income is expected to drop to $49 billion, down 57 percent from 2013 highs (*Chart 1*). The Economic Research Service (ERS) at the U.S. Department of Agriculture (USDA) projects total U.S. farm income to rise over the next decade with net farm income approaching $70 billion by 2025. Yet, these income levels will remain 40 percent below the booming profit levels farmers enjoyed between 2011 and 2013.

Chart 1: U.S. Net Farm Income



Calculations based on Net Farm Income data from Economic Research Service, U.S. Department of Agriculture and Consumer Price Inflation data from the Bureau of Labor Statistics.

The decline in farm profitability was more severe than expected. In February 2015, USDA projected farm profits to decline to $84.2 billion in 2015.[3] By the end of the year, farm profits had fallen to $56 billion.

The unexpected decline in farm profitability was driven by a drop in U.S. farm commodity prices. Farm prices received by farmers have fallen more than ten percent from 2014 highs, with the sharpest declines for crop producers (*Chart 2*). By the spring of 2015, prices received for crop production plummeted more than 25 per-

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[1] Goetz, Stephan J. and Meri Davlasheridze. (2016). "State-Level Cooperative Extension Spending and Farmer Exits" *Applied Economic Perspectives and Policy,* April 19, 2016. Downloaded April 25, 2016.

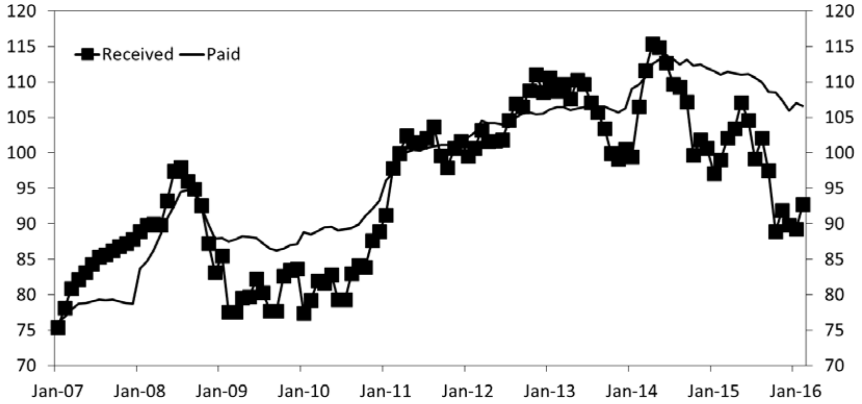
[2] Rivera, R.L., & Eicher-Miller, H. (2015). *P115 Food Security Among Households With Children Improved Following a Nutrition Education Intervention.* JOURNAL OF NUTRITION EDUCATION AND BEHAVIOR, 47(4S).

[3] Westcott, Paul and Janes Hansen. (2015). "USDA Agricultural Projections to 2024." Office of the Chief Economist, World Agricultural Outlook Board, U.S. Department of Agriculture. Prepared by the Interagency Agricultural Projections Committee. *Long-term Projections Report OCE–2015–1,* 97 pp. Downloaded April 25, 2016. *www.ers.usda.gov/publications/oce-usda-agricultural-projections/oce151.aspx.*

cent below recent highs in 2013, with further declines in the fall of 2015. The combination of flat global and domestic demand and burgeoning supplies slashed farm revenues and profits. The fall in revenues was driven by sluggish demand for U.S. farm exports and ethanol. Simultaneously, global agricultural production surged in response to previously high agricultural commodity prices.

Chart 2: Prices Received and Paid by Farmers

Index 2011=100



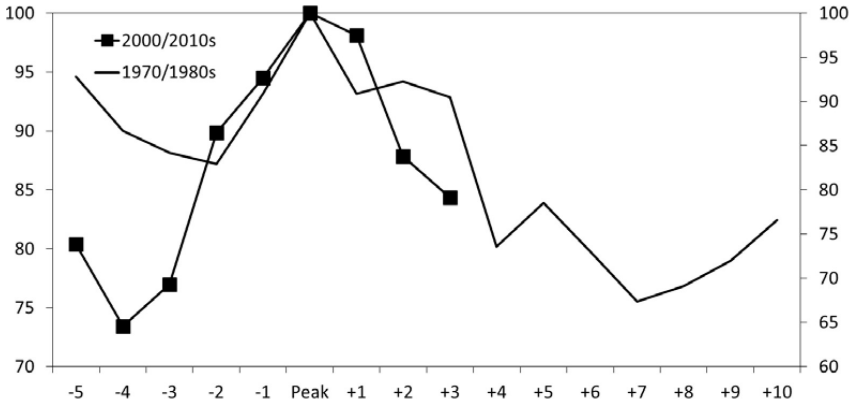
Source: National Agricultural Statistics Service, U.S. Department of Agriculture.

At the same time, farm production costs remained historically high. The prices paid by farmers remained elevated as input prices paid by farmers declined only six percent below 2014 highs (*Chart 2*), which trimmed intermediate product expenses for farmers. However, contract labor and factor payments to stakeholders, which includes landlords, hired labor, and interest expenses, continued to rise in 2015 with further increases expected in 2016. Payments to stakeholders are expected to increase by 4.8 percent. Interest expenses are projected to jump another 6.8 percent in 2016 after an 18 percent rise the previous year. Labor costs are projected to rise 5.0 percent and net rents to landlords are expected to rise 2.9 percent after declining in 2015. The combination of falling revenues and historically high expenses trimmed U.S. farm profits.

Sharp declines in U.S. farm profitability are not uncommon. Historically, farm profitability is cyclical. Since 1900, the U.S. farm economy has experienced four farm profit booms: 1910s, 1940s, 1970s, and 2010s. Two of those booms ended in farm busts. The 1910s farm boom collapsed in the 1920s after World War I with the bust extending through the Great Depression. The 1970s farm boom ended with the farm financial crisis of the 1980s. One unique feature of the current farm boom was the speed by which farm profitability disappeared. The value of agricultural production has fallen more sharply in the current farm cycle. Three years after its peak, the value of agricultural production is down more than 20 percent in the current cycle (*Chart 3*). In contrast, during the 1970/1980s cycle, the value of agricultural production declined a more modest ten percent in the first 3 years of the farm economy downturn of the 1980s. However, during the 1980s farm bust, farm incomes continued to decline 7 years after the farm income peak in 1979.

Chart 3: Value of U.S. Agricultural Production

Index Peak Year=100



Calculations based on Economic Research Service, U.S. Department of Agriculture.

Note: the Peak year for the 1970/1980s cycle was 1979 and the Peak year for the 2000/2010s cycle is 2013.

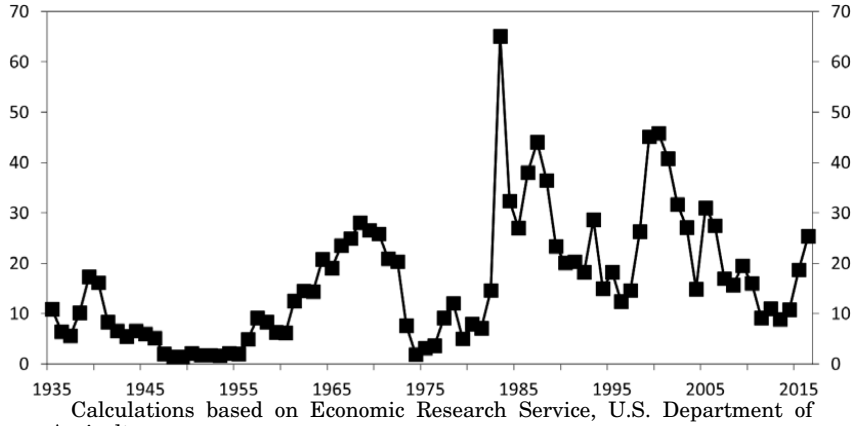
Another unique feature of the current farm downturn is the structure of the farm safety net. Past farm downturns underpinned farm policies that often used price-related subsidies and supply management to support U.S. farm profitability. As profitability plummeted in the 1920s, farm policy incorporated price subsidies for farmers, such as the 1922 Grain Futures Act, the 1929 Agricultural Marketing Act, and the 1933 Agricultural Adjustment Act. During the farm bust of the 1980s, various farm policies were enacted that provided more government control of agricultural production through set aside acres and price related subsidies. In fact, direct government payments to farmers jumped to $17.3 billion in 1983, up from $6.7 billion in 1982 and $2.8 billion in 1980.[4] These farm subsidy programs were often criticized for their adverse impacts on restrictions on international trade and for costs for consumers and taxpayers.[5]

[4] Direct government payments are measured in real 2009 dollars.

[5] Sumner, Daniel A. (2008). "Agricultural Subsidy Programs" (*http://www.econlib.org/library/Enc/AgriculturalSubsidyPrograms.html*). *In* David R. Henderson (*https://en.wikipedia.org/wiki/David_R._Henderson*) (ed.). *Concise Encyclopedia of Economics* (*https://en.wikipedia.org/wiki/Concise_Encyclopedia_of_Economics*) (2nd ed.). Indianapolis: Library of Economics and Liberty (*https://en.wikipedia.org/wiki/Library_of_Economics_and_Liberty*). ISBN (*https://en.wikipedia.org/wiki/International_Standard_Book_Number*) 978-0865976658 (*https://en.wikipedia.org/wiki/Special:BookSources/978-0865976658*). OCLC (*https://en.wikipedia.org/wiki/OCLC*) 237794267 (*https://www.worldcat.org/oclc/237794267*). Downloaded, April 25, 2016.

Chart 4: Direct Government Payments Share of Net Farm Income

Percent



Calculations based on Economic Research Service, U.S. Department of Agriculture.

By the mid-1990s, U.S. agricultural policy shifted to a more market-oriented farm safety net based in large part on crop insurance. The FAIR Act of 1996 started this transition [6] and after twenty years and several farm bills, the share of farm income due to director government payments has diminished (*Chart 4*). Although farm incomes have fallen more sharply in the current cycle, direct government payments are expected to rise less dramatically. For example, direct government payments are projected to reach 25 percent of net farm income in 2016 compared to a spike of 65 percent in 1983 and an average of 40 percent between 1983 and 1988.

In recent years, crop insurance has emerged as a main safety net for U.S. crop producers. Crop insurance programs have existed since the Dust Bowl of the 1930s.[7] Coverage remained limited until the Federal Crop Insurance Reform Act of 1994 required crop insurance coverage for some other disaster assistance programs. Federal crop insurance premiums are subsidized and have increased in recent years. For example, government costs for premium subsidies and operating costs have increased from $2.8 billion in 2003 to $7.8 billion in 2014 (*Chart 5*). The costs of crop insurance are projected to decline further in 2016 with lower commodity prices.[8–9]

[6] Tweeten, Luther and Carl Zulauf. (1997). "Public Policy for Agriculture after Commodity Programs." *Review of Agricultural Economics.* (19)2, pp. 263–280.

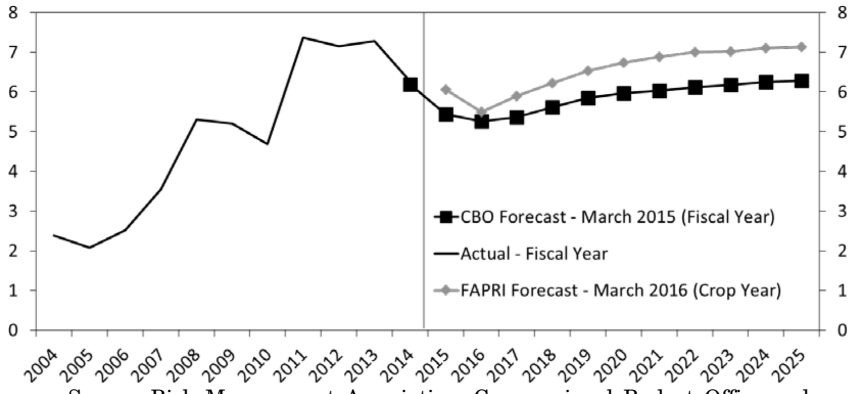
[7] Shields, Dennis (2015) "Proposals to Reduce Premium Subsidies for Federal Crop Insurance" Congressional Research Service Report, 7–5700, R43951.

[8] Congressional Budget Office (2015). "CBO's March 2015 Baseline for Farm Programs", March 9, 2015. Downloaded April 25, 2016. *www.cbo.gov/sites/default/files/51317-2015-03-USDA.pdf.*

[9] Food and Agricultural Policy Research Institute (2015). "U.S. Baseline Briefing Book: Projections for Agricultural and Biofuel Markets" FAPRI–MU Report #02–16, March. Downloaded April 25, 2016. *www.fapri.missouri.edu/wp-content/uploads/2016/03/FAPRI-MU-Report-02-16.pdf.*

Chart 5: Government Costs for Crop Insurance Premiums

Billion Dollars



Source: Risk Management Association, Congressional Budget Office and Food and Agricultural Policy Research Institute.

A recent study has shown that the removal of crop insurance would hurt U.S. food consumers. Based on 2013 data, eliminating crop insurance subsidies would result in lower participation rates and reduced food production that would underpin higher food prices.[10] It was estimated that U.S. food consumers would lose $2.5 billion in welfare value if crop insurance subsidies would decline with addition welfare losses to foreign consumers. In addition, U.S. farmers and agricultural producers would lose roughly $8 billion in welfare gains through the loss of subsidies. To be sure, U.S. taxpayers would benefit from the elimination of crop insurance premium subsidies, yet the net general welfare gains would be $932 million. Although, there was recognition that the benefits would vary across farm commodity, consumer food prices, and U.S. states, the analysis was not able to identify the distribution of benefits.

With the focus on crop insurance and market-based safety, farmer education programs have focused on risk management issues to help farmers manage farm margins during this downturn. At Purdue Extension, the Center for Commercial Agriculture has partnered with the Indiana Soybean Alliance to produce on-line resources to help producers understand, evaluate, and manage risk.[11] In 2015, the Farm Service Agency partnered with the Cooperative Extension Services across the nation to provide farm bill training and educational opportunities to help farmers understand various risk management strategies. These partnerships are the continuation of long-standing educational programs that support farm profitability. Funding for the state Cooperative Extension System through the Smith-Lever Act was found to have kept almost 137,700 or 28 percent more farmers from disappearing in U.S. agriculture from 1983 to 2010.[12]

Farm and Consumer Food Prices

In addition to slashing farm incomes, weaker commodity prices will place downward pressure on U.S. consumer food prices. However, consumer prices do not fluctuate as widely as farm level prices. As a result, falling commodity prices at the farm level are more likely to translate into slower growth in consumer food prices, not lower consumer food prices.

Historically, food prices at various stages of the food system tend to move together. The correlation between farm prices and producer prices remains strong (*Chart 6*). Using data from 1976 to 2015, the correlation between prices received by farmers and crude foodstuffs is 0.96; and the correlation between farm prices and

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[10] Jayson L. Lusk. 2015 "Distributional Effects of Selected Farm and Food Policies: The Effects of Crop Insurance, SNAP, and Ethanol Promotion." Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, April 2015.

[11] Information on the partnership between the Center for Commercial Agriculture and Indiana Soybean Alliance is available at *www.farmriskresources.com*.

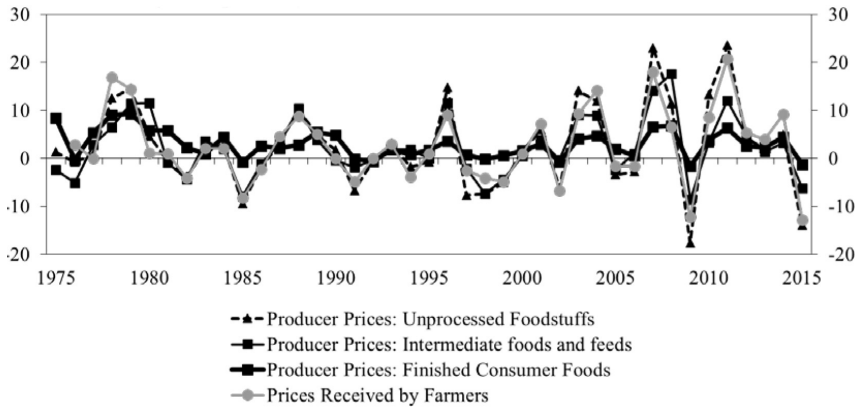
[12] Goetz, Stephan J. and Meri Davlasheridze. (2016). "State-Level Cooperative Extension Spending and Farmer Exits" *Applied Economic Perspectives and Policy,* April 19, 2016. Downloaded April 25, 2016.

producer prices for intermediate and consumer foods is 0.81 and 0.79, respectively. The correlation between farm level prices and consumer price inflation (CPI) for food is weaker, 0.39.

The correlations between farm and producer prices for food have strengthened over the past 2 decades. For example, between 1976 and 1995, the correlation between farm level prices and finished consumer foods was 0.71. Between 1995 and 2015, the correlation between farm level prices and finished consumer food prices strengthened to 0.93. A similar trend emerged between farm level prices and other producer prices (unprocessed foods and intermediate foods).

Chart 6: U.S. Farm Prices and Producer Prices for Food

Percent Change from Previous Year



Source: Economic Research Service, U.S. Department of Agriculture.

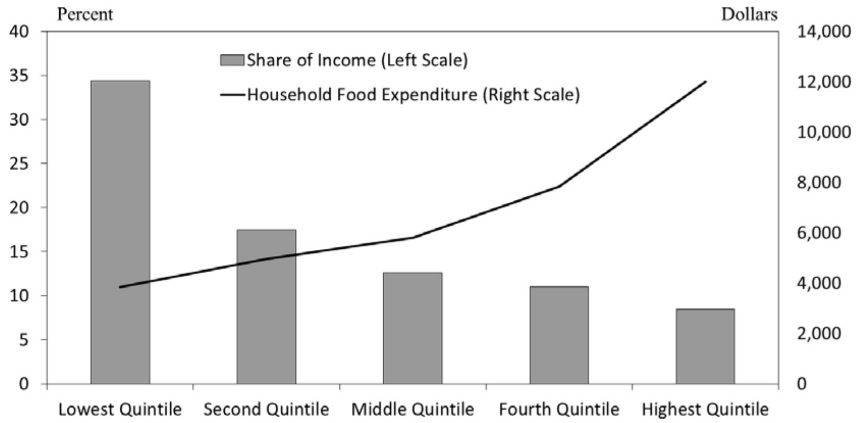
Although farm level and producer prices are highly correlated, farm level prices demonstrate more volatility than processed producer and consumer prices. Farm level prices and producer prices for unprocessed foodstuffs have fluctuated widely over the past decade increasing over 20 percent in 2007 and 2011 and plummeting almost 20 percent in 2009. At the same time, producer prices for finished consumer foods rose less than ten percent in 2007 and 2011 and edged down slightly in 2009. Consumer prices for food (CPI-food) followed similar patterns as the producer prices for finished consumer goods, but instead of falling in 2009, the CPI-food rose more slowly.

Consumer food prices tend to have less volatility due to the stability in other processing and marketing costs. According to USDA, farmers received 14.3 percent of the U.S. food bill, with other industry segments such as food services, food processing and wholesale and retail trade accounting for larger portions of the consumer food bill. Due to less processing, consumer foods, such as fresh fruit and vegetables, meats, and dairy, tend to have stronger correlations between farm level prices and consumer prices. For example, the correlation between farm level beef prices and consumer prices for beef and veal is 0.82.

Slower growth in consumer food prices arising from stable farm commodity prices could provide benefits to low-income consumers. For low-income households, food accounts for a larger share of their incomes and household expenditures. For example, households in the lowest fifth quintile by income spend over ⅓ of their income on food (*Chart 7*). In contrast, households in the highest fifth income quintile spend less than ten percent of their income on food. Lower food prices should allow food consumers to stretch their food dollar and increase the quantity and quality of food purchases.

Chart 7: Food Spending by U.S. Household Income

(2014:Q3 to 2015:Q2)



Source: Consumer Expenditure Survey, Bureau of Labor Statistics, April 2016.

However, the benefits of lower food prices for low-income households could be muted for those households living in food deserts. Food deserts are locations where affordable and nutritious food is difficult to obtain. USDA identifies food desert tracts as those with at least 33 percent of the tracts population or a minimum of 500 people with low access to a supermarket or large grocery store.[13] In regards to consumer food prices, retail food stores, such as grocery stores, provide food at lower prices compared to restaurant prices (*Chart 8*). The gap between restaurant and retail food store prices has widened over time as restaurant prices relative to manufacturing prices has increased from 2.5 to 3.5 since 1975, while retail food prices relative to manufacturing prices has fallen from 1.5 to 1.0. Low-income households in food deserts with little access to retail food stores, but access to restaurants are facing higher food costs and have additional challenges achieving better health outcomes.

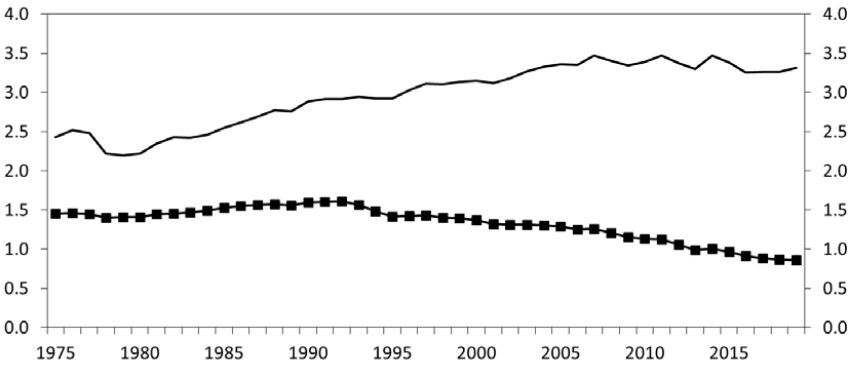
Educational programs for low-income households help them overcome access to food issues and reduce food insecurity. For example, the Nutrition Education Program administered by Purdue Extension has reduced food insecurity by 25 percent for low-income households participating in this program.[14] In this federally funded program, participants learn how to stretch their food dollar and eat healthier foods on a limited budget. Participants learn the health benefits of the different food groups and understand food safety practices and how to conserve limited food resources.

[13] Economic Research Service, USDA. "Definition of a Food Desert" Downloaded April 25, 2016. *www.ers.usda.gov/dataFiles/Food_Access_Research_Atlas/Download_the_Data/Archived_Version/archived_documentation.pdf*.

[14] Rivera, R.L., and Eicher-Miller, H. (2015). *P115 Food Security Among Households With Children Improved Following a Nutrition Education Intervention.* JOURNAL OF NUTRITION EDUCATION AND BEHAVIOR, 47(4S).

Chart 8: Restaurant and Retail Food Store Prices

Ratio to Manufacturers' and Shippers' Prices



Source: Economic Research Service, U.S. Department of Agriculture.

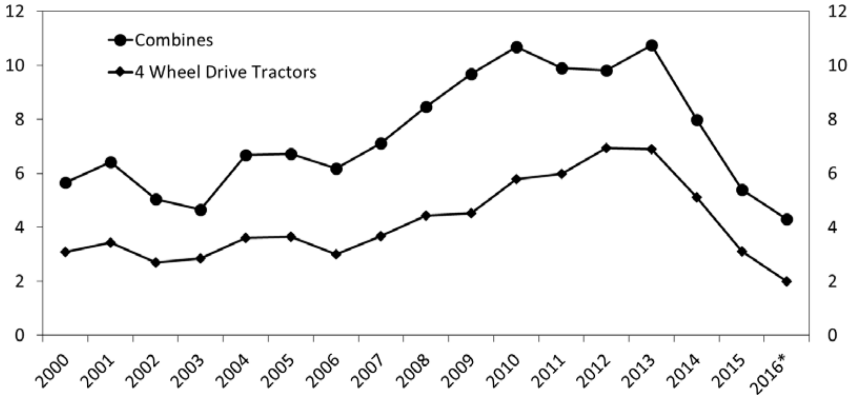
Impact on the Rural Economy

Declining profits in agriculture are also straining consumer spending, especially in rural America. According to USDA, agriculture and its related industries account for 9.3 percent of U.S. employment. According to the Bureau of Economic Analysis (BEA), farm earning accounted for roughly six percent of the earnings in nonmetropolitan counties in 2014 compared to less than ½ of one percent in metropolitan counties. Lower farm incomes spillover into the rest of the rural economy by reducing spending on farm inputs and household consumption.

Falling farm incomes have led to broader economic strains in rural economic activity. Based on BEA data since 1970, nonmetropolitan county farm earnings have a strong correlation with earnings in food and kindred product manufacturing and agricultural service industry. For example, U.S. tractor and combine sales surged with farm income after 2006 peaking in 2013 (*Chart 9*). Since then, the sharp decline in farm incomes translated into plummeting tractor and combine sales. In fact, tractor and combine sales in 2016 are on pace to fall below sales posted prior to the farm income boom. Bankers reporting to Federal Reserve agricultural credit surveys indicate that farm capital spending is expected to decline further in 2016.[15]

Chart 9: U.S. Tractor and Combine Sales

Thousands of Units



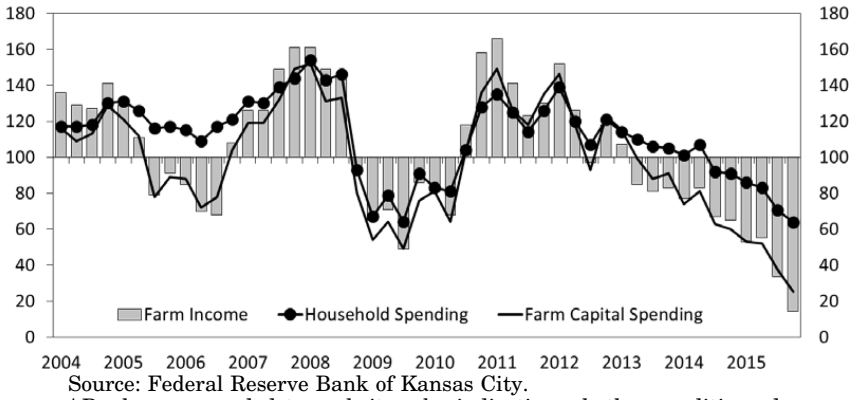
Source: Association of Equipment Manufacturers.
*Estimated based on sales through March 2016.

[15] Kauffman, Nathan and Matt Clark (2016) "Farm Economy Tightens Further" *Survey of Agricultural Credit Conditions,* Federal Reserve Bank of Kansas City, February 11.

In addition to plummeting farm capital spending, farm household spending has collapsed with farm incomes. According to bankers in the Tenth Federal Reserve District, farm households have cut household spending along with capital spending (*Chart 10*). Reduced household spending will place pressure on retail businesses on rural Main Streets, rural incomes, and support for charitable organizations in rural communities. In total, sharp downturns in agricultural profitability often spillover into lower investment, capital spending, and household spending in rural communities.

Chart 10: Tenth Federal Reserve District Farm Income, Farm Capital Spending, and Household Spending

*Diffusion Index**



Source: Federal Reserve Bank of Kansas City.

*Bankers responded to each item by indicating whether conditions during the current quarter were higher than, lower than, or the same as in the year-earlier period. The index numbers are computed by subtracting the percent of bankers that responded "lower" from the percent that responded "higher" and adding 100.

Lower farm incomes and reduced spillovers into rural consumer spending and ag-related activity could further strain rural poverty rates. Since the 1960s, nonmetropolitan poverty rates have been substantially higher than poverty rates in metropolitan areas.[16] Although poverty rates are much higher in the South, rural poverty rates are higher than urban rates even in the Midwest, which enjoyed strong income gains during the recent farm boom. Based on U.S. Census Bureau data, in the North Central Extension Region, total poverty rates rose from 10.4 percent in 2003 to 14.9 percent in 2013. And, child poverty rates rose higher, increasing from 14.4 percent in 2003 to 20.4 percent in 2013. In fact between 2009 and 2013, 44 percent of nonmetropolitan counties faced child poverty rates above 20 percent compared to 31 percent of metropolitan counties. These increases in child poverty occurred during a period of boom farm profitability that underpinned economic strength in many rural communities. Shrinking farm incomes and spillovers into rural economies could place additional pressure on rural poverty rates. For example, during the last major farm downturn in the 1980s, rural poverty rates rose from 13.7 percent in 1979 to 18.3 percent in 1983.

Holistic approaches to rural economic development are needed to combat rural poverty, especially child poverty. Studies on child poverty indicate that it is multidimensional and programs focused on the intergenerational mobility into new economic status tend to target family issues, such as parenting or structure that affect investments in children, or community issues, such as education, safety and jobs, that provide opportunity for economic advancement. For example, the National Advisory Committee on Rural Health and Human Services recommended action steps to assist rural children and families in poverty that encouraged holistic approaches focused on local coordination of community health clinics, community agencies, fam-

[16] Poverty data is available from the Economic Research Service, USDA. *http://www.ers.usda.gov/topics/rural-economy-population/rural-poverty-well-being.aspx.*

ily support organizations, and rural community development efforts.[17] At Purdue Extension, the focus on child poverty is increasingly focused on a holistic approach that addresses economic opportunities in communities and regions and families and their investments in children/youth. To strengthen local economies, Purdue Extension is partnering with Federal and state government agencies to build capacity the local/regional level. Through the Strengthening Economies Together program, Purdue Extension is partnering with USDA to identify community assets that can be leveraged into seizing emerging opportunities in rural communities. Through the Hometown Collaboration Initiative, Purdue Extension is partnering with the Office of Community and Rural Affairs in the Indiana State Government to build local capacity in communities with less than 25,000 people.

Reducing child poverty also means that programs need to assist families as they make investments in their children. With the high incidence of teen drug abuse in many rural communities, Purdue Extension has launched new parenting programs to strengthen teen-parent relationships that are often found to reduce teen drug use. In fact, the World Health Organization identified the Strengthening Families Program: For Parents and Youth 10–14 created by Iowa State University as the premier program reducing substance abuse among teens. For every dollar spent on this program, communities receive $9.60 in benefits in the form of less time in treatment, less jail time, and less time off work. In addition, child and youth programs are increasingly focusing on education, career readiness and the development of leadership and life skills. Through partnerships with USDA, state and local governments and nonprofit philanthropy, Indiana 4–H has increased its focus on science education and healthy living to prepare youth for future opportunities. In 2013, 91 percent of the 4–H youth that graduated high school planned to continue their education at a college, university, trade or technical school and 26 percent of them were first-generation college students.[18]

Conclusion

U.S. farmers are facing substantial declines in farm profits, driven by lower commodity prices. With crop insurance as the primary safety net for U.S. agriculture, the learning and implementation of various risk management techniques are the key to helping farmers manage margins in these difficult times. In addition to benefiting farmers, crop insurance payments provide economic welfare benefits to food consumers.

Food consumers could also benefit from lower food prices. However, consumer food prices are less volatile than farm prices, suggesting that consumer prices will not fall with farm prices, but rise at a slower pace in 2016. Low-income households spending a larger share of their income on food could benefit the most from more stable food prices. Yet, low-income households living in food deserts without access to larger grocery stores may not be able to take advantage of these opportunities as food prices at restaurants have risen more sharply that food prices at retail stores. Thus, nutrition education programs that teach low-income households how to stretch their food dollar are critical to reducing food insecurity.

Finally, plummeting farm incomes will strain rural economies. Farm capital spending on items such as tractors and combines has fallen with farm incomes straining non-farm income and employment in agricultural input companies. At the same time, farm households have reduced household spending which also limits opportunities for consumer spending on rural Main Streets. These ripple effects in the rural economy pose a challenge to reducing poverty rates, which tend to be higher in rural communities. If communities are going to address poverty, especially child poverty, holistic approaches that focus on leveraging local assets to seize emerging economic opportunities and address more social issues such as family health and wellness to strengthen the investments in children appear to offer the best opportunities. These approaches often require partnerships between government agencies at all levels, academic institutions such as land grant universities, nonprofit organizations and philanthropic entities to enhance the lives and livelihoods of people across the country.

The CHAIRWOMAN. Thank you, Dr. Henderson.
Dr. Leibtag, you may proceed.

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[17] *Child Poverty in Rural America.* (2015) National Advisory Committee on Rural Health and Human Services, Policy Brief, December. *http://www.hrsa.gov/advisorycommittees/rural/publications/childpoverty1215.pdf.*

[18] Wilson, Tyler and Renee McKee (2013) *Assessing Life Skills Developed Through Participation in Indiana 4–H Program—2013. https://extension.purdue.edu/4h/Pages/impact.aspx.*

STATEMENT OF EPHRAIM LEIBTAG, PH.D., ASSISTANT ADMINISTRATOR, ECONOMIC RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Dr. LEIBTAG. Chairwoman Walorski, Ranking Member McGovern, and Members of the Subcommittee, I appreciate this opportunity to present information on trends in retail food prices, the share of U.S. consumer budget spent on food, and the farm share of money that consumers spend on food.

My remarks are based on the most recent data available from USDA's Economic Research Service, as well as other Federal statistical agencies, such as the Department of Labor's Bureau of Labor Statistics, Department of Commerce's Bureau of Economic Analysis, the BEA.

At ERS, our mission is to inform and enhance public and private decision-making on a broad range of economic and policy issues related to agriculture, food, the environment, and rural development. This afternoon, I will discuss the ERS data on retail food prices, consumer spending, and how food spending and prices can be linked to the food supply chain.

These sets of data impact programs and policies affecting consumers who plan their diets and food budgets based on which foods are available, their associated prices, and other factors. The dynamics of retail food markets are driven by changing trends in both what and how food companies produce, and what consumers choose to eat. A major factor during the past 30 years has been the rise in the food away from home share of total consumer food spending. Consumers are eating more outside the home and paying for the added services and convenience. Changes in diet and preferences also influence which foods are available and consumed, as do changes in where food is produced around the world.

In order to track and forecast food price changes, the ERS uses the Bureau of Labor Statistics Consumer Price Index, the CPI, for food and its subcomponents. There are separate food indexes for food at home, grocery stores and supermarket-sourced, as well as food away from home, prepared foods for eating and drinking establishments, as well as non-commercial food service outlets.

Looking at our recent trends, overall food prices in 2015 rose 1.9 percent. Grocery store prices were up 1.2 percent, while restaurant prices rose 2.9 percent. Food price inflation varies across categories, though. For example, the loss of laying hens due to avian influenza led to a spike in egg prices, while drought in the Southwest and California contributed to higher prices for some fruits, vegetables, and dairy products. For 2016, ERS currently predicts grocery store prices to rise one to two percent, a rate of inflation that would fall below the 20 year average of 2½ percent across the U.S. We update our food price forecast monthly and revise estimates if conditions, such as the crop outlook or weather-related conditions, change significantly.

To get a better understanding of these food price dynamics, we also track producer prices within the food supply chain. This uses the BLS Producer Price Index, which provides estimates of the price change in food products by food stores and restaurants. For many commodities, these prices change in greater rate than at the retail level. How much of a change depends on retailing costs be-

yond the raw food ingredients, as well as the competition level in the retail market.

Even when rising production and ingredient costs result in increasing retail food prices, impacts might be small relative to those underlying costs. For example, in 2011, corn, wheat, and soybean prices were up by about 40 percent, while grocery store prices rose 4.8 percent.

One of the reasons for this relative stability of retail food prices is the number of industries that contribute to the food on the shelves of supermarkets. ERS's Food Dollar series details the components of the retail food dollar by industry and allows us to understand the factors that impact food changes. Data are presented in the Food Dollar series in three ways to shed light on different aspects of the food supply chain. Based on these estimates, as of 2014, the farm share of the U.S. food dollar is estimated to be 17.2 percent.

Turning now to consumer budgets, ERS estimates that food expenditures by families and individuals as a share of disposable personal income can be calculated using data from the Bureau of Labor Statistics. Broadly speaking, consumers in the U.S. and many developed countries spend less than 15 percent of their income on food, while in developing countries consumers may spend upwards of 40 or 50 percent. Within the U.S. between 1960 and 2002, the average share of disposable income fell from 17½ to 9.6 percent. This was mostly due to rising incomes for consumers overall. But since 2002, the average has stabilized between 9½ and ten percent. Breaking this down by income group, ERS analyses show that while households spend more money on food at higher income levels, it represents a smaller portion of income as these households spend money on other goods. The middle income level within the U.S. have household spending around 13.4 percent of income on food, while the lowest income group spends roughly 34 percent, as was mentioned earlier.

To conclude, our data shows that retail food prices in the U.S. are relatively stable. Consumers are therefore able to spend a relatively small share of income on food, and devote larger amounts of their budget to other goods and services, but the extent to which this is the case does depend on the income level of a given household.

Madam Chairwoman, this concludes my statement. I would be happy to answer questions.

[The prepared statement of Dr. Leibtag follows:]

PREPARED STATEMENT OF EPHRAIM LEIBTAG, PH.D., ASSISTANT ADMINISTRATOR, ECONOMIC RESEARCH SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Chairwoman Walorski and Members of the Subcommittee, I appreciate this opportunity to present information on trends in retail food prices, the share of the average U.S. consumer budget spent on food, and the farm share of money spent by consumers on food. My remarks are based on the most recent data available from USDA's Economic Research Service (ERS) and other Federal Statistical Agencies.

The mission of ERS is to inform and enhance public and private decision-making on a broad range of economic and policy issues related to agriculture, food, the environment, and rural development. ERS is a trusted resource for objective information, data, and unique economic and social science analysis on these topics.

This afternoon I would like to discuss ERS data on retail food prices, consumer spending, and how food spending and prices can be linked to the food supply chain. These sets of data impact programs and policies affecting individual citizens who plan their diets and food budgets based on what foods are available, their associated prices, and other factors.

Measuring Retail Food Price Change

The dynamics of retail food markets are driven by changing trends in both what and how companies produce food and what consumers prefer to eat. A major factor in the food market during the past 30 years has been the rise in food away from home's share of total food spending. This increase means consumers are eating more outside of the home and paying for added services and convenience when buying food. Changes in diets and preferences also impact what foods are available and consumed as do changes in where food is produced around the world. In order to understand food price dynamics, ERS uses Consumer Price Index (CPI) data from the Department of Labor's Bureau of Labor Statistics (BLS). BLS publishes food price changes through the monthly collection of prices from a representative group of food-stores and foodservice establishments.

The CPI compares prices in a base year to prices in the current year. For products purchased by consumers, the All-Items CPI is used to represent average increases or decreases in prices paid for retail goods and services. The All-Items CPI is composed of a number of sub-indexes, including the Food CPI.

There are separate food indexes reported for food-at-home, which consists of food sold in retail outlets, and food-away-from-home, which consists of meals, entrees, and other prepared foods sold in eating and drinking establishments, and non-commercial (institutional) foodservice outlets. To obtain the Food CPI, the separate indices of the at-home and away-from-home segments are combined, using their respective expenditure shares. Expenditure shares are determined based on average American consumer purchasing behavior from the Bureau of Labor Statistics' Consumer Expenditure survey and updated on an annual basis.

Looking back at last year, supermarket (food-at-home) prices rose 1.2 percent overall in 2015, but food price inflation varied across food categories. The loss of laying hens due to Highly Pathogenic Avian Influenza (HPAI) led to a spike in egg prices, while drought in the Southwest and California contributed to higher prices for fruits and vegetables and dairy products.

ERS currently predicts 2016 food-at-home (supermarket) prices to rise 1.0 to 2.0 percent—a rate of inflation that would fall below the 20 year historical average of 2.5 percent. These forecasts are based on an assumption of normal weather conditions; however, severe weather or other unforeseen events such as unexpected surges in commodity prices could potentially drive up food prices beyond the current forecasts. The ongoing drought in California is likely to have an impact on the state's agricultural production, but because of the prevalence of irrigation systems there, the impact on specific commodities will vary. Long-term moisture deficits across most of the state remain at near-record levels. Because California is a major producer of fruits, vegetables, tree nuts, and dairy, the drought has potential implications for U.S. supplies and prices of affected products this year and beyond. Conversely, increases in the strength of the U.S. dollar, already up substantially from a year ago, make the sale of domestic food products overseas more difficult. This would increase the supply of foods on the domestic market, potentially placing downward pressure on domestic retail food prices.

ERS updates its food price forecasts monthly and revises estimates if the conditions such as the feed grain crop outlook or weather-related crop conditions on which they are based change significantly.

In order to gain insight into factors that influence consumer price changes, it is useful to track producer prices within the food supply chain. BLS' Producer Price Index (PPI), measures prices received by processors, suppliers, and wholesalers, in the food industry and more broadly in the economy. Both farm and processed products are included in the PPI. Similar to the CPI, the indexes are reported monthly and annually. The PPI more closely represents the price change in food products *purchased* by food stores and restaurants. For many food commodities, the PPI is more volatile as compared to consumer prices.

Food service operators purchase both products with a high farm value component, such as milk or apple juice, as well as more highly processed foods having lower commodity/farm value shares, such as cereal or pizza. Suppliers to the food-away-from-home segment offer both traditional foods requiring additional preparation, as well as highly processed, value-added foods such as heat-and-serve entrees.

In general, retail food prices are much less volatile than farm-level prices and tend to rise by a fraction of the change in farm prices. The magnitude of response

depends on both the retailing costs beyond the raw food ingredients and the nature of competition in retail food markets.

Several key factors influence how a cost increase affects the prices of food under conditions of competition. For a given increase in an input's cost, the larger will be an increase in the food product's price when:

- The share of the input in the total cost of producing food products is larger.
- The input has fewer good substitutes in the food production process—that is, few other inputs or processes could be used to produce the food product.
- Consumers have few good substitutes for the food product, in which case consumers do not decrease purchases substantially when the price is higher.
- Prices are expected to remain high for a long period of time.

Retail prices for fresh fruits, vegetables, and eggs have a relatively high farm value share compared to other commodities. Changes in farm-level prices of these products have a larger and earlier impact on retail prices as a result. There are also seasonality factors contributing to volatility of produce (fresh fruits and vegetables) prices. Produce supply and price variation are also influenced by extremes of weather and growing conditions, such as droughts, floods, freezes, and pests. Because most produce commodities are highly perishable, supply and prices are highly sensitive to adverse growing conditions.

How Changes in Input Costs Affect Retail Food Prices

When food manufacturers and retailers face increased costs, they can respond by:

1. absorbing the higher costs by keeping prices steady and accepting a lower profit level,
2. passing on at least some of the higher costs by raising the price of products, or
3. adjusting the production process and employing fewer units of the higher cost input by substituting one or more other inputs.

If input costs decrease, companies have the opposite options—higher profits, lower output prices, or expanded input use. Of the three options, the last two can directly affect food prices either by raising or lowering the price of food products or by food production adjustments that influence the amount of food available and thus prices.

Economic research has shown that retail prices are typically more responsive to input cost increases than to decreases. This pattern is evident in the U.S. CPI, as retail food prices have, on average, increased by two to three percent per year, while commodity prices have been more volatile.

Despite the fact that rising input costs are almost certain to result in increasing retail food prices, there are a number of reasons to expect that this impact will often be small relative to the changes in input costs. For example, the 2012 severe drought in the Midwest resulted in sharp increases in the farm prices of corn, soybeans, and a number of other commodities important to the food supply chain. However, this resulted in only a modest increases in overall retail food prices—in 2012, food prices rose 2.6 percent (consistent with the historical average).

Historically, dramatic changes in input costs typically result in small changes in the CPI for food and for grocery prices in general. For example, in 2011, the average weighted price of corn, wheat, and soybeans in the U.S.—important U.S. agricultural inputs into the U.S. food supply—increased by nearly 40 percent over 2010 levels. In contrast, food-at-home prices rose 4.8 percent between 2010 and 2011. Very much in line with this disparity, commodity prices, in general, are about ten times more volatile than retail food prices over time.

One of the most important reasons for the relative stability of retail food prices is that a number of industries contribute to food on the shelves of supermarkets, and the cost components from each industry serve to mitigate much of the volatility seen in commodity prices and wholesale food prices. ERS's Food Dollar Series details the cost components of the retail food dollar by industry and allows us to better understand the factors behind changes in the costs of food.

Food Dollar

ERS uses data from the Department of Commerce's Bureau of Economic Analysis to calculate its Food Dollar series. This Series measures annual expenditures by U.S. consumers on domestically produced food. It provides an overview of the distribution of shares of the average dollar spent on food for each underlying industry or factor, including estimates of the farm share of the average dollar spent by consumers on food. Data are presented in three primary series—the *marketing bill* series, the *industry group* series, and the *primary factor* series—that shed light on dif-

ferent aspects of the food supply chain. The three series show different ways to split up the same food dollar and I will discuss each in turn.

The farm share of the food dollar is the share received by farmers from sales of basic food commodities. The most recent version of this data spans from 1993–2014 and the farm share has ranged from slightly above 15 percent to as much as 18 percent during the past 20 years. Our latest estimates, using 2014 data, show the farm share to be 17.2 percent of every dollar spent in the U.S. on domestically produced food.

Within the data, we are able to calculate a farm share for both at-home- and away-from-home foods, with the food-at-home farm share currently at 26.2 percent and having ranged from the low to mid 20s for the past 20 years. The food-away-from-home farm share is 5.8 percent as of 2014 and has ranged from five to ten percent during the past 20 years. These estimates imply that a variety of other costs also comprise the food prices consumers pay and variation in those costs and changes over time may influence the prices for consumer food products.

The second food dollar series, the **industry group dollar,** breaks down the cost of food into 12 major industry groups involved in the food production and supply system. Whereas the marketing bill series measures proceeds from sales, the industry group series measures value added (or costs contributions) across 12 industry groups. For example, farmers received 17.2¢ per food dollar in sales proceeds (farm share), but after paying their suppliers such as seed, fertilizer, energy inputs, financial services, and agribusiness such as veterinarians and equipment suppliers, the farm value added in 2014 amounted to 10.4¢.

For a typical dollar spent in 2014 by U.S. consumers on domestically produced food, including both grocery store and eating out purchases, 32.7¢ went to pay for services provided by foodservice establishments, 15.3¢ to food processors, and 12.9¢ to food retailers. At 5.1¢, energy costs per food dollar are up 16 percent since 2009, but still below the 6.8¢ that energy costs contributed in 2008.

Finally, the **primary factors dollar** identifies the distribution of the food dollar in terms of U.S. worker salaries, rents to food-industry property owners, output taxes and imports.

For calendar year 2014, the primary factor series shows that 48.7¢ of every food dollar expenditure goes to the salary and benefits of domestic workers, 36.6¢ is dispensed as property income, and the remainder is split between output taxes (primarily state and local sales taxes) and imported commodities embedded in U.S. produced foods, such as imported petroleum products.

Food Spending as a Share of Income and Overall Consumer Spending

Food expenditures by families and individuals as a share of disposable personal income are reported annually by ERS. The annual disposable personal income data are reported by the Department of Commerce's Bureau of Economic Analysis and used in the ERS analysis.

ERS' data on share of income spent on food has been tracked for over 85 years as the share of income spent on food has fallen steadily from around 25 percent to its current 9.7 percent level. Looking at trends for the past 50+ years, between 1960 and 2002, the average share of disposable personal income spent on total food by Americans fell from 17.5 to 9.6 percent. This downward trend was driven by increasing income for U.S. consumers during most of those 42 years allowing for increased purchases of non-food items.

Since 2002, the share of disposable income spent on food has stabilized and ranged between 9.6 and 10 percent each year. As of 2014 (the most recent data available), the 9.7 percent of disposable income spent on food includes roughly 5.4 percent spent on food at home and 4.3 percent spent on food away from home. The food-at-home share of disposable income has fallen from over 20 percent to its current 5.4 percent, while the share of income spent on food away from home rose from just over three percent to its current 4.3 percent.

Looking at similar data by income group, ERS analysis shows that households spend more money on food at higher income levels, although food represents a smaller portion of income as households allocate additional funds to other goods. In 2014, for example, U.S. households in the middle income quintile spent an average of $5,992 on food, representing 13.4 percent of income, while the lowest income households spent $3,667 on food, representing 34.1 percent of income.

Along similar lines, consumers in the U.S. and many developed countries spend a relatively small share of their budget on food, usually less than 15 percent, while consumers in many other countries spend 15 to 30 percent on food. Consumers in developing countries with lower average incomes and fewer non-food consumables available may spend 40 to 50 percent of their budget on food. These differences are

driven by overall economic conditions, average household income, food market dynamics, and overall food availability in each country.

To conclude, our data show that retail food prices in the U.S. are relatively stable, consumers are therefore able to spend a relatively small share of income on food and devote larger amounts of their budget to other goods and services.

Madam Chair, this concludes my statement. I will be happy to answer any questions that the Subcommittee may have.

The CHAIRWOMAN. Thank you, Dr. Leibtag.

Mr. Harig, you can proceed.

STATEMENT OF ANDREW HARIG, SENIOR DIRECTOR OF SUSTAINABILITY, TAX, AND TRADE, FOOD MARKETING INSTITUTE, ARLINGTON, VA

Mr. HARIG. Chairwoman Walorski, Ranking Member McGovern, and distinguished Members of the Committee. Thank you for the opportunity to testify before the Subcommittee today on food prices and the consumer. I am Andrew Harig, Senior Director of Sustainability, Tax, and Trade of the Food Marketing Institute, which represents food wholesalers and retailers in each Congressional district in the U.S.

Americans of all income levels are intensely price conscious when deciding what foods to purchase. In survey after survey, low prices remains the single most important attribute that consumers seek in deciding where to shop.

Food retailing is an intensely competitive business that averages about a one percent profit margin annually. While FMI's members compete on service, quality, and selection, the role of prices in driving decision making plays a dominant role in how the industry operates. Put simply, we focus so intensely on food prices because our consumers demand that we do.

As the final link in the supply chain, food retail plays a crucial role in connecting the American public with farmers and ranchers. FMI and our industry feel a strong responsibility to create a better understanding of the role that agricultural policy and the health of the farm sector play in making sure that the United States has the world's safest and most affordable food supply.

A number of our members have launched initiatives over the past few years to make this link explicit. These programs range from Meet your Farmer sessions at the store level, to expanding local purchasing agricultural programs.

Despite this, we believe the relationship between farm level issues and their impact on food prices is not always as clear to consumers as it could be, in part due to the shared complexity of our industry's pricing model. As the other witnesses have made clear, there often dozens, if not hundreds of factors that go into the price of a product by the time it reaches retailer's shelves. When you consider that the average store carries about 40,000 unique items, the number of different variables shaping retail prices blend into an extremely complex algorithm.

Admittedly, certain occurrences, including drought and crises like the avian influenza, tend to have an obvious link to changes in the cost of food. Other factors could be more confusing. When huge energy cost increases drove up the price of food in 2007 and 2008, many consumers were caught off guard by how energy intensive farming, manufacturing, and food retailing can be. The dis-

connect between what is going on at the farm level and how it translates into price increases raises long-term concerns that the entire supply chain needs to address. As the demands on U.S. agriculture increase, it is important that consumers understand the changes so that they can continue to make the best use of their food dollar.

One of the most important factors for improving outreach across the supply chain is recognizing that many consumers take a holistic approach to food prices. They focus less on the cost of any single component of their store visit and more on the total cost of building and preparing a meal. As a result, consumers have become particularly adept, particularly at lower income levels, at addressing price increases by scaling back the purchase of expensive items and substituting in less expensive alternative foods. This has been especially true of the protein category. Drought, avian influenza, PEDv, and a number of other factors have all contributed to large changes in price that consumers have had to adapt to. As these changes occurred, consumers adjusted their own purchases to maintain their overall quality of their diets.

Retailers have responded to this by adopting a variety of strategies to help the American public in these efforts. A number of FMI members, for example, have limited the cost increases they pass along to consumers on an extensive list of staple products. The last few years have also seen a much broader use of private labeled brands that are often lower priced than national brands. Retailers have found that as they respect and promote a focus on total food costs and the total food bill, they are often rewarded with shoppers' loyalty.

When we talk about food prices, however, it is also important to acknowledge the role that regulatory changes play in driving the prices paid by consumers. The industry is currently in the process of implementing the Food Safety Modernization Act, the most significant change to food safety laws in over 70 years. FMI supported many of the changes proposed in FSMA, but the sheer scope of the law is almost certainly going to impact consumers. Similarly, the FDA's Chain Restaurant Menu Labeling Regulation could have broad impacts on supermarket buy local programs, food waste, and the cost of prepared foods at the store level. Even state level laws, such as Vermont's GMO labeling requirement, can expand to have national implications.

That being said, the flexibility and resilience shown by the American consumer should be heartening to everyone in the food supply chain. Despite sometimes sharp and occasionally unexpected changes to price in a number of different categories over the past few years, consumers continue to adapt their purchasing strategies. Moving forward, as new demands are placed on the supply chain, producers, manufacturers, and retailers are going to be called on to be equally as adaptable.

Thank you for the opportunity to testify this afternoon. I look forward to answering any questions you might have.

[The prepared statement of Mr. Harig follows:]

PREPARED STATEMENT OF ANDREW HARIG, SENIOR DIRECTOR OF SUSTAINABILITY, TAX, AND TRADE, FOOD MARKETING INSTITUTE, ARLINGTON, VA

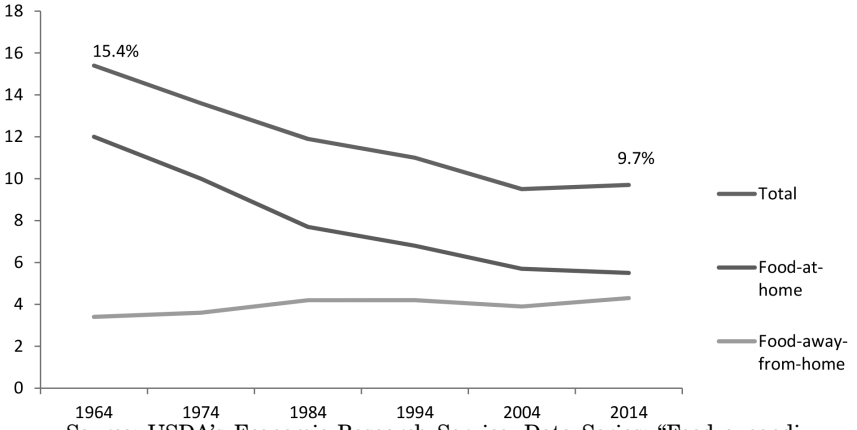
Chairwoman Walorski, Ranking Member McGovern, and distinguished Members of the Subcommittee:

Thank you for the opportunity to testify before the Subcommittee on Nutrition on the issue of food prices and the consumer. My name is Andrew Harig and I am Senior Director for Sustainability, Tax and Trade at the Food Marketing Institute, which represents food wholesalers and retailers in each Congressional district in the U.S.[1]

The Role of Price in Food Retailing

Over the past fifty years, one of the great—and often unheralded—success stories of the United States' economy has been that Americans devote less of their income to feeding their families today than they have at any other point in our history. In 1964, families and individuals spent over 15 percent of their disposable income on food; by 2014, this number had dropped to under ten percent (see chart below). This decrease has been a boon for the overall economy, since it freed up disposable income to be diverted into new and productive areas.

Percentage of Disposable Income Spent on Food in the United States, 1964–2014



Source: USDA's Economic Research Service, Data Series: "Food expenditures by families and individuals as a share of disposable personal income".

Despite this long downward trend, however, consumers continue to be intensely price conscious in making decisions about the food they purchase. For example, ¾ of all consumers take price into consideration when deciding whether to purchase a product for the first time.

Decision Factors Contributing to the Purchase of New Products

	Never	Hardly Ever	Sometimes	Almost Always
Price	1%	3%	21%	75%
Nutrition Label	5%	10%	38%	46%
Brand Name	3%	14%	50%	33%
Health Claims	13%	20%	47%	21%

[1] Food Marketing Institute proudly advocates on behalf of the food retail industry. FMI's U.S. members operate nearly 40,000 retail food stores and 25,000 pharmacies, representing a combined annual sales volume of almost $770 billion. Through programs in public affairs, food safety, research, education and industry relations, FMI offers resources and provides valuable benefits to more than 1,225 food retail and wholesale member companies in the United States and around the world. FMI membership covers the spectrum of diverse venues where food is sold, including single owner grocery stores, large multi-store supermarket chains and mixed retail stores. For more information, visit *www.fmi.org* and for information regarding the FMI foundation, visit *www.fmifoundation.org*.

Decision Factors Contributing to the Purchase of New Products—Continued

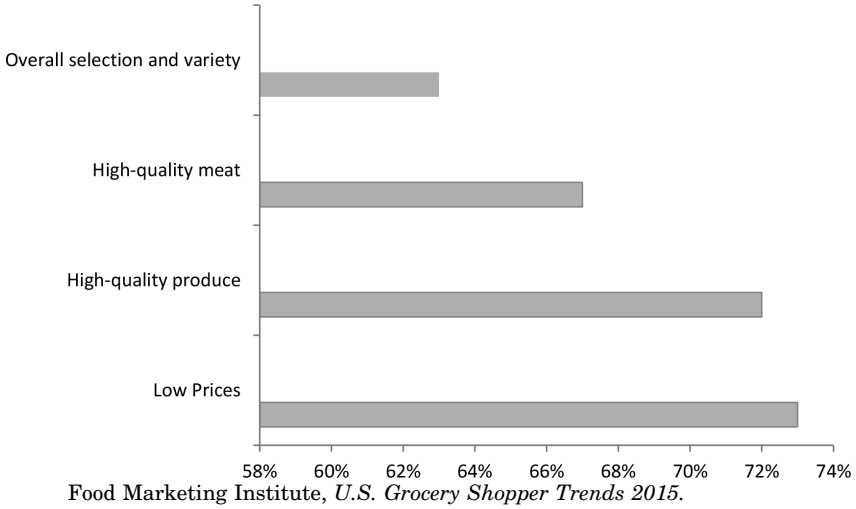
	Never	Hardly Ever	Some-times	Almost Always
Organic Claims	22%	27%	34%	17%

Food Marketing Institute, *U.S. Grocery Shopper Trends 2015.*

Once the decision to purchase a product is made, and the consumer integrates it into their shopping, they become more flexible on price. But sudden changes to the price remain a factor of concern even for products for which a consumer expresses a deep loyalty.

Similarly, "low prices" remains the single most important attribute that consumers seek in deciding at which store to shop.

Top Store Attributes Rated as "Very Important" to Consumers



Food Marketing Institute, *U.S. Grocery Shopper Trends 2015.*

The recession that began in 2008 certainly drove many consumers to focus more on what they were paying for groceries, but these impacts persist even in 2016. This is true for people at all income levels, not just lower-earning households. Overall more than ½ of all consumers maintained that they paid about the same for groceries in 2015 than they did in 2014, and most are looking to continue holding that line.

Changes to Spending Behavior in 2015

	Total	Income under $35K	Income of $35,000–$99,999	Income over $100k
I am spending about the same on groceries	52%	50%	54%	52%
I am spending more on groceries	31%	31%	31%	36%
I am spending less on groceries	16%	19%	15%	12%

Food Marketing Institute, *U.S. Grocery Shopper Trends 2015.*

Food retailing is an intensely competitive industry which averages about a one percent profit margin annually. In an industry of our size and scope, successful companies cannot afford to ignore even a single factor that brings consumers into the store. While FMI's members compete on service, quality and selection, the role of prices in driving consumer decision making plays a dominant role in the way the industry operates. Put simply, we focus so intensely on food prices because our consumers demand that we do.

Communicating the Factors that Make-up Food Prices

As the final link in the supply chain, food retail plays a crucial role in connecting consumers with farmers and ranchers. FMI and our industry feel a strong sense of responsibility to create a better understanding of the role that agricultural policy and the health of the farm sector play in making sure that the United States has the safest, most wholesome and most affordable food supply in the world. A number of our members have launched initiatives over the past few years to make this link explicit; these programs range from "Meet your farmer" sessions at the store level to expanding local agriculture programs.

Despite this, we believe the link between farm-level issues and their impact on food prices are not always clear to consumers. In large part, this disconnect can probably be traced to the sheer complexity of the pricing model in our industry. As the other witnesses have made clear, there are often dozens—if not hundreds—of factors that go into the price of a product by the time it makes it to FMI members' retail shelves. When you consider that the average store carries about 40,000 unique items, the number of different variables shaping retail prices blend into an extremely complex algorithm.

Admittedly, certain occurrences—including drought and crises like avian influenza—tend to have a direct and obvious link to the cost of food that most people understand. Other changes can be more confusing, however. For example, when huge energy cost increases drove up the price of food in 2007 and 2008, many consumers were not necessarily focused on just how energy intensive farming, manufacturing and retailing food can be. During this period, our members received many more calls asking about the reasons behind price increases than we have received about the California drought.

The disconnect between what is going on at the farm-level and how it translates into price increases raises long-term concerns that the entire supply chain needs to address. For example, as the demands placed on U.S. agriculture to feed an ever-expanding population increase, it is important that consumers understand these changes so that they can continue to make the best use of their food dollar. But it is just as important that farmers and ranchers understand the changing face of the American consumer so that they can begin planning for the changes that are going to be asked of them.

The Understanding of Why Costs Increase May Be Imperfect, But Consumers are Becoming Increasingly Expert at Responding to Them

As previously noted, the factors underlying cost increases for individual commodities or products may not be completely understood at the consumer level at certain times. However, many consumers tend to take a more holistic approach to how they view food prices. These shoppers tend to focus less on the cost of any one component of their store visit, and more on the total cost of building and preparing a meal.

As a result, consumers have become particularly adept over the past decade at addressing price increases through both scaling back the purchase of expensive items and substituting in less expensive alternate foods. This has been especially true of proteins, a number of which have faced significant challenges in recent years that have led to price changes. Drought, avian influenza, PEDv and a number of other factors have all contributed to large and unexpected changes in price to which consumers have had to adapt. We have seen that as these changes occur, consumers make adjustments to their own purchases to make sure that the overall quality of their diets is not impacted.

For instance, over 40 percent of consumers surveyed in FMI's and the North American Meat Institute's 2015 Power of Meat Survey admitted that price increases changed the way they bought meat and poultry. But the strategies they used to address these price increases were extremely broad:

Buy the same kinds of meat, but less of it	33%
Buy what's on promotion	19%
Buy less expensive items	16%
Volume-based discounts	13%
Change stores	5%
Buy premium; eat-out less	*3%

*Food Marketing Institute & the North American Meat Institute, *Power of Meat 2015.*

Retailers have adopted a number of strategies to aid consumers in their efforts to address changes in food prices. A number of FMI's members have limited the cost increases they pass along to consumers on an extensive list of staple products. The

last few years have also seen a much broader use of private label brands that are often lower-priced than national brands.

The flexibility and resilience shown by American consumers should be heartening to everyone in the food supply chain. Despite sometimes sharp (and unexpected) changes to prices in a number of different sectors over the past few years, they have continued to adapt their purchasing strategies.

A Quick Word on Regulatory Impacts

When we talk about food prices, it is also important to acknowledge the role that regulatory changes play in driving costs paid by consumers. The industry is currently in the process of implementing the Food Safety Modernization Act (FSMA), the most significant change to food safety laws in over thirty years. FMI supported many of the changes proposed in FSMA, but the sheer scope of the law is almost certainly going to impact consumers. Each of the new FDA rules facing retailers are more than 275 pages long, so retailers and wholesalers are working hard to understand, interpret and implement all the changes. Similarly, the FDA's chain restaurant menu labeling regulation could have broad impacts on supermarket "buy local" programs, food waste and the cost of prepared foods at store level, forcing retailers to move from local and produce department sourcing to a more standardized food service sourcing—similar to restaurants. Even state level laws, such as Vermont's GMO labeling requirement, can expand to have national implications that impact consumer prices. For example, if companies attempt to reformulate to non-GMO ingredients due to consumer concern resulting from a lack of information, we are anticipating a 25% increase in cost in the reformulated private brand product (not including labeling and distribution costs)—with an almost certain impact on low-income customers and local farmers.

Each of these new regulatory requirements is going to impose costs on the system, and with a 1% retail margin, these added costs will impact consumer prices. Before Congress considers legislation or an agency moves to finalize a regulation, we would urge you to consider the broad implications of any new proposal—not only its impact on farmers, ranchers, manufacturers and retailers, but also its impact on consumers.

Conclusion

Despite the best efforts of many on this Committee, the challenges of the past decade have forced Americans to become incredibly creative in how they feed their families and spend their food dollars. This is going to have long-term impacts on how Americans shop for food. However, FMI's research shows that a new consumer is emerging—one who is going to demand both value and broader engagement on the part of food companies at every level of the supply chain. This is going to mean not only a commitment to greater transparency, but also the forging of new partnerships focused on health and wellness. As we begin to prepare for the next farm bill, FMI looks forward to continuing to work with the Committee to share our research and work to keep the U.S. food supply the safest, healthiest, and most affordable in the world.

Thank you.

The CHAIRWOMAN. Thank you, Mr. Harig.

Dr. Henderson, and to all of you, thank you for your expertise, and we have been focusing at the Subcommittee level on the hearing series, *The Past, Present, and Future of SNAP*. And we have heard from a diverse group of witnesses over the past several months about the array of challenges that low-income families face, whether it be access to healthy, nutritious food, arranging childcare, transportation, or learning the adequate skills for gainful employment. We also know, as you all have just alluded to, that the low-income individuals have less disposable income to spend on food compared to the average American.

Dr. Henderson, can you just talk a little bit more about what role does the consumers' income play in their responsiveness to food prices, and then what other factors contribute to low-income individuals as they choose to purchase different types of things at the grocery store, just to give us a little bit more insight? Thanks.

Dr. HENDERSON. Thank you. From my perspective, the low-income consumer when they have a limited food budget and limited food dollar, they have to stretch it across many different items. When you have higher food prices, they first will go through there and start adjusting their allocation of what they buy. First of all, I oftentimes think that they look at a different component. So instead of buying steaks, they buy hamburger. And if they bought one hamburger and it becomes really expensive, they look at different types of meats or different types of products that are in the grocery store in doing those allocations.

The other challenge that we have, though, with low-income households is about in terms of access to foods, those that are living in food deserts. Do they have access to grocery stores and other types of markets that allow them the variety of food choices that they are able to make?

And then the third part of it is how do we help them through education to have a better understanding of the nutrition of the product and the choices that they make from a nutritional standpoint, and how to stretch their food dollar to make those choices when they into a grocery store or a retail store to make those personal choices.

And so when I think about consumers, they have a lot of different stages and a lot of different components on making that food choice of how to stretch their dollar, let alone how do they get to the store in the first place.

The CHAIRWOMAN. And just a follow up question: in Indiana, we have a very diverse agricultural economy. We obviously have row crops, corn, soybeans, very diverse, though, with other things that we grow. And understanding some of the policies here, especially because we have all mentioned crop insurance and how it helps farmers through difficult times. Can you help us make the connection between how those policies work and the connection to the abundant and affordable food supply in the U.S.? Help us understand what role that farm policy plays and how important it is as we look to the future.

Dr. HENDERSON. Farm policy and crop insurance, it provides the protection against the downside risks of short crop, extremely low prices and the risks that you have on the revenue generation. What it does is then because it protects against the downside risk, it stabilizes production.

The CHAIRWOMAN. Yes.

Dr. HENDERSON. And through that, it helps then mitigate and stabilize prices that are then pushed through the system. And that is where the impact of where the farm policy will impact the consumer and provide the benefits that the consumer would have.

And so that is the general mechanism through it is stabilizing, potentially increasing crop production in certain places, and providing coverage and reducing crisis for the consumer at the retail event through increased supplies and stable supplies.

The CHAIRWOMAN. And one other thing you mentioned earlier was the Nutrition Education Program. Can you talk about some examples of how that directly impacts folks and how they are able to stretch SNAP dollars, how the programs work together?

Dr. HENDERSON. Yes, the Nutrition Education Program in Indiana is administered by Purdue Extension. We have staff in every county, and so part of what we do in the Nutrition Education Program is direct education. We will have our staff, program assistants go out and meet individually with families, talk to them about their situation, talk to them about budgeting, talk to them about food safety, how to reduce food waste, but also talk to them about nutritional aspects of food, which foods provide the most nutritional benefits. About how you think about your shopping experience to maximize your dollar and stretch your food dollar, and all these different things. It is about a seven-step process. It goes through quite a bit of time, over a few months to go through that process. But we have seen tremendous benefits when we followed up with them about how they have changed their spending patterns, how they have been able to stretch their food dollar, they have been able to get more nutritional components into their diets, and ultimately better health outcomes. So we have been pleased with that in terms of a broad measure of food insecurity of 30 different components that go into it, it has been a real benefit.

The CHAIRWOMAN. Thank you. I appreciate it.

The chair recognizes Mr. McGovern, for 5 minutes.

Mr. MCGOVERN. Thank you. All of you have highlighted the relative stability and affordability of food in this country, but there are important distinctions to be made among income groups. Billionaires, for example, face no price constraints on food, so presumably, their demand is shaped by prices the same way it is for you or me. And at the other end of the income distribution, very poor households are extremely resource constrained. An extra dollar on milk might mean no bus fare to work. So for the poor and very poor, their response to minor price fluctuations or transportation costs to get to food stores would be very, very different.

Fortunately, we have Federal food assistance programs like SNAP that provide assistance with purchasing food to help stabilize demand among very poor households. SNAP has important short-term benefits, reducing hunger and poverty, increasing demand for food, as well as important long-term benefits. Families with young children who participate in the program were shown to have long-term positive health and education outcomes. And we know that SNAP recipients are also consumers. Households spend their SNAP dollars quickly in their local communities. SNAP has an important economic multiplier effect. Every SNAP dollar spent generates about $1.75 in economic activity.

Mr. Harig, can you talk about the economic impact of SNAP for food retailers and their communities? And related to that, after the stimulus package's boost to SNAP was cut in 2013, I heard from supermarkets in my district that they were seeing an uptick in SNAP recipients abandoning carts full of food or having to put items back because they didn't realize their benefit had been cut. I was wondering whether you heard any such stories like that? And the other thing is recent proposals here in Congress have proposed block granting SNAP, which would result in about $150 billion in cuts to the program. Others have proposed even more Draconian cuts. Can you talk about the impact that such a cut would have on your industry?

Mr. HARIG. Sure. Thank you, Congressman McGovern.

In terms of the role that SNAP plays with the industry, the average SNAP recipient is on the program for a relatively short period of time. The last number I saw was about 9 months is the average. And certainly during that period, we believe it is better both in terms from a business aspect, but also for the consumer to continue to be a consumer, to continue to shop in stores as opposed to maybe necessarily being reliant on a food kitchen or a food pantry. So it does play an important role.

We can see huge swings in different areas. There are some districts in the country where up to 20 percent of consumers are on SNAP. Obviously, if you take that out of the grocery store, it not only has a dollar impact, but it puts a huge strain on the hunger services in the community as well. So SNAP plays an important role in helping create a level playing field in that, making sure that resources aren't too strained.

After the change to the program, we always see a period of time where there is an adjustment where the information takes a while to get down to the consumer level. That is always a concern for us. One of the great success stories of it has been over the years a switch to EBT, because it has helped take a lot of the stigma away from SNAP and people are able to use it in a much more discreet way where they don't always have to feel like there is a spotlight on them. And so when we start to see people having to put staff back or cashiers having to say this is no longer eligible, or you have exceeded your amount, that is a problem for us, so that is a long-term concern for us on the program, too, that we always have time as these changes are made to communicate it to the participants and spread the word.

Mr. MCGOVERN. All right, but as it stands right now, the benefit for most families doesn't allow them to be able to afford groceries for an entire month. Oftentimes they buy groceries and they end up at a food bank or a soup kitchen or at a church trying to get additional food. I don't know whether you want to answer this or not but if we were to do something here to further restrict that benefit, to further cut so that the benefit would be even less than it is now, what do you anticipate the impact would be on the consumers, and also on your industry?

Mr. HARIG. Oh, well sure. I mean, we would expect to see that those hunger resources would be strained. A lot of us now, because our supply chains are very efficient within the industry, a lot of the food waste we used to have that went to donation doesn't occur, so that has tightened that up. So a lot of the donations now are straight donations that our members make.

Mr. MCGOVERN. Right.

Mr. HARIG. Clearly there is going to be more demand for that. But, again, it is always a concern for us that people have the information available, they know it is coming, so they can plan for it to make sure.

Mr. MCGOVERN. Thank you.

The CHAIRWOMAN. Thank you. The chair recognizes Chairman Conaway, for 5 minutes.

Mr. CONAWAY. Well thank you, ma'am, and I appreciate that.

That drop in food stamp benefits in 2013 was scheduled by the stimulus bill from 2009, and it was structural to that stimulus bill which was done when my colleague on the other side was in charge.

Dr. Leibtag, you mentioned that in the lower quintile, 34 percent, middle quintile was 13 percent. Let me make sure I understand the mechanics. The other three quintiles then, I assume that fourth quintile from the first to the bottom would be between 34 and 13. How do we get to 9.8 percent overall? The top two quintiles, that distorting of the average. How do we understand that?

Dr. LEIBTAG. So yes, the consumer income in the country, of course, varies and the highest income groups are spending quite a bit below ten percent of their income.

Mr. CONAWAY. Right, I understand that, but how are the quintiles broken, where are the breaks on income, I guess for the top two quintiles.

Dr. LEIBTAG. The way that the break works is that we take the entire survey of households' consumer expenditures, and all the households report income, and we take ⅕ of the households and that is the first 20 percent, in order of income, lowest to highest, second, third, fourth, and fifth. So it is dividing the population into five groups.

Mr. CONAWAY. Okay, I got you.

Well as we look at policies here, the top two quintiles are never really concerned about increases in food prices. And so as we look at policy changes, whatever they might be, I hope our team collectively can focus on the bottom two quintiles, because those are the folks who have the least flexibility to be able to adjust to price changes, and are the most conscious about that. So whether it is a farm bill change or a SNAP change or whatever it might be, that is the group that I hope all of us have in our mind's eye when we discuss food prices.

For either you or Dr. Henderson, 17.2 percent goes to the farmer, the other 82+ percent, where does that go? How is that broken up between the other folks in the food chain?

Dr. LEIBTAG. So the 17.2 percent is what we call the farm share.

Mr. CONAWAY. Okay.

Dr. LEIBTAG. The remainder is what is known as——

Mr. CONAWAY. That is specifically the farm, that is the farmer piece?

Dr. LEIBTAG. Yes.

Mr. CONAWAY. No middle man between him and that 17 percent?

Dr. LEIBTAG. The 17 percent is the value of the sales for each dollar that goes back to the farmer.

Mr. CONAWAY. Okay.

Dr. LEIBTAG. Now the farmer has to pay out of that, so there are two parts there.

Mr. CONAWAY. Right, he has input costs.

Dr. LEIBTAG. Yes.

Mr. CONAWAY. That is not——

Dr. LEIBTAG. But the other 82, 83 percent distributed across the other industries in the food supply chain.

Mr. CONAWAY. Yes, can you break that up for us between distributors and however you break that up?

Dr. LEIBTAG. Yes, so there, of course, is wholesale retail and food service kind of at the further end the chain. There is also transportation, packaging, energy—I am looking down at my notes here. We have about 12 categories of industry——

Mr. CONAWAY. You said 12?

Dr. LEIBTAG. Yes, there are 12 industry groups that contribute significantly to the food supply.

Mr. CONAWAY. Okay.

Dr. LEIBTAG. And that other 82+ percent——

Mr. CONAWAY. Which of the 12 gets the most of that? Who is the highest?

Dr. LEIBTAG. The largest industry share is for food service, which is the final——

Mr. CONAWAY. Away from home.

Dr. LEIBTAG. Away from home.

Mr. CONAWAY. All right, and that is what? And that is how much?

Dr. LEIBTAG. About 32¢, 33¢

Mr. CONAWAY. It is 33¢, okay.

Dr. LEIBTAG. Yes.

Mr. CONAWAY. And the next largest would be?

Dr. LEIBTAG. The next—I am looking at my numbers here. The next largest in the industry group is food processing at 15¢, retail at 13¢, and then going down from there.

Mr. CONAWAY. All right, I appreciate it. Anything is helpful for folks from time to time when they see these—and they can be some sizable numbers—either food stamps or support programs. Somehow that number is out of context with the 17¢ gross that our farmers get. Any sense of what the net is for farmers?

Dr. LEIBTAG. For our industry series, it is about 10½ percent, or about 10¢, so they have the 17¢, then they pay for their input costs, like you said.

Mr. CONAWAY. All right, but that doesn't count anything to them? That is pre-compensation to the farmer?

Dr. LEIBTAG. That is right. That takes it back to the farm for——

Mr. CONAWAY. All the farm inputs, the fertilizer cost, seed cost?

Dr. LEIBTAG. That has been accounted for from the 17¢——

Chairman CONAWAY. To get down to 10¢?

Dr. LEIBTAG. Yes.

Mr. CONAWAY. So that is what he or she then has to feed his family or her family off of?

Dr. LEIBTAG. That is right.

Mr. CONAWAY. I appreciate that. We have some other questions, but I yield back to the team. Thank you all for being here this morning. I appreciate it.

The CHAIRWOMAN. Thank you. The chair recognizes Congresswoman DelBene, for 5 minutes.

Ms. DELBENE. Thank you, Madam Chair, and thanks to all of you for being here with us today.

Dr. Leibtag, in your testimony, you talk about the volatility of commodity prices and how higher inputs are certain to increase food prices. But what about when prices go down? It is particularly relevant in the dairy sector and milk prices, when prices go down for the farmer, it seems like consumers rarely see lower milk

prices. In fact, there is one study by the National Farmers Union that showed that if the retail price for milk is $3.89, the farmer nets $1.35. So who benefits from these lower inputs but higher prices?

Dr. LEIBTAG. There has been a good amount of research on how the food industry responds to higher and lower costs, and there is a good amount of evidence to what you are referring to in terms of different responses on the way up *versus* on the way down. And part of the understanding of that difference in response is a function of the various parts of the supply chain and the decision those producers are able to make.

We will talk about retail as an example. Retailers obviously face uncertainty in terms of the supplies that they are going to have to purchase and how much those are going to cost. When things fall in the short-term, they may have the option to not pass on all of that savings immediately, and part of that can be because of the uncertainty. And we do see that in a lot of the grocery stores. There are many instances over the last 10 or 15 years where there is a quick spike run up and you see that pretty quickly at the grocery store throughout the supply chain, but then when things drop back down they are probably slower to adjust. And I am not a retailer myself, but I would venture to say that part of that is the uncertainty. They don't know how long it is going to stay low, and if they drop too fast, they may come out short. But maybe Mr. Harig who is representing retailers may have——

Mr. HARIG. Thank you. Yes, certainly Dr. Leibtag makes a good point. It is the uncertainty that drives that a lot, too. It can also be if other inputs that aren't necessarily that direct input go up at the same time. Energy costs, cost of insurance, those other kind of non-food related costs that businesses have, those can also go up in the meantime. As I said, the algorithm that goes into saying how prices go, there are so many elements of it, and sometimes the direct relationship always doesn't play out at the store level.

Ms. DELBENE. Based on both of your comments then, would you think that it is crucial to ensure that any changes, for example, in the dairy safety net if we are talking about milk, that any changes in the dairy safety net in the future include a mechanism that stabilizes the milk supply so that we avoid flooding the market? Also, eliminating price spikes and keeping milk pries stable are important so that farmers obviously are not impacted when prices go down and consumers aren't being charged a higher price, even when inputs go down? Dr. Leibtag, I don't know if you have——

Dr. HENDERSON. In terms of the stabilizing prices on the milk, there has been a lot of different policies that have been enacted in there. The determination for policy is, again, going to be what is the goal on that role, on those different aspects of it in there. What we have seen over the last couple of years and just looking at the data is that farm prices and producer prices, that would be kind of the wholesale aspect of it, have a much stronger correlation. And so what I was seeing is that when they are going up and they are coming down, they are a much tighter relationship than what has been over the last few years than what it was maybe 20 years ago. And so what we have seen is much, much stronger correlation which would suggest that they are moving together more.

One of the challenges with the dairy policy is going to be, what is the goal? How do you tie it with those fluctuations? And it is one of the challenges that farmers traditionally have of balancing the inputs and the output costs. And on the crop side, that is why you do have the crop insurance program.

Ms. DELBENE. And then quickly, if I can, Dr. Leibtag, the maximum SNAP benefit is based on a market model called the Thrifty Food Plan, the TFP. I wondered if you could talk about how long this has been the basis for SNAP, and has it kept up with the needs of recipients?

Dr. LEIBTAG. The Thrifty Food Plan is calculated and updated on a monthly basis by the Department of Agriculture, and it is a food basket based on two objectives, have a nutritionally balanced set of foods available, and fit within a constraint of costs. You want to have nutritional balance, get as close to recommendations as possible, and at the same time, have costs not be too high based on affordability. This gets updated based on changes in prices on an annual basis, and one issue interesting to explore in terms of research is the changing behavior in how consumers get their food and what they choose to buy, and where. The Thrifty Food Plan is based on mostly buying more basic ingredients, purchasing mostly at grocery stores, and then going home and making the food. And we know, as I mentioned a few minutes ago, that people's behaviors change, and so people are making the tradeoff between making less at home and buying more either at restaurants, but certainly prepared foods.

The CHAIRWOMAN. Dr. Leibtag, I am sorry. I have to cut you off. I want to make sure our Members get their votes cast.

Ms. DELBENE. My time has expired.

The CHAIRWOMAN. Thank you. The chair recognizes Mr. Benishek.

Mr. BENISHEK. Thank you, Madam Chair.

Well thanks for your testimony. I have heard a lot of things that were very interesting.

Dr. Leibtag, you mentioned noncommercial food outlets in your testimony. What is that?

Dr. LEIBTAG. You said noncommercial food output?

Mr. BENISHEK. I think that was something you mentioned in your testimony. What does that mean?

Dr. LEIBTAG. I believe you are referring to the factors in the food dollar, and let me check on the wording.

Mr. BENISHEK. Okay, and I had another question, a follow up with the Chairman's. Is 32 percent one of the inputs in the nonfarm pricing? That was the largest one, and I didn't understand what that was. Was that eating out?

Dr. LEIBTAG. The overall U.S. food dollar can be broken down by the industries that contribute to the food supply chain, and so we talked about the ten percent and the 17 percent for the farm.

Mr. BENISHEK. So 32 percent of the food consumed in this country is consumed outside the home, is that what that means?

Dr. LEIBTAG. Thirty-two percent of the costs of buying food are from the food service part of the process. So at the end, the food is produced from the farm all the way through the chain, and then it gets to the back door of the restaurant, for example. Those added

32 percent are the costs of the people preparing the foods for you at a restaurant or at a store, serving it, *et cetera.*

Mr. BENISHEK. So it includes stores too then?

Dr. LEIBTAG. Yes, it is industry-wide. Whatever we would consider or define as food service, which is kind of the finishing touches, that is what that piece of the dollar goes to.

Mr. BENISHEK. Well, I heard in your testimony, and you talked a little bit about, the change in the nature of consumers and I went to the grocery store over the weekend and I was surprised by the percentage of the grocery store that was dedicated to already prepared foods. I mean, the deli—at least in my hometown, there was a little deli, like a counter. At this store, the deli was like ½ the store, and it was all $9.99 a pound, no matter what it was. It was unbelievable to me. It was in D.C., so people must go in there and buy food prepared that way, but it was amazing to me coming from a small rural area. I couldn't find any Heinz vinegar. It was all specialty vinegars, you know what I mean? It was just amazing because I was looking for some apple cider vinegar that I use to put in my eggs when I poach eggs. But anyway, I didn't want to pay a premium price for vinegar. It just was weird going to the store. I go to the store at home a lot, but I don't really shop here in D.C. that often at the grocery store, so it was kind of weird.

Dr. Henderson, I would like to ask you about this extension teaching that you do for consumers. You talked about teaching people how to shop and buy food in your testimony, how do you identify the people that get that teaching and tell me more about what you do. Tell me more about that, because it is really interesting. This is a state-funded program from the Purdue University Extension Service, right, like Michigan State? I am from Michigan, we have a pretty good extension service in Michigan State. But you are in every county in Indiana, I would imagine?

Dr. HENDERSON. Right. The cooperative extension service is in all 50 states, and Puerto Rico. At Purdue, we have different organizational types of structures, but we are present in pretty much every county across the country. In Indiana, we have county-based offices which we have had traditionally. Part of them is delivering educational programs on health and human sciences, and our focus has been health and nutrition.

Mr. BENISHEK. How do you identify the people that you are teaching?

Dr. HENDERSON. How we do that is through our connections in local communities, just like many other different educational programs. We do——

Mr. BENISHEK. So if somebody goes to social services, they get referred to you if they get on food stamps or they get referred to you, or——

Dr. HENDERSON. We will have some partnerships and we give them brochures, distributions of our programs to help them. It is not required that people on food stamps go through our programs. That is not the thing, but we give them the educational brochures to help them, how do you help them stretch the food dollars.

Mr. BENISHEK. Is there some kind of a holistic educational program to see what people are—for their situation? In other words, they have a situation going on in their home that they are getting

food stamps, they need some assistance. So are there other things beside the food education that you do?

Dr. HENDERSON. Yes. In addition to food education, we also do family resource management. That is budgeting components is the primary example of them. And then we will come in and also offer to do other types of budgeting programs to help them learn how to stretch their dollar, not just for food, but for other areas and how to——

Mr. BENISHEK. All right, thank you. Five minutes goes by real fast.

The CHAIRWOMAN. But your vinegar story was intriguing.

The chair recognizes Congresswoman Adams, for 5 minutes.

Ms. ADAMS. Thank you, Chairwoman Walorski and Ranking Member McGovern, and thank you for your testimony, gentlemen.

Next month I am introducing the Close the Meal Gap Act of 2016, which will address one of the most important points of today's hearing, that low-income households are spending more of their money on food than the national average. This bill would permanently authorize a standard medical deduction for seniors and disabled individuals applying for SNAP benefits. It would incorporate the Low Cost Food Plan into SNAP, and to the SNAP formula to take into account how much working people, including SNAP recipients, spend on food. It would eliminate the cap on the excess shelter deduction in the SNAP formula. It would raise the minimum SNAP benefit from $16 to $25. And finally, it would allow able-bodied adults to be exempt from SNAP work requirements if their state could not provide them with a slot in the SNAP Employment and Training Program. It has been endorsed by Feeding America, the Food Research and Action Center, the National Council on Aging, and others. I certainly welcome Members of Congress to support it, sign on to it, and I want to thank Congressman McGovern and those on the Committee who have done so.

But Dr. Leibtag, the way we consume food is at the heart of why SNAP benefits just aren't enough. USDA Thrifty Food Plan is used to estimate how much a minimally nutritious meal should cost an individual participating in the program. We expect a participant in the program to work, but the benefit amount they receive expects them to spend hours each week cooking and preparing meals from scratch. A mother, for example, who works two and three jobs does not have the time to prepare the food that SNAP benefits can pay from one month to another. Does the basket of products in the Thrifty Food Plan take into account that many SNAP participants purchase more prepared foods, that these foods cost more to purchase with their limited SNAP benefits? Dr. Leibtag?

Dr. LEIBTAG. Thank you for the question. It raises an important issue to think about when we look at consumer food choices, especially low-income households and how that changes over time.

As I mentioned earlier, as consumer behavior has shifted, we have observed the way that people shop, what they find in the store changes. The Thrifty Food Plan has a basket, as I mentioned, that has a nutritionally balanced group of foods at a minimum cost. It does assume most shopping of more basic ingredients in the store. So as more prepared foods become the norm with their associated higher costs, the Thrifty Food Plan may not be covering

those types of foods. So at least to a question about tradeoffs between time and coverage and between time spent working, perhaps, or time spent shopping and preparing food *versus* benefits or the affordability of food.

Ms. ADAMS. Does it seem fair and accurate for SNAP benefit calculation to assume that households use 30 percent of their non-SNAP income for food?

Dr. LEIBTAG. I think the 30 percent number is a pretty good estimate. From what we mentioned a little earlier, the 20 percent lowest income households spend about 34 percent of their income on food, and so that is, of course, just one number, but I would say on average somewhere between 25 and 35 percent is probably the norm for many households in that group.

Ms. ADAMS. Do you know if purchases at these smaller stores vary from purchases at larger, traditional grocery stores?

Dr. LEIBTAG. What people buy at stores does vary. It does vary for the consumer. It also varies based on what is on the shelves. One concern about food choice is the types of stores people choose to shop at, which could be a function of food access. What stores are closest to their homes or to their places of work? And so that can be a factor in the choices of foods people choose to buy and consume.

Ms. ADAMS. Thank you, Madam Chair. I yield back.

The CHAIRWOMAN. Thank you. I just want to update our Members really quickly. They are going to be calling votes in a couple minutes, but I want to go ahead and recognize Congressman Abraham. We will get through his questions and see where we are at. Congressman Abraham, for 5 minutes.

Mr. ABRAHAM. Thank you, Madam Chair. I will be quick.

Dr. Henderson, I do farming on my property in Louisiana and so your comment about farming being very cyclical and very up and down is very true. Help us explain that we have the ARC, we have the PLC, we have the crop insurance that helps us when we have really bad years. Help us make the jump from that connection as to how it helps America have the most affordable and abundant food, and where does the farm policy play in here?

Dr. HENDERSON. Right. The role of farm policy on many of these different programs, from crop insurance to ARC and all these other different things, the primary benefit of what it does is it tries to mitigate the downside risk. It tries to take away the uncertainty for the farmer so they can plan long-term in the fluctuations from year to year. It provides a more stable food system. In many ways, it also provides opportunities for farmers to plant additional food, and so it expands agricultural production. And that translates to the consumer a more stable food system than what naturally would be, to more stable consumer prices, and ultimately then lower prices as you reduce and extract uncertainty out of the system.

Mr. ABRAHAM. Okay. Madam Chair, I yield back. I just had that one question.

The CHAIRWOMAN. The chair recognizes Congressman Ashford, for 5 minutes.

Mr. ASHFORD. Thank you, Madam Chair, and I just have one question because we don't have much time.

First of all, Dr. Henderson, your work is significant because it applies to a lot of what we are dealing with in Nebraska with rural poverty and so forth. At the University of Nebraska the Buffett Foundation has funded a $50 million early childhood program for our state, and actually a global early childhood initiative. You are probably aware of it in some ways. But how do you see those initiatives, early childhood initiatives and the food issue going forward? There is a nexus there and food is a big part of it, and healthy food for early childhood individuals and families.

Dr. HENDERSON. Yes, there is a major nexus between food and children.

Mr. ASHFORD. Right.

Dr. HENDERSON. I think about it——

Mr. ASHFORD. Maybe it was a vague question. Programmatically, how do we set up or do you have experience in dealing with early childhood programs and how we connect that to healthy food and healthy start, that sort of thing?

Dr. HENDERSON. Yes. One of the different programs that we go through with children, we have also been focusing with them on how do you prepare healthy meals, and what does a healthy meal look like? It is kind of interesting and a longstanding tradition of extension is that if you want to teach parents, sometimes you teach the children. And so we have been working with the children and helping with schools with different types of programs of how do you bring in healthy meals, how do you teach healthy meals, how do you teach healthy snacks. We have been focusing a lot on snacks and doing many different things. There is a wide variety of programs that are out there, but that is where the focus is, is how do you get them to eat healthy? It is giving them opportunities to do that.

And the other thing that we have been doing is how do you teach them to grow food? Because what we are also finding is that when they grow food like tomatoes and peppers, they are more likely to try it and eat it, and then enjoy it because they actually grew it. And so there are some other things in terms of that nexus between food and food consumption of how do we bring agriculture and consumers together in order to help them understand healthy choices?

Mr. ASHFORD. Thanks, I ran the Housing Authority in Omaha and we initiated some of those programs for Housing Authority residents for young people, for children to grow food. And that actually has been expanded very successfully in the urban areas, so that is good. That is good work.

Thank you, Madam Chair.

The CHAIRWOMAN. Thank you. The chair recognizes Congresswoman Hartzler, for 5 minutes.

Mrs. HARTZLER. Thank you.

Dr. Henderson, your words strike my heart as a former home economics teacher and someone who has taught nutrition for many years. I do believe in that and think everybody should take family and consumer sciences, and that would help.

But I would like afterwards more information on your program that you referenced with anti-drug program, so I will get with you on that, but my question for the panel has to deal with GM soybeans, corn, cotton, and different studies that have been done that

shows that biotechnology has increased crop yields by 22 percent, reduced pesticide use by 37 percent, and increased farm profits by 68 percent.

Now even with these large benefits to farmers and the environment, there is a vocal portion of Americans that have expressed concerns with the use of GM crops. So will each of you elaborate on how GM crops affect consumer prices, and provide any insight into the rewards and risks of consuming GMOs. Do you want to start, Dr. Henderson?

Dr. HENDERSON. GM crops have, as you mentioned, done a lot of different things to enhance farm profitability, and from the consumer standpoint, they have also expanded production, allowed us to grow many different crops and increasing yields in many different ways. The benefits flow from that directly into food prices on those types of consumption aspects of it.

The other aspect of it, in terms of when you think about crops that are somewhat related to GMOs, but not a GMO, *per se,* is that we have been focusing at Purdue Extension on a lot of different new technologies that are looking at how do you maximize nutrients, and so you don't want all the runoff. How do you use sensors in terms of plants to identify those plants that grow faster and better than other plants. I am 6′4″, my brother is 5′9″. Because plants are different in different places, and so how do you identify those plants that are going to have the most and best breeding potential and doing different things?

For us at Purdue, we have a huge plant sciences move. Looking at those things and how do you adopt technology that works in there? We are also, us and colleagues across the country, are looking at food for health, identifying plants, their traits that enhance health, becoming nutrient-based and figuring out how can that help food consumption patterns and help identify those foods that can help nutrition and health that way as well.

There are a lot of different technologies that are being brought out to support the consumer.

Mrs. HARTZLER. Thank you. Dr. Leibtag?

Dr. LEIBTAG. Broadly, as this relates to work on food prices, it is correct that as crop yields improve, there are ways in which costs can be lowered and they have been lowered, and as costs of production are falling or stabilized, that certainly has a stabilizing effect on food prices. In terms of the various methods of production, what is interesting to track and follow is the influence of consumer demand or consumer preferences on the way we produce our food and what we produce.

So what I have seen in the last 10 or 20 years is that producers, companies, industry, the ag sector adjust to what people want. From an economics perspective, if people want different attributes and traits, you would imagine that supply and production would meet those and it is just a matter of what people want and where they want. And I think that remains to be seen in terms of demand for various types of characteristics.

Mrs. HARTZLER. Thank you. Mr. Harig?

Mr. HARIG. Thank you. We are enormously concerned about how we are going to continue to feed a growing population. It is not just in the United States, it is a global population, and we believe that

GMOs or genetically engineered products are an essential part of that, making sure that there is enough food to feed the population. And as we have seen more of an anti-GMO effort in place, you can Google GMO and you can find good science, but you can also find a lot of junk science that comes at the same time. And so our biggest concern is we have always said as an industry, if people want to know something, we will disclose that to them. We are happy to do that, but we are very concerned about the sort of misinformation around it, and the possibility that that information is going to drive consumer trends and ultimately hurt the ability of the U.S. agriculture industry and the U.S. retail industry to feed people in an affordable way.

Mrs. HARTZLER. Thank you very much. I yield back.

The CHAIRWOMAN. The chair recognizes Congressman Davis, for 5 minutes.

Mr. DAVIS. Thank you, Madam Chair, and thank you to my colleague, Mrs. Hartzler, for bringing up the biotech issue. Obviously, as Federal policy-makers, we are here in this Committee hearing room talking about how we in America can better feed those who are hungry.

Mr. Harig, you just mentioned feeding the world. I don't know how we continue to feed the world with the projected increases in population over the next 20 years, billions more—a billion more individuals. How do we do that without genetically modified products and without being able to grow more on less land? Can you give me your response on that, sir?

Mr. HARIG. Yes, I don't have an answer for you on that. As I said, we think that it is an essential part, and again, some of this misinformation is already having an impact, if you can look at Africa right now.

Mr. DAVIS. All you have to do is look at the Senate.

Mr. HARIG. Yes. No comment on that, but yes.

Mr. DAVIS. Feel free to.

Mr. HARIG. No, again, our position has always been if people want to know if this is in there, we are happy to disclose that. We are happy to let people know what is in their food. But this sort of misinformation surrounding it is a big concern for us. This idea that people are walking away thinking these products are dangerous when there is no science to support that right now.

Mr. DAVIS. I am going to come back to you, but Dr. Henderson looked like he was ready to respond to this, too.

Dr. HENDERSON. GMOs are part of the solution, they also obviously are not the whole solution. There are a lot of different technologies that are emerging. At Purdue University and our other land-grants across the whole country that——

Mr. DAVIS. Including the University of Illinois, the land-grant university.

Dr. HENDERSON. And so doing many different things of looking at traits and figuring out all this is driven by customer and customer demand, and how do you provide choices for customers and deliver the products that they want to receive, which is ultimately what we are here to satisfy is customers.

Mr. DAVIS. Well Mr. Harig, one quick question. In your testimony, you talked about when consumers decide what products to

buy, like nutrition, biotech labeling and other claims on a food label. In your testimony though it indicates that 75 percent of consumers almost always use price in deciding to purchase these new products, far more than they consider any other factors. What should this tell us as policy makers about what matters to consumers with their purchasing decisions?

Mr. HARIG. Well, I think it is pretty straightforward. I mean, price is still the driving factor and will be. We do see periods of time in 2004 and 2005, people listed selection and quality as higher ranking attributes than price, but since 2008 and continuing through 2016, price is the main factor they look for in both the ability of the store to offer that and the products themselves.

Mr. DAVIS. Is that due to family economics?

Mr. HARIG. Yes, I mean, it is, and that is actually across the board too. If you are at the higher income level, obviously you are a little bit less price sensitive, but we still see in a lot of our surveys, those shoppers don't necessarily go out and say, "Well, we are going to blow the bank on this just because we can." They are still value shoppers.

Mr. DAVIS. Okay, I guess the last question is for everyone. Dr. Leibtag, we will start with you. Do you think science backs up the safety of genetically modified products?

Dr. LEIBTAG. I don't think that my research background can answer that question. So I wouldn't have an opinion at this point.

Mr. DAVIS. Dr. Henderson?

Dr. HENDERSON. I think that with these GMO technologies and other technologies out there that we have the safest, most abundant food system in the world.

Mr. DAVIS. Mr. Harig?

Mr. HARIG. Yes, at FMI we go by what the FDA tells us, and they say the products are safe.

Mr. DAVIS. Well, and I have a few seconds left and I am sorry, Madam Chair, I know we are voting but I am going to use them.

Right now, when we walk into a store and when you are teaching families how to shop, you can buy products that say non-GMO on the label. Frankly, does anybody really know what that means? Is there a set of standards that are in place right now?

Dr. HENDERSON. From my perspective, that is one of the biggest challenges that we have right now. What is GMO?

And you talk to various different people and they have various different answers of what GMO would be, and then we are also coming up with all these new different technologies that are emerging that push the boundaries of science, and some of them are traditional, more programs in doing different things. So the definition of *GMO* is a bit uncertain.

Mr. DAVIS. So we are trying to feed people who are hungry. We are trying to give them access to food, and at the same time, because we don't have a set of standards, we are confusing them as to what may be scientifically safe. We have a 66 percent consensus here on this panel that they are safe, but we are telling them this might be bad for you because of misinformation.

So with that, my time has expired.

The CHAIRWOMAN. Gentlemen, I have to cut you off there. Thank you, Congressman Davis.

Mr. MCGOVERN. I was going to ask him to yield, but——

The CHAIRWOMAN. He can't yield now. He is done.

I appreciate the panel's help in understanding how the farm economy affects the prices consumers find at the grocery store. Making the connection from farm to fork provides a great opportunity for people in both urban and rural areas to better understand our food system. Thank you so much to the panel for providing the context for our overall look at the farm economy, and we thank you for your time.

Under the Rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional information and supplementary written responses from our witnesses to any question posed by a Member.

This hearing of the Subcommittee on Nutrition is adjourned.

[Whereupon, at 3:08 p.m., the Subcommittee was adjourned.]

FOCUS ON THE FARM ECONOMY

(IMPACTS OF ENVIRONMENTAL REGULATIONS AND VOLUNTARY CONSERVATION SOLUTIONS)

TUESDAY, MAY 17, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON CONSERVATION AND FORESTRY,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:01 a.m., in Room 1300 of the Longworth House Office Building, Hon. Glenn Thompson [Chairman of the Subcommittee] presiding.

Members present: Representatives Thompson, Lucas, King, DesJarlais, Gibson, Allen, Conaway (*ex officio*), Lujan Grisham, Kuster, DelBene, Kirkpatrick, and Peterson (*ex officio*).

Staff present: Callie McAdams, Haley Graves, John Weber, Josh Maxwell, Patricia Straughn, Stephanie Addison, Faisal Siddiqui, John Konya, Anne Simmons, Evan Jurkovich, Liz Friedlander, and Nicole Scott.

OPENING STATEMENT OF HON. GLENN THOMPSON, A REPRESENTATIVE IN CONGRESS FROM PENNSYLVANIA

The CHAIRMAN. This hearing of the Subcommittee on Conservation and Forestry, entitled, *Focus on the Farm Economy: Impacts of Environmental Regulations and Voluntary Conservation Solutions,* will come to order.

Welcome everyone. Good morning. Each Subcommittee of the Committee on Agriculture has been tasked with highlighting issues within their respective jurisdictions that impact the economic well-being of rural America. Through this series of hearings on the farm economy, one of the consistent themes has been that government rules and regulations are overly burdensome and negatively impact the bottom line and long-term success of our farmers and ranchers.

In a hearing more than 2 months ago with EPA Administrator McCarthy, Members engaged in extensive questioning regarding actions her agency had taken which impose considerable costs with questionable, if any, benefits.

It seems that every day brings a new regulation, new litigation, or another case of unelected bureaucrats running wild across America's farms and ranches. The Administration's extreme environmental agenda, with its blatant disregard for the impact it will have on rural America, has increased the cost of doing business for America's farmers and ranchers at a time when producers are al-

ready experiencing a 56 percent drop in net farm income over the past 3 years.

It has become increasingly clear that some government agencies and environmental activist organizations ignore or otherwise discount the commitment that our farmers and ranchers, our foresters make to environmental stewardship. Every day, the Administration seems to demonstrate how vastly disconnected it is from the folks who provide our food, our fiber, and our energy. They do not seem to realize that rural America's economy is dependent on agriculture. A thriving agriculture sector breeds a healthy rural economy.

The path the Administration has chosen forces farmers and ranchers to spend more and more time complying with regulations. Now, I believe that both the environment and those who work the land are all better served when our time and resources are directed to what really works: locally-led and incentive-based approaches that help restore and protect our natural resources while encouraging a healthy rural economy.

The critics forget that farmers and ranchers are the best and the original stewards of the land. They continually find new and innovative ways to reduce energy usage, reduce emissions, and sequester carbon, while still providing America with an abundant and affordable food and fiber supply. All of us share a common goal: the continued health and vitality of our natural resources.

To me, the path is clear: voluntary conservation programs work. If we want a real solution to cleaner natural resources then we should continue to focus on incentives, innovation, and research that stimulate the rural economy; not backdoor energy taxes, mandates and more burdensome regulations.

Today, our first panel will discuss many of the regulatory challenges that impact production on our nation's farmers and ranchers. While the farm bill conservation programs somewhat mitigate these impacts, our nation's farmers continue to operate on very thin, and in some cases negative, margins.

Our second panel will more broadly discuss the locally-led solutions to addressing natural resource concerns. No two producers face the same natural resource concerns, and there is no shortage of reasons why we must continue to innovate when it comes to preserving our natural resources.

The record that is created today will be extremely beneficial. And I want to thank you all for being here.

[The prepared statement of Mr. Thompson follows:]

PREPARED STATEMENT OF HON. GLENN THOMPSON, A REPRESENTATIVE IN CONGRESS FROM PENNSYLVANIA

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All of us share a common goal: the continued health and vitality of our natural resources. To me, the path is clear: voluntary conservation programs work. If we want a real solution to cleaner natural resources then we should continue to focus on incentives, innovation, and research that stimulate the rural economy; not backdoor energy taxes, mandates and more burdensome regulations.

Today, our first panel will discuss many of the regulatory challenges that impact production on our nation's farmers and ranchers. While the farm bill conservation programs somewhat mitigate these impacts, our nation's farmers continue to operate on very thin—and in some cases negative—margins.

Our second panel will more broadly discuss the locally-led solutions to addressing natural resource concerns. No two producers face the same natural resource concerns, and there is no shortage of reasons why we must continue to innovate when it comes to preserving our natural resources.

The record that is created today will be extremely beneficial. Thank you all for being here.

I now yield to the distinguished Ranking Member, Rep. Lujan Grisham for any comments she wishes to make.

The CHAIRMAN. I now yield to the distinguished Ranking Member, Representative Lujan Grisham, for any comments she wishes to make.

OPENING STATEMENT OF HON. MICHELLE LUJAN GRISHAM, A REPRESENTATIVE IN CONGRESS FROM NEW MEXICO

Ms. LUJAN GRISHAM. Thank you very much, Mr. Chairman. And thank you very much to the panel, and for this hearing.

Having a hearing on the impacts of environmental regulations and voluntary conservation solutions is an important opportunity for the entire Committee to better understand the challenges that our farmers and ranchers and foresters face each and every day on their land. And I would agree, actually, that the current regulatory environment can, in fact, be very difficult, and at times, extremely costly for producers to comply with. However, the genesis of the Federal regulations, I hope, are critical in ensuring and are directed at having clean and safe water and air. Access to clean and safe water and air is not only paramount for the producers that rely on these resources for their livelihood, it is also critical for protecting the public's health and the environment.

I have heard from many New Mexico producers that compliance with Federal regulations can be very challenging, especially for

small producers that do not have the time or the resources to interpret regulations. It is important that Federal regulations be clear, concise, uncomplicated, and to make the necessary regulatory compliance as easy and affordable as possible. Compliance should not be a "gotcha" or a profit game for anyone.

I know there are concerns about how some of the more recent regulations have been developed and proposed, and quite frankly, Mr. Chairman, I share many of those concerns. It is clear to me that government can and should be doing a better job, especially when it comes to engaging the agricultural communities. And while issues of clean air, water, and regulatory uncertainty persist, farmers, ranchers, and foresters, in my opinion, are doing what they do best; using proven and innovative conservation practices that protect our resources. An example is one in New Mexico at the State University where a researcher, David C. Johnson is working with New Mexico ranchers and farmers. Dr. Johnson has been working with ranchers and farmers to help improve the health of their soils. Minimal changes in land management not only benefitted farming and ranching operations, but also helped sequester large quantities of carbon into their soils. This conservation practice could help reduce greenhouse gases and help states meet carbon dioxide reduction requirements under the Clean Power Plan 111(d) rule.

It is also clear to me that promoting conservation efforts like these are the key to addressing many of the regulatory issues, while preserving our natural resources, bolstering the economy and restoring our environment.

I am looking forward to hearing from all the witnesses today. I am especially interested in hearing about how they are using the farm bill conservation programs, along with other innovative approaches to conservation that we should be considering and discussing as we move toward the next farm bill.

Thank you, Mr. Chairman, and I yield back.

The CHAIRMAN. I thank the gentlelady.

The chair would request that other Members submit their opening statements for the record so that the witnesses may begin their testimony, and to ensure there is ample time for questions. The chair would like to remind Members that they will be recognized for questioning in order of seniority for Members who were present at the start of the hearing. After that, Members will be recognized in the order of their arrival. And I appreciate the Members' understanding.

I would like to welcome our first panel of witnesses this morning. First, we have Mr. Richard R. Ebert, President of the Pennsylvania Farm Bureau, from Blairsville, Pennsylvania; Ms. Kate English, Partner, English Family Partnership, Fort Myers, Florida; and Mr. Patrick O'Toole, President of Family Farm Alliance, Savery, Wyoming.

Witnesses are reminded to limit their oral presentations to 5 minutes. All written statements will be included in the record.

And so, Mr. Ebert, please begin when you are ready.

STATEMENT OF RICHARD R. EBERT, PRESIDENT, PENNSYLVANIA FARM BUREAU; MEMBER, BOARD OF DIRECTORS, AMERICAN FARM BUREAU FEDERATION, BLAIRSVILLE, PA

Mr. EBERT. Good morning, Chairman Thompson, Ranking Member, and Members of the Subcommittee.

Thank you for this invitation. I am Rick Ebert. I have an 80 head dairy farm in Westmoreland County, Pennsylvania. We grow alfalfa, corn, and soybeans. I am the President of Pennsylvania Farm Bureau, and serve on the American Farm Bureau Board of Directors.

EPA's Chesapeake Bay regulation gives us a good look at how environmental regulations impact farmers. Today, I will highlight three things of the Bay regulations: inflexibility, bureaucracy, and uncertainty.

The bottom line, it is difficult for farmers to function in this regulatory environment, especially when facing the economic challenges described in my testimony.

Bureaucracy: A massive bureaucracy has cropped up around the Bay regulations. How massive? Nearly 60 public bodies have been created, a web which farmers are supposed to provide input. These meetings produce pages of academic analyses based on a model world, but looks nothing like how I farm in the real world. I have a degree in animal science and decades of farming experience, yet I can't understand EPA science. How does this make me part of the process?

Inflexibility: In farming, one size doesn't fit all. EPA's Chesapeake Bay model is inflexible and based upon assumptions that are just plain wrong. The model fails to capture and credit best management practices, BMPs, unless they are funded or verified by the government. For years, EPA has rejected our attempts to change this. We are working with state officials and Penn State to capture these non-cost-shared BMPs through a survey. So far, we have received over 7,000 survey responses. But will EPA use this data in their model? Also, NRCS data says no-till and conservation tillage are used on nearly 80 percent of the cropland in the Bay, while only six percent are under continuous till. Yet, EPA's model assumes 50 percent conventional tillage, and 50 percent conservation tillage. The science just doesn't add up.

Uncertainty: Last year, EPA withheld $3 million from Pennsylvania because they believe we weren't doing enough. Our state officials had to guess what changes were needed to restore EPA's favor and funding. What is to stop EPA from demanding more? Is it fair for farmers to be caught in a tug-of-war between EPA and state regulations? And even if EPA's model is fully implemented, 20 percent of the cropland in the watershed will need to be set aside to meet EPA's goals. Who will decide what land is fallowed? EPA? We made major progress in reducing pollution in the watershed, but EPA still points fingers; painting agriculture, farmers just like me, as a villain. To EPA I ask, do you really think I am trying to pollute? I no-till, I plant cover crops, I have implemented nutrient management plans voluntarily, without Federal funding. However, in the eyes of EPA's model, it doesn't matter. Does that make sense?

Regulators must understand real-life agriculture. I am a small business owner. There is no compliance officer, just me and my three sons trying to farm, balancing daily tasks while complying with a list of growing regulations, while EPA ignores the beneficial practices we employ.

I consider myself a typical American farmer. I operate a small family farm. Our milk goes to a small family business where it is processed and used around Pittsburgh. We try to do the right thing. We are good stewards. We take excellent care of our cows, and we go the extra mile to take care of our land and our water, not only because it is the right thing to do, but it is my family, my children and grandchildren, who eat here, play here, and hopefully one day will work here.

Thank you.

[The prepared statement of Mr. Ebert follows:]

PREPARED STATEMENT OF RICHARD R. EBERT, PRESIDENT, PENNSYLVANIA FARM BUREAU; MEMBER, BOARD OF DIRECTORS, AMERICAN FARM BUREAU FEDERATION, BLAIRSVILLE, PA

Chairman Thompson, Ranking Member Grisham, and Members of the Subcommittee, thank you for the invitation to appear today to testify on "Focus on the Farm Economy: Impacts of Environmental Regulations and Voluntary Conservation Solutions." I am Rick Ebert. I operate a dairy farm in Blairsville, Westmoreland County. We milk 80 Holstein cows and grow alfalfa, corn and soybeans. I am working to bring my three sons into the family business.

I have the privilege of serving as the elected President of Pennsylvania Farm Bureau and I was recently elected to serve on the American Farm Bureau Federation's Board of Directors. Farm Bureau represents farms of all sizes, spanning virtually all commodities grown and sold in our great nation. I am pleased to offer this testimony on behalf of the American Farm Bureau, the largest farm organization in the U.S.

In Pennsylvania, farming remains an integral and critical component of our state's economy. Agricultural production in Pennsylvania generated an estimated $7.5 billion in cash receipts in 2014, providing $75 billion in total annual economic impact to the Commonwealth. However, the same forces that can provide economic benefit to Pennsylvania's agricultural industry also have the potential to seriously cripple it. While some may consider Pennsylvania agriculture to be "big business" in the aggregate, the typical business structure of individual farm businesses is predominantly those of small business operations—family-owned proprietorships and partnerships. As with others owning and managing small businesses, Pennsylvania's farm families have practically no means to individually control the sharp changes in commodity prices and other national and international economic forces that can plague profit margins. As I will discuss a bit later in my testimony, current trends in national and international markets are seriously threatening farm businesses in Pennsylvania, including my family's business.

Many outside of agriculture fail to appreciate the real significance of either of these aspects. Agriculture does play a pivotal role in the economic vitality of many states and the overall vitality of our national economy. And yet, the viability of agriculture and the economies that agriculture supports are especially vulnerable to volatile economic forces because of the small scale in which individual farm businesses operate and their practical inability to control those forces.

Because farmers are likely to regularly experience volatile and unpredictable commodity prices, it is critically important for individual farm businesses to control their operation costs, especially when sharp drops in prices for their products occur. But farmers can't be effective in managing costs unless they are very certain of what those costs are likely to be for both the short-term and a more long-term span of several years.

Compliance with the legal obligations associated with commercial business operations is becoming a significant aspect of farmers' management of costs. Often, actions by government to increase regulatory standards have the effect of increasing a business' costs of operation. Some businesses have the economic ability to pass the additional costs of increased regulatory standards onto their customers merely by increasing the prices of their products. Increasing their prices doesn't impact the

marketability or consumer demand for their products. Individual farm businesses, however, do not the power in the market to increase prices. The farm business will have to employ some other means—usually reduce or control some other area of cost—to offset any increased costs resulting from more stringent regulatory standards.

In order to come close to making sound cost-management decisions, farmers must have a thorough understanding of what their operational costs will likely be. We can't make good decisions if regulatory officials are unable or unwilling to identify the boundaries of regulatory standards that will be imposed in the near future or the standards that are likely to be imposed for years to come.

Farmers in Pennsylvania and around our nation are seriously frustrated by the two-pronged approach being taken by both Federal and state officials, especially in the area of environmental regulation. EPA's administrative approach under the current Administration seems to be both a pervasive assertion of regulatory authority over virtually every aspect of land use and function and a serious lack of effort to specifically identify the type of conduct that gives a person any confidence of compliance with his or her legal obligations.

The posture and attitude of Federal officials seem to be that any land activity performed may be subject to Federal regulation and that the agency make no commitment to defining the extent and limitation of regulatory standards unless the individual first seeks a permit or other approval from the agency. Farm Bureau and individual farmers have raised numerous legitimate questions and have tried to gain specific answers from EPA officials about how existing and proposed regulations are to be interpreted and applied in the context of specific situations that commonly occur on farms. EPA's response has been evasive and rhetorical, with no meaningful answer provided. And what may be determined today as acceptable conduct may not be acceptable tomorrow because of changes in modeling or evaluation of environmental impacts.

Small businesses owners, especially farmers, cannot sensibly function or viably operate their businesses in such a regulatory climate and culture.

Congress has heard from several agricultural sources about the impacts of EPA's regulatory posture and strategy in the Chesapeake Bay Watershed. I also wish to focus much of the remainder of my testimony on EPA's posture in the Bay, because it is a clear example of the real challenges that agriculture has faced and will likely face under the Federal Government's current exercise of regulatory power.

EPA's regulatory and administrative oversight in the Bay Watershed has consistently been one of inflexibility and bureaucracy. And the pervasive efforts and nebulous standards being established or evolving through EPA's oversight are leaving farmers in the Bay Watershed with a high level of uncertainty about whether their farm production practices are legal now or will be legal tomorrow. I'll highlight these themes as I discuss the real-life farm- and community-level implications for farmers like me.

I have an average-sized dairy herd and I try to grow as much feed as possible for them on the farm. In that way, I look a lot like my fellow dairy farmers in Pennsylvania. And, I suspect my farm structure—me and my three boys—looks a lot like what farmers across Pennsylvania typically have, including those farmers operating farms in the Bay Watershed. So when I discuss the potential impacts of Federal regulatory oversight to my farm, you can assume there are a lot of other farmers who would be similarly impacted.

In addition, while I live western Pennsylvania and not in the Chesapeake Bay Watershed, I am very much impacted by the rules and regulations that the Environmental Protection Agency—and our state Department of Environmental Protection—have developed as a result of their targeted efforts in the region.

As we talk about environmental regulations and their impact, we cannot ignore the challenging situation farmers across the nation are facing in terms of commodity prices. As I said earlier in my testimony, in the real world of agriculture, individual farming businesses cannot make up for the increased costs of regulation by increasing their commodity prices. We must adjust other aspects of our businesses and financing activities to balance those increased costs.

Farmers have been experiencing very low prices on the major commodities for more than a year now. USDA's Economic Research Service (ERS) estimates that total cash income for farm businesses in the United States for 2015 is more than 27 percent below that of 2014—again, more than 27 percent below what farmers received in 2014. 2015's income figure is below what farmers received in 2010—the "recovery year" from the previous serious economic downturn in agriculture's economy. And ERS projects another significant drop in cash income for the U.S. agricultural sector in 2016—nearly 2.5 percent below what farmers received in 2015.

Since I'm a dairy farmer, I'll highlight how my sector has been impacted by price volatility. For example, 2009 and 2010 were financially devastating years for the dairy industry. In fact, in 2009 client dairy farms of PFB's MSC Business Services [1] lost an average of $2.53 per hundredweight. After 2 rough years, milk prices began to climb again, reaching all-time highs in 2014, helping farms recover from the low prices of previous years. Regardless, for the 6 year period of 2008 through 2013, the net profit margin realized on MSC-client dairy farms only averaged 6¢ per hundredweight, meaning that dairy farmers overall had little to show for 6 years of operation.

Costs of production—how much it costs to produce 100 pounds of milk—have also increased for Pennsylvania's dairy farmers. Annual costs of production have increased significantly from 2009's average of $19.50 per hundredweight, jumping to over $23.00 per hundredweight in 2011, 2012 and 2013, and in 2014, the average rose to $25.14. While we don't have the final analysis yet for 2015, based upon my own experiences, cost of production in 2015 is likely to be at least as much as it was in 2014. Unfortunately, while we had record milk prices to offset 2014 production expenses, the picture was very different for 2015 and, for this year as well, so far.

Why is this important? For farmers already facing significant challenges from volatility in their net operating income, anything that adds stress to already tight margins is a bad thing. For farmers like myself, who are already treading carefully on a razor's edge of profitability, the danger of uncertainty that comes from a growing patchwork of environmental regulations—particularly those of us in and around the Chesapeake Bay Watershed—is unbelievably frightening and potentially debilitating when we need to make decisions about farming, expansion and even bringing on the next generation.

Perhaps the best illustration of uncertainty comes from estimates of consequences to agricultural production in the Bay Watershed if the nutrient and sediment reduction goals under EPA's Total Maximum Daily Load (TMDL) are fully implemented. Those estimates project that some 20 percent of all cropland—roughly 630,000 acres—in the watershed will need to sit idle in order to meet nutrient reduction goals. Not surprisingly, EPA has neither confirmed nor denied the accuracy or likelihood of these estimates. But EPA has conceded that even if Pennsylvania farmers fully comply with all of the legal requirements that are "normally" imposed under Federal and state regulations, Pennsylvania will still fall substantially below the reduction goals that EPA has imposed for the Commonwealth.

When we're talking about privately-owned cropland, who will determine what land gets fallowed? Certainly, EPA officials don't intend to make individual, local land use decisions. or do they?

That's the looming uncertainty that I'm talking about.

And it is in this context that I ask you to place my testimony today.

Bureaucracy

As the EPA's Chesapeake Bay regulations have evolved over the years, so too has the massive bureaucracy surrounding this effort. There has been a continuous and overbearing stream of Chesapeake Bay meetings held by dozens of teams, task forces, working groups, expert panels and committees since 2010, when the Chesapeake Bay TMDL was first imposed by EPA. And the overwhelming majority of these meetings have been held directly or indirectly under the auspices of EPA and its exercise of regulatory control in the Bay.

I suspect that EPA is attempting through its stream of meetings to create the image that the agency is working "in partnership with" affected "stakeholders" in the Bay region and is making a serious effort with stakeholders to reach "solutions" for reducing pollution that landowners and local communities can readily and practically do. A closer review of these meetings, however, should clearly show you that activities performed and work products resulting from these meetings are merely an exercise in academics, without any serious consideration of how realistic those academic analyses can be attained or feasibly implemented by landowners and communities subject to TMDL regulation.

The driving force behind this host of Bay meetings remains a model that attempts to "project" outcomes from land use activities based on numerous assumptions. Even

[1] PFB's MSC Business Services provides every aspect of farm and agribusiness management. A staff of 40 trained accountants conduct tax planning/preparation and business consulting services in farm homes and offices across the state. MSC Business Services publishes nearly 900 individual Dairy Profitability Comparisons annually for clients, giving in depth analysis allowing for comparison to similar sized farms and the most financially successful farms in the program. See *Appendix 1* for corresponding data.

those who have the technical ability to understand EPA's Chesapeake Bay model and the factors that affect outcomes in the model will commonly remark there is a significant difference between the "model world" and the "real world."

I'll just quickly mention that this same EPA model, which drives the requirements and limitations imposed on farmers, landowners and communities in the Bay watershed, and which measures the environmental achievements of Pennsylvania and other Bay states, has been significantly modified several times since 2010. And it will be significantly changed in the near future, once again moving the target of regulatory requirements that EPA will impose on farmers, businesses and local communities and the measure of environmental achievement that these sectors have attained in the Bay Watershed.

EPA can attempt to claim that its system of Chesapeake Bay meetings is an open and public process and that I—as a farmer—have the opportunity to weigh in. Yes, there are token farmer representatives on these meeting bodies. But despite my 4 year degree in animal science from a well-known and respected university and 34 years of farming while implementing modern technologies, I don't understand EPA's science. And no farmer can legitimately comprehend and respond to the reams of academic analyses that have been produced through these meetings and continue to perform the tasks needed to run his or her farm business.

There should be little doubt that EPA's bureaucratic imprint and extensive nature of influence and oversight of outcomes in the Bay has continued even in the creation and function of "public input" bodies currently existing in the Bay Watershed.

The Chesapeake Bay Program is described on its website as "a regional partnership" that leads and directs the restoration and protection of the Chesapeake Bay. Yet all of the members of the Program's leadership team are EPA officials. And EPA officials comprise a significant presence on numerous input bodies.

I have attached (*Appendix 2*) to my testimony a list of nearly 60 public bodies that have been created under the auspices of Chesapeake Bay Program. This is the organizational web through which EPA expects individual farmers to engage and provide input.

As a farmer, I consider myself a practical guy. My inputs are measurable. My outputs are measurable. Each year, I have a profit or loss statement. My farm's—and my family's—financial future is measured by real, tangible things: bushels of corn, tons of silage, pounds of milk . . . dollars. Meanwhile, EPA seeks to measure environmental impact through complex computer modeling, even though several state, interstate and Federal agencies have accurate and reliable water quality monitoring stations in rivers, streams and the Bay itself.

Inflexibility

While simple for regulators, one size doesn't usually fit all. It especially doesn't work in agriculture—where farms are most certainly not alike and where land dynamics change significantly from one part of the state to the other. In fact, more recent studies by Penn State University and others are showing that not only is EPA's one-size-fits-all regulatory approach in the Bay Watershed unworkable, it is also very inefficient in both managing the costs of environmental improvement projects and utilizing public funds in a manner that provides the greatest environmental improvement for each dollar of public funds spent.

EPA's Chesapeake Bay model is inflexible. For example, it makes assumptions of no-till that conflict with what we know to be true. The Conservation Effects Assessment Project (CEAP), undertaken by USDA's Natural Resources Conservation Service (NRCS), determined that no-till and conservation tillage are used on nearly 80 percent of the cultivated cropland in the Bay watershed.

Furthermore, continuous conventional tillage is used on only six percent of the cropland. In fact, the report demonstrates there has been substantial adoption of conservation practices between the 2003–2006 and 2011 reports. Despite NRCS' findings, EPA's model makes the assumption that 50 percent of all cultivated crops used conventional tillage, with the other half planted using only conservation tillage. What amazes me is that when we have reliable data, produced by another Federal agency, EPA still refuses to credit farmers for the good work we're doing.

One of the major challenges we continue to face regarding the Chesapeake Bay regulations and the resulting Bay Model is the failure to capture and credit a multitude of best management practices (BMPs) that farmers voluntarily use, without the use of government funds. While these are practices have been proven to provide measurable impacts in improving water quality, EPA has consistently refused to recognize them, unless those practices are administered through government cost-share or are personally verified by state or Federal regulatory officials. It just doesn't make sense to me.

For years, EPA officials have flatly rejected attempts by the agricultural sector to provide a feasible methodology for recognition and crediting of these reported agricultural non-cost-share BMPs that would allow verification by persons other than a "qualified" government official or allow a crediting of pollution reduction for reported BMPs on any acre of farmland in which the "qualified" official has not personally inspected and verified the practice is actually performed.

In Pennsylvania, the departments of Environmental Protection and Agriculture have teamed up with Penn State University and agricultural organizations—including Farm Bureau—to develop a program to capture and verify these BMPs. As part of the effort, farmers in the Bay Watershed were asked participate in a survey where they have the opportunity to report recognized BMPs and do so in a way that protects them from adverse consequences such as enforcement activity. The results will be reported and statistically verified, and hopefully credited in EPA's Bay Model. Unfortunately, EPA has previously rejected similar plans hoping to utilize statistically reliable data collection and validation in order to credit Pennsylvania's farmers with nutrient and sediment reduction activities. So far, I understand that approximately 7,000 surveys have been returned. We are optimistic that this survey will help us better capture the practices that farmers are using, but in order for this endeavor to be successful, we will need the full, continued support of state and Federal officials to convince EPA to include this statistically valid data into the Chesapeake Bay computer model.

Uncertainty

In the fall of 2015, EPA summarily decided to withhold $3 million in funding because they believed Pennsylvania was not doing enough to reduce nutrient and sediment pollution from nonpoint sources. This is money that the state could ill-afford to lose considering that Penn State University's Environmental and Natural Resources Institute found that to fully comply with EPA's pollution reduction mandates by 2025, the state would need to incur $3.6 billion in total costs or approximately $240 million per year just for initial implementation of nonpoint BMPs and infrastructure. In order to both implement and maintain such practices and infrastructure, that number rises to $378.3 million per year. In FY 2014, total state and Federal funding available to the state for nitrogen, phosphorus and sediment pollution reduction programs *statewide,* not just for the Bay Watershed, amounted to just $146.6 million. In short, while comparatively speaking that $3 million withheld by EPA is a small amount, it is absolutely needed.

EPA failed to provide to either Pennsylvania officials or to Pennsylvania citizens specific detail of the supporting reasons or bases behind its determination to withhold Federal funding. Similar to Pennsylvania's regulated community, officials from Pennsylvania's Department of Environmental Protection (DEP) were left trying to guess the type and degree of change the agency needed in administrating its nonpoint program to restore favor with EPA and finally receive the $3 million that EPA was withholding from Pennsylvania.

DEP's administrative response to EPA's decision to withhold Federal funds, which DEP has characterized as its "reboot strategy," did result in the release of the $3 million being withheld. But similar to its initial decision to withhold funds, EPA provided no specific detail on which previously deficient components of Pennsylvania's nonpoint program were sufficiently remedied under DEP's reboot strategy.

While I'm glad that Pennsylvania did finally receive needed Federal monies for use in Pennsylvania's Bay Watershed, the lack of due process shown by EPA in both its initial decision to withhold Federal funds and its subsequent decision to release funds to the Commonwealth is very disturbing. EPA's manipulation of Federal funding for Pennsylvania was arbitrary, at least in appearance if not in reality. What is to stop EPA in the future from making greater demands of Pennsylvania and imposing more stringent demands of state regulatory programs purely for political or ideological purposes? Is it fair for state regulators to be forced to play a guessing game with EPA? And more importantly, is it fair for farmers to be caught in this tug of war between EPA and state regulators? Finally, is it fair for those 33,600 Pennsylvania farmers in the Bay watershed to wonder if—despite their best practices—one day they will be forced to shutter or significantly reconfigure their farms in order for Pennsylvania to meet EPA's arbitrary threat of Federal withholding?

As a farmer, I do several things to satisfy state regulators, but as I established earlier, I'm also dealing with tanking milk prices while trying to make my farm financially sustainable to bring my sons into the family business. I believe I've demonstrated my willingness to undertake practices that are better for the environment, but I want to do things that make sense *for my farm and improves water quality in my local community, rather than a water body that is several hundred miles away.*

Both state and Federal officials have noted and documented the significant progress that Pennsylvania has made in reducing nitrogen and phosphorus pollution in the Bay Watershed, including pollution from nonpoint sources over the past several decades and more recently during the time period that President Obama's Chesapeake Bay Executive Order has been in effect.

At the same time EPA and its cohorts point fingers and paint agriculture—farmers just like me—as a villain that impairs water quality in the Bay. But their accusations are in direct conflict with U.S. Geological Survey data—which showed pretty positive gains on water quality in tributaries throughout the Bay Watershed. These gains are not because of our revised Bay strategy or EPA's model. It merely demonstrates what agriculture has been doing for decades through increased knowledge, additional opportunities, technology and time.

Here's my question for EPA: Do you really think I'm trying to pollute?

I want to do the right thing. On my farm, I've been no-tilling for 20 years and, for the last 4 to 5 years, I've planted cover crops. I maintain a farm conservation plan and a nutrient management plan specifically designed for my farm. All of these practices were done voluntarily and without Federal dollars. The only time I've used Federal dollars for conservation was for help in laying out our contour strips on our farm in the 1980s. I know there are many farmers in Pennsylvania and in the U.S. who have implemented voluntary practices without any Federal funding. Yet, in the eyes of the EPA—and in terms of the Bay Model—we don't count.

Tell me, does that makes sense?

Conclusion

Bureaucracy. Inflexibility. Uncertainty. These three words certainly capture the theme of EPA's Chesapeake Bay regulations and how they impact farmers, not just in the watershed, but across Pennsylvania, the region and even the nation.

There's no question that farmers can reap financial benefits from implementing best management practices. I've certainly seen that using no-till practices on my farm. But there are also can be significant costs as well. As much as I—and other farmers—would like to implement more practices, I don't have the money to do more without—or even sometimes with—state or Federal assistance. As farmers, we are dependent on the agricultural economy and right now, that definitely adds a major challenge. As I mentioned earlier, there's been a great ebb and flow of farm income and margins for nearly 10 years.

Regulators must be aware of the realities of agriculture. I'm a small business owner. I don't have a compliance officer—or a large staff—available to dance when the EPA says dance. At the end of the day, it's just me and my three sons trying to make a living on the farm—trying to balance the day-to-day tasks while complying with an ever-growing list of environmental regulations put forth by Federal agencies willingly ignoring the beneficial practices we employ.

I consider myself a typical American farmer. I operate a small family farm. Our milk goes to a small family business, where it is processed and used in schools and hospitals in and around Pittsburgh, Pennsylvania. On our farm, we're trying to do the right thing. We're good stewards. We take excellent care of our cows and we go the extra mile to take care of our land and our water, not only because it's the right thing to do, but because it's my family—my children and grandchildren—who eat here, play here and hopefully one day will work here.

Again, thank you for the opportunity to provide testimony to the Subcommittee today.

APPENDIX 1

MSC Business Services
Key Dairy Benchmarks per CWT

	2008	2009	2010	2011	2012	2013	2014	Avg.
Income								
Milk	$19.84	$13.91	$18.05	$21.87	$19.77	$21.40	$25.57	**$20.06**
Livestock Income *	$0.93	$0.92	$1.11	$1.20	$1.50	$1.48	$1.87	**$1.29**
Other	$1.28	$2.14	$1.36	$1.35	$2.06	$1.59	$1.28	**$1.58**
Total Income	**$22.05**	**$16.97**	**$20.52**	**$24.42**	**$23.33**	**$24.47**	**$28.72**	**$22.93**
Expenses								
Management Labor	$2.24	$2.17	$2.14	$2.22	$2.20	$2.10	$2.19	**$2.18**
Feed *	$5.53	$5.13	$5.72	$7.07	$6.60	$6.20	$6.97	**$6.17**
Hired Labor	$1.64	$1.54	$1.56	$1.70	$1.84	$1.97	$2.06	**$1.76**
Interest	$0.85	$0.78	$0.77	$0.79	$0.69	$0.63	$0.63	**$0.73**
Rent	$0.54	$0.53	$0.56	$0.59	$0.69	$0.77	$0.84	**$0.65**
Milk Marketing	$1.00	$1.01	$1.02	$1.06	$1.09	$1.11	$1.14	**$1.06**

MSC Business Services—Continued
Key Dairy Benchmarks per CWT

	2008	2009	2010	2011	2012	2013	2014	Avg.
Dairy Expenses	$2.21	$1.98	$2.05	$2.21	$2.30	$2.23	$2.47	**$2.21**
Crops (Seed, Chem., Fert., Fuel)	$2.45	$1.89	$1.97	$2.43	$2.85	$2.74	$2.89	**$2.46**
Depreciation	$1.43	$2.17	$1.49	$1.53	$1.63	$1.55	$1.62	**$1.63**
Other	$3.62	$2.30	$3.36	$3.78	$3.43	$3.77	$4.33	**$3.51**
Total Expenses	**$21.51**	**$19.50**	**$20.64**	**$23.38**	**$23.32**	**$23.07**	**$25.14**	**$22.37**
Net Margin	**$0.54**	**−$2.53**	**−$0.12**	**$1.04**	**$0.01**	**$1.41**	**$3.58**	**$0.56**
Avg. No. Cows	124	119	127	132	134	149	164	
Milk Sold per Cow	20,113	19,750	20,061	19,992	20,036	20,466	20,909	

*Adjusted for Inventory Change (Livestock Inventory for Livestock Income and Crop Inventory for Feed).

APPENDIX 2

Public Bodies Created Under Auspices of Chesapeake Bay Program

Agricultural Ditch BMPs Expert Panel
Agricultural Modeling Subcommittee
Agricultural storm water and Tailwater Expert Panel
Agriculture Workgroup
Animal Waste Management Systems Phase 6 BMP Expert Panel
Best Management Practices Verification Committee
Biosolids Ad Hoc Taskforce
BMP Verification Review Panel
Boat Pump-Out Expert Review Panel
Budget and Finance Workgroup
Citizen Stewardship Team
Citizen Stewardship Subgroup
Climate Resiliency Workgroup
Communications Workgroup
Conservation Tillage Phase 6.0 Expert Panel
Cover Crop Phase 6.0 Expert Panel
Criteria Assessment Protocol Workgroup (through 2015)
Crop Irrigation Management Expert Panel
Data Integrity Workgroup
Diversity Action Team
Education Workgroup
Enhancing, Partnership, Leadership and Management Goal Implementation Team
Federal Facilities Workgroup
Fish Habitat Action Team
Fish Passage Workgroup
Floating Wetlands Expert Panel
Forestry Workgroup
Fostering Chesapeake Stewardship Goal Implementation Team
Habitat Goal Implementation Team
Impervious Cover Disconnection Expert Panel
Independent Evaluator Workgroup
Integrated Monitoring Networks Workgroup
Integrated Trends Analysis Team
Land Use Workgroup
Local Area Targets Task Force
Local Government Advisory Committee
Local Leadership Workgroup
Maintain Healthy Watersheds Goal Implementation Team
Manure Injection and Incorporation Phase 6.0 Expert Panel
Manure Treatment Technologies Expert Panel
Milestones Workgroup
Modeling Workgroup
Nutrient Management Phase 6.0 Expert Panel
Nutrient Management Task Force
Onsite Wastewater Treatment Systems Expert Panel
Oyster BMP Expert Panel
Scientific and Technical Advisory Committee
Scientific Technical Assessment and Reporting Team
Shallow Water Modeling Workgroup
Status and Trends Workgroup
Stream Health Workgroup
Street and Storm Drain Cleaning BMP Expert Panel (final report filed in 2015)
Submerged Aquatic Vegetation Workgroup
Sustainable Fisheries Goal Implementation Team
Toxic Contaminants Workgroup
Trading and Offsets Workgroup
Urban Stormwater Workgroup
Urban Tree Canopy BMP Expert Panel
Wastewater Treatment Workgroup
Water Quality Goal Implementation Team
Watershed Technical Workgroup
Wetland Workgroup
Wetlands Expert Panel

The CHAIRMAN. Thank you, Mr. Ebert.

Ms. English, go ahead and proceed with your 5 minutes of oral testimony whenever you are ready.

STATEMENT OF KATHERINE R. ENGLISH, J.D., PARTNER, ENGLISH FAMILY LIMITED PARTNERSHIP, LLC, FORT MYERS, FL; ON BEHALF OF FLORIDA FARM BUREAU FEDERATION; AMERICAN FARM BUREAU FEDERATION

Ms. ENGLISH. Thank you. I would like to thank Chairman Thompson, Ranking Member Lujan Grisham, and the fellow Mem-

bers of the House Committee on Agriculture for the opportunity to speak with you today about the cost of conservation compliance.

My name is Kate English. I grow citrus and raise cattle in southwest Florida with my family, under the business name of the English Family Limited Partnership. I am here today on behalf of my family, as well as the Florida Farm Bureau Federation, and American Farm Bureau Federation.

There is a growing gap between farmers' abilities to meet the demands imposed upon them by regulatory compliance, and our ability to meet these obligations while remaining profitable. Rather than try to explain to you in terms of the regulations, I thought I would share with you a couple of stories from our family farming operation that would help you understand this.

The first is, our family farm has been in our family since 1870. Portions of the property were granted to us under the Federal Homestead Act, and we have had a pump in the Caloosahatchee River, which is now known as C43, as part of an Army Corps of Engineers project, since 1890, using low-volume irrigation techniques more than 60 years before the first literature in the universities covered it.

The first story I want to tell you is about our water use permits. In 1977, a Soil Conservation Service scientist came to my grandfather's house and said there is a new program, and you are going to need a water use permit. You are going to need to have a permit for every well, pump, and surface water management structure that you have on your property. And he helped him fill out the paperwork, and we sent it in to the South Florida Water Management District, which is the local partner for the Federal drainage project. In about 3 weeks, we had a permit. In 1988, that permit expired and my father and my uncles timely applied for a renewal. What they didn't get in the mail was a permit. What they got was a request for additional information, which they didn't know what to do with. And it sat there for 8 years until I was licensed to practice law, and was actually working on an application for another client. When the reviewer said, do you know anything about English Brothers, and I said, yes, it is my fathers and my uncles. And he said, well, do you want to finish this water use permit? It took me about 3 months, but I got it done.

The last time I renewed this permit was 5 years ago. I am an environmental permitting attorney. It took me 3½ years, and I had to hire the former acting General Counsel of the South Florida Water Management District, and the former head of the regulatory division in order to successfully complete it, for an allocation that was less than the allocation we requested in 1977, for a pump my family has had in the river since 1890.

The second story I want to tell you is about citrus greening. And we are struggling to survive. Eighty percent of the trees in 90 percent of the groves in the State of Florida are dying of citrus greening. Congress has been incredibly generous to us in terms of research dollars. We just need to hold on until the research money works.

Unfortunately, our friends at EPA are considering de-listing the very insecticide that we need to control the one insect that vectors this disease, the Asian Citrus Psyllid, which is an invasive species

to Florida. It is not native here. We can't survive without controlling this psyllid population. We struggle to understand the investment that Congress has made, at the same time the EPA is considering de-listing that tool that we need.

The final story I have for you is to tell you the skills my family brings to the table. I am an environmental permitting lawyer. My sister is the Bureau Chief for Pest and Disease for the Florida Department of Agriculture. My father is a recognized citrus expert in the Citrus Hall of Fame and the Florida Agricultural Hall of Fame. I have an uncle who is a CPA, and I have two cousins who are licensed engineers; one of whom works on our surface water management system, the other of whom spends his summer vacations trying to develop robotic technology to harvest our citrus crops, since labor is a challenge for us.

I wonder what families that don't have this level of skill in their family farm do. You shouldn't need a lawyer and an engineer in order to farm.

Thank you.

[The prepared statement of Ms. English follows:]

PREPARED STATEMENT OF KATHERINE R. ENGLISH, J.D., PARTNER, ENGLISH FAMILY LIMITED PARTNERSHIP, LLC, FORT MYERS, FL; ON BEHALF OF FLORIDA FARM BUREAU FEDERATION; AMERICAN FARM BUREAU FEDERATION

Good morning, my name is Kate English. I grow citrus in southwest Florida with my family under the business name of English Family Limited Partnership, LLC. I am here representing my family, as well as Florida Farm Bureau Federation and American Farm Bureau Federation.

I want to thank Chairman Thompson, Ranking Member Lujan Grisham, and fellow Members of the House Committee on Agriculture for the opportunity to speak with you today about the costs of conservation compliance in accordance with the farm bill, and the myriad Federal environmental regulations imposed upon Florida agriculture. There exists a widening chasm between the demands imposed on farmers by regulatory compliance, supplier and consumer requirements, and our ability to meet these obligations while remaining profitable enough to continue producing the fresh, nutritious food that we all take for granted. I am focusing my comments today on the issues of increasing complexity, expense of compliance, lack of science-based decision-making, and lack of partnership with the Federal Government. The point of my comments today is that **a farmer shouldn't have to have a lawyer and an engineer on staff to grow food.**

Complexity and Lack of Science

U.S. Environmental Protection Agency's Actions on Nutrients

Florida farmers work hard to implement effective strategies for resource conservation, but they're continually confronted with the sentiment that their extensive science-based efforts are never sufficient to protect the resource. New regulations expand the jurisdiction of agencies far beyond the regulatory space previously occupied. A prime example of this is the recent "*waters of the United States*" rule. The rule not only expands the regulatory footprint for farming and increases the uncertainty we battle daily, but it also lacks peer-reviewed sound science. These regulations appear instead to be based on public opinion and social media trends rather than facts and science. The result is a highly unpredictable regulatory environment and uncontrolled costs when faced with compliance based on a moving target rather than a rational, science-based goal.

We are doing more than ever to protect the environment—much of it at our own expense—while facing increasingly expensive inputs, skyrocketing regulatory compliance costs, and stronger competition in a global marketplace in which we are price takers, not price makers. Our profit margins are slim at best and these factors are not a recipe for long-term success.

Florida and its farmers have worked hard to address the impacts of agriculture on the state's natural systems. We have worked hand-in-hand with the State of Florida and other stakeholders to develop programs to effectively and responsibly use nutrients and water. Using sound, peer-reviewed science developed by the Uni-

versity of Florida/Institute of Food and Agricultural Sciences, best management practices (BMPs) were developed for Florida soils and climate conditions minimizing the use of nutrients and managing water use. Florida farmers were quick to recognize the benefits of BMPs and readily adopted them, utilizing the cost- and time-efficiencies found in better nutrient and irrigation management.

The Florida Department of Environmental Protection reviewed and approved these practices, noting their effectiveness in reducing nutrients and runoff while protecting the environment.

At the same time, we have struggled with litigation filed by special interest groups against the U.S. Environmental Protection Agency (EPA) claiming that Florida's efforts to protect its water supply were insufficient to comply with the Clean Water Act. Extensive litigation and negotiations at taxpayers' expense finally resulted in a settlement that provided for the adoption of Florida's proposed numeric nutrient criteria. The settlement recognizes Florida's ability to enforce its water quality standards.

The Florida Department of Environmental Protection's work on Basin Management Action Plans (BMAPs) is collaborative and intensive. These BMAPs are developed in a joint effort with stakeholders to address Total Maximum Daily Load (TMDL) exceedance. For a farm located within a BMAP, the Best Management Practices program empowers farmers to avoid the significant expense of water quality monitoring (which does not include any land management component) and instead address concerns about their operation by filing a Notice of Intent to comply with the best management practices and then working with the Florida Department of Agriculture and Consumer Services to ensure those practices are used. The other benefit of the Best Management Practices program is it allows farmers to choose from a range of management tools for their commodities. The options allow each farmer to customize environmental protections based on his or her particular operation.

Many decades of development created the conditions that we have today (though some science is now noting that naturally occurring nutrient levels may have been higher than first believed), but special interest groups are using litigation against EPA to drive policy decisions, including a demand to immediately improve water quality to standards that will realistically require decades and billions of dollars to achieve. At worst, this strategy could result in removing farming from the landscape entirely. The most extreme groups seem to seek that result based on my experiences in working with stakeholder groups. Members of these most extreme groups slander best management practices as mere "window dressing" and claim the farmers are not performing the practices or the practices do not work because immediate results downstream are not apparent. Claims like these drove the Florida Legislature to require the Florida Department of Agriculture and Consumer Services to begin development on an Implementation Assurance Manual, creating yet one more unnecessary level of bureaucracy at an additional cost to the farmer.

In response to these claims, I would instead cite the success of farmers in the Everglades Agricultural Area using best management practices who have managed to reduce phosphorus discharges from their drainage basin by more than 56 percent over the last 20 years. For a milestone 20th year, water flowing from farmlands in the Everglades Agricultural Area achieved phosphorus reductions that significantly exceed those required by Florida's Everglades Forever Act. This improvement is the result of farmers implementing improved farming techniques under the South Florida Water Management District's Source Control Permitting Program. This program has an overall average annual phosphorus reduction of 56 percent—more than twice the 25 percent required by law.

We have tools that will work which do not require pyramiding local, state and Federal regulation on farmers who are working hard to protect their most basic tool and greatest investment, their land. We must use reasonable, economically feasible approaches and allow those approaches time to work. We cannot survive ever-mounting regulation and ever mounting costs of compliance when the benefits of those regulations and costs do not result in meaningful improvement.

Removing Products Due to Public Perceptions

Citrus Greening (Huanglongbing or HLB) disease is spread by a single vector, the Asian Citrus Psyllid, first detected on the east coast of Florida in June 1998. By September 2000, this pest had spread to 31 Florida counties. Currently, 90 percent of all groves and 80 percent of all citrus trees in Florida are infected with greening disease. Once a thriving industry producing more than 250 million boxes, this past season Florida citrus growers produced less than 80 million boxes (90 pound equivalent), the lowest production in more than 50 years. We are perilously close to falling below the volume of fruit required to maintain the industry's infrastructure for proc-

essing, packing and marketing our crop. We will not long survive if we cannot maintain our infrastructure and our markets.

Congress has been incredibly generous and responsive during this time. It has authorized and allocated millions of dollars for research in the hopes of finding a cure to this economically devastating disease. At the same time, EPA is actively working to remove some of the few crop protection products that can control populations of the Asian Citrus Psyllid.

Public sentiment has risen against neonicotinoid chemical use due to one-sided media reports and social media campaigns claiming that these materials are responsible for the honey bee population decline. The research is ongoing, but there are a number of factors that may contribute to honey bee population changes. Studies note that decreasing population in some locales may be climatic in nature or a result of Colony Collapse Disorder (CCD), of which no scientific cause has been proven.

Florida growers have worked with beekeepers to develop schedules to time the use of neonicotinoid sprays so that honey bee populations are not present when these products are applied or when the ingredients are active. Honey bees in Florida citrus groves are transient, as beekeepers bring the hives in for the citrus bloom then move the hives on to other crops. The pesticides' labels clearly indicate how to use the product to minimize the impact to beneficial insects and citrus farmers are well aware of the potential harm caused by improper use.

We have very few options when combating the psyllid and EPA needs to make decisions based on sound, peer-reviewed science rather than fears and rumors.

Complexity and Conflict

Permitting at All Levels of Government

The cost of compliance continues to rise due to the volume and complexity of information required to obtain and maintain compliance with a permit at all levels of government—local, state and Federal. Land activities such as leveling, clearing or routine water management that used to be allowed, either without a permit or with a minimal permit that denoted the activity on the land, now require more complex technical information and the fulfillment of ongoing reporting. Permit applications that initially could be completed by the farmer in a few hours now require many months of preparation and expert assistance from legal and engineering professionals to navigate the agencies' review of the application, which can take more than a year. These changes have exponentially increased the cost of farming and the costs are not prorated to the size of the farm, disproportionately impacting small and mid-sized farms.

Much of the information generated for the permitting process becomes public information. This information is used to both challenge the permits being sought and as fodder for litigation challenging existing operations. The statutory provisions that allow third parties to sue farmers under the citizen suit provisions of a number of environmental laws can create significant financial roadblocks and push smaller farmers to consider other options for their land, particularly as development presses closer to farms. While a cow or a farm field may be aesthetically appealing in concept, the reality of living next door to even a small commercial farming operation is most usually perceived by a home owner as a nuisance. Right-to-Farm laws found in most states do not protect against environmental litigation. Challenging the farm's compliance with environmental regulations is typically a very successful tool to force a farmer out, especially as he contemplates the possibility of having to pay his own attorney's fees along with the fees incurred by the people suing him. The result is frequently a sale of the property for development.

USDA NRCS Conservation Programs

USDA's Natural Resources Conservation Service (NRCS) has an 80 year history of helping farmers and others "maintain healthy and productive working landscapes." The keyword in the above quote from NRCS is "working," which should be interpreted as a landscape that combines commodity production (*i.e.,* agriculture) with ecosystem protection.

In recent years, the process NRCS uses to help farmers has become increasingly complex and difficult to navigate. At the same time, staffing challenges at the agency are increasing as experienced staffers retire, taking their institutional knowledge with them. Though cost-share opportunities exist for the implementation of conservation measures, many farmers in Florida avoid these programs due to their complexity and lack of transparency. Besides the time and intricate detail required to complete the paperwork, under the most recent farm bill, NRCS programs can now require the farmer to provide an affidavit signed under penalty of perjury that certain practices impacting sensitive lands have never occurred on the property.

Farmers are often unable to obtain the corresponding back-up documentation for the affidavit to ensure they are prepared for future audits or compliance reviews, so they choose to avoid this program in its entirety.

To many Florida farmers today, USDA's NRCS is a regulatory entity. Contrast that with the view of farmers in the 1970s who welcomed the NRCS' ancestor, the Soil Conservation Service, whose scientists tirelessly worked to get Florida farms permitted when a new Water Resources Act required that every well, pump and surface water management system be accounted for and permitted. My grandfather's farm in Lee County has those permits that I now work so hard to maintain because a Soil Conservation Service scientist came out to the farm and educated him about the requirements and helped him with the paperwork.

Citrus Crop and Tree Insurance

Farmers appreciate the Federal Government's recognition that food security is vital to our nation. Congress' crop insurance program helps farmers recover from catastrophic crop failures that occur from weather and other events. In citrus, we have the distinct benefit of having both crop insurance and tree insurance. While the loss of a crop can be devastating, the loss of our trees can destroy, and is destroying, our industry. This program is quite complex with distinctions being drawn about what entity can hold which kind of policy. In addition, to obtain any insurance, a grower must provide sworn testimony by affidavit that all of his farming operations are in strict compliance with the Food Security Act's Swampbuster provisions. Curiously, citrus is not defined as one of the commodity crops that must comply with the Swampbuster provisions.

Threatened/Endangered Species

Farmlands frequently provide habitat for threatened and endangered species for a number of reasons, such as the availability of prey and forage, cover for nesting and denning, and protection from people. Farmlands in southwest Florida are providing habitat for the Florida panther, the Florida bonneted bat, the crested caracara and the gopher tortoise, among other species. Unfortunately, very little recognition is given to farmers for the habitat that they're providing. Instead, we face the imposition of additional regulations that limit or eliminate the farming practices which created the habitat benefitting the species in residence. This is particularly apparent when farmers sell the development rights over a property and finds, to their surprise that they now have a partner in their farm who has no knowledge, understanding of the land or farming practices and no economic risk, but imposes its management practices all the same. Often these management practices are based on the current fashions of wildlife management rather than knowledge of the land and the creatures that live there.

Farmers are intimately involved with the land they farm. They have a culture of stewardship to protect and maintain the most significant asset they have, the land. They know what lives on their land and why. For many of us, it is matter of pride that we coexist with these animals and have the luxury of observing them. And yet, frequently this approach leads to even greater regulatory pressure. For example, when we construct a surface water management impoundment to manage water quality in accordance with Section 401 of the Clean Water Act, we may be creating an area that will subject us to additional regulation and the threat of enforcement by the U.S. Fish and Wildlife Service when a listed species uses that area. The rules prohibiting habitat modification can prevent farmers from effectively using the impoundment or changing the system to accommodate future needs and changing regulatory requirements.

Recognition/Lack of Partnership

Slow Progress on the Comprehensive Everglades Restoration Plan

South Florida has been the recipient of heavy rainfall events in the past year, leading to local and regional flooding. Winter vegetable crops that feed much of the nation were destroyed this past winter due to flooded fields.

Lake Okeechobee is over 700 miles^2. It receives the water that falls on a 4,600 mile^2 basin stretching from Orlando south to the lake. The outfalls of the lake flow south into the remnant Everglades, east to the St. Lucie Canal and west to the Caloosahatchee River. The towns and farmlands around Lake Okeechobee received flooding rains this past winter. The flood control efforts to protect those farms and communities, as well as the discharges from the lake into the Caloosahatchee and Saint Lucie to prevent a breach to the aging dike surrounding the lake, resulted in outcries from people living on both the east and west coasts of Florida regarding impacts to their estuaries.

Environmental activists claim that agriculture is ultimately to blame for degradation in the Indian River Lagoon and the Caloosahatchee Estuary after the U.S. Army Corps of Engineers authorized releases from Lake Okeechobee to lower lake levels and protect those living around the lake. False claims abound that water was not moved south because the sugar industry did not want the water. Water from the lake was moved south to the extent possible but this year's rains had left the water conservation areas full and the amount of water that could be drained through that system was very limited. With Lake Okeechobee continuing to rise, alternative actions had to be taken by the Corps to protect lives and property.

Just as Hurricane Katrina devastated New Orleans, Florida was swept by two category 4 hurricanes, one striking Broward and Dade Counties in 1926 and the second bringing destruction to the people, livestock and lands around Lake Okeechobee in 1928. The 1928 hurricane pushed water out of Lake Okeechobee and destroyed the towns of Belle Glade, Canal Point, Chosen, Pahokee and South Bay. The loss of life for humans and animals was unimaginable. My grandfather told the story of going to the area after the hurricane to help bury the dead, afraid of the disease that the Caloosahatchee River could transport to our family farm. My grandmother told the story of being left to shovel the mud from the ground floor of their flooded home while taking care of her husband's aged and infirmed parents. While the exact number of people killed will never be known, the death toll ranges from 1,836 to more than 2,500. When we discuss the need to protect the integrity of the dike around Lake Okeechobee by controlling the lake's water elevation, we can never forget what prompted the decision to build the dike.

These losses along with the impacts of the Fort Lauderdale Hurricane of 1947 that caused flooding and significant crops in Fort Lauderdale and threatened to breach the dike around Lake Okeechobee again prompted Congress to pass the Flood Control Act of 1948, authorizing the first phase of the Central and South Florida Project which completely replumbed south Florida.

Remember that our culture at that time supported the concept that nature should be controlled and lands should be converted to human use. The extensive levee, canal and gate system of the Central and Southern Florida Flood Control Project is very efficient at moving water and protecting life and property, just as it was designed. The project's environmental impacts, while extensive, were not considered until the project was very near completion in the late 1960s. Environmental awareness and scientific research has driven us to reconsider the Central and Southern Florida Flood Control Project and develop plans to restore portions of the system to reduce the environmental impact and protect precious natural resources. Florida has worked hard to develop a restoration plan that balances the needs of the environment with society's needs to protect a population of 8.1 million people and an agricultural industry that generates billions dollars of economic activity each year by feeding our citizens throughout the winter months.

Those demanding immediate restoration of the system refuse to take into account that it took decades to implement the original plan and it will take a significant investment in time and money to implement the works needed to improve the environmental health of the system, including improving water quality.

We can take actions to implement this plan more quickly, including moving more water south toward the Everglades, if the Comprehensive Everglades Restoration Plan (CERP) was sufficiently funded. CERP includes a suite of projects needed to restore South Florida's ecosystem and we can accelerate the construction of a number of key projects that address those needs. The state of Florida and the Federal Government agreed to a 50/50 joint effort to fund CERP, but we have struggled to obtain appropriations from our Federal partner even as the state has allocated more funds for project construction.

We need our Federal partner to meet its fiscal commitment to support these vital restoration efforts, while also understanding the need for the measures alleviating flooding and protecting human lives in the interim.

County Alliance for Responsible Environmental Stewardship

The County Alliance for Responsible Environmental Stewardship (CARES) is an award and recognition program that was established in 2001 by Florida Farm Bureau Federation to recognize farmers who have voluntarily implemented best management practices on their farms and promoted environmentally sound and economically viable farming practices. The CARES program also serves as a tool to educate and demonstrate to the public that Florida agriculture is actively involved in protecting our resources by implementing sound environmental management and nutrient stewardship practices.

The CARES program is a cooperative effort between Florida Farm Bureau Federation, Federal agencies, county governments, businesses, other organizations and

state officials. Independent experts review the farming practices and approve the farms to be recognized. Starting in the Suwannee basin of north Florida, the U.S. Environmental Protection Agency was an early participant with the Suwannee River Partnership to promote best management practices in the region. Not long after the creation of the CARES program and the partnership, EPA discontinued their participation, even though the programs promote a joint vision of environmental improvement.

Florida Farm Bureau Federation invited Ms. Allison Wiedeman, then EPA Agricultural Counselor to the Administrator, to attend a CARES recognition event in the summer of 2014. Ms. Wiedeman was quite impressed and noted that this is the type of proactive work that the EPA should support.

EPA and other Federal agencies struggle to partner with the private-sector. The agencies focus on using regulatory action to address its concerns with small and medium farming operations, rather than working to address compliance issues in an effective way. Voluminous paperwork and unattainable compliance goals make it hard for the farming community to work with Federal agencies. Further, the limited options for challenging the decision of a Federal agency in an enforcement action drive many farmers to settle rather than face the prospect of litigation with an entity that pays its lawyers an annual salary rather than a billable hour. The threat of mounting fines and the expense of litigation drive decisions to settle, and sometimes agree to impossible standards simply to avoid the threat of astronomical fines and attorney fees.

Closing

Our society has grave misunderstandings about conventional agriculture and as farmers we have not effectively countered the campaign to paint us as abusers, rather than stewards, of the land we farm, the resources we need, and the creatures we care for. I have heard agriculture described as a form of "violence on the landscape." Most people in the United States are several generations removed from the farm and have no functional understanding of agriculture as the provider of their food and fiber. Without personal knowledge, they have great difficulty finding reliable sources of information and even greater difficulty resisting emotionally charged words and downright horrifying misrepresentations. Even for those of us who farm, it is difficult to avoid the lure of social media and the 24/7 news cycle. We must support the development of, and encourage the effective use of, peer-reviewed science. As farmers, we must do a better job of telling our story.

An outgrowth of this misunderstanding is the abuse of litigation by particular interest groups to drive the development of unworkable regulatory programs at the Federal level. The pressure for ever-lower compliance numbers that are elusive at best and unattainable at worst is never ending. Further, this approach to developing regulation exacerbates the difficulty for state agencies required to comply with Federal regulations. Only the largest and most sophisticated farmers can afford to retain the services of engineers and lawyers to help them navigate this challenging landscape. Those who do have one or both on staff or retainer can only do so by vastly increasing in size, despite the interminable cry of the same special interest groups against "industrial agriculture."

To my family, growing citrus is not a hobby or a game. It is who we are. We define ourselves by our connection to the land we have farmed for more than 130 years. This is what sustainable agriculture means to me. I am charged with a stewardship to farm the land in a responsible way and hand it down intact so that my children, my nephew and my cousins' children can enjoy this legacy.

We have faced the challenges of farming for more than a century. We have faced uncertainty and existential threats brought about by economic collapse, social change and pestilence in our time on this farm. We continue to grow citrus in an uncertain environment and challenging conditions. We do not control the inputs of sunlight, rainfall and temperature. We do not control the price of the goods we produce to sell. We do not control the pests and diseases that find their way to our farm. We face the challenges of a deadly disease which is, as yet, without a cure, and race to find ways to continue to produce citrus until one can be found. We live in a state which is ground zero for imported pests and diseases.

I am here today to ask that you keep these things in mind as you work to develop programs in support of conservation of our landscape and recognize that agriculture is working hard to do the same thing while we feed and clothe you. I ask that you recognize that clear and predictable regulations can be met, but regulations based on unreasonable demands, emotion or litigation put our ability to do our job in jeopardy.

Without the support of Congress to rein in the actions of Federal agencies, much of Florida agriculture is at a crossroads where the next step may be the growth of

a terminal crop of residential, commercial or industrial developments. Disease pressure, increasing regulations, stagnant prices and a weary farmer are a recipe for disaster when it comes to the food security for the people of the United States.

The CHAIRMAN. Thank you, Ms. English.

Mr. O'Toole, go ahead and proceed with your 5 minutes of testimony when you are ready.

STATEMENT OF PATRICK O'TOOLE, PRESIDENT, FAMILY FARM ALLIANCE, SAVERY, WY

Mr. O'TOOLE. Good morning, Mr. Thompson, Ranking Member Lujan Grisham, and the Members of the Committee.

I really appreciate the opportunity to be here. I am thinking about this testimony and how inadequate I will be to plumb the depths of the issue.

Our family started ranching in 1881. We are cattle and sheep ranchers, and raise hay on the Colorado-Wyoming border. I am also President of the Family Farm Alliance. And the mission of the Family Farm Alliance is to provide adequate, affordable water for irrigators. We represent irrigators that raise every crop, every type of livestock in the country, in the 17 western states.

And I have a schizophrenic, I guess, testimony. My written testimony goes into quite a lot of detail that I obviously can't go into today. But I have a great story to tell. My family has been very fortunate. We live in a watershed that has been celebrated at the White House in the last couple of months, about how you do a watershed. My family has won several environmental awards for stewardship. We are a pilot for how you integrate irrigation and fishery. That is all good stuff. And I have partnerships that I have formed with people in this Administration, or any Administration. But as you all know, agriculture is bipartisan, and we have to figure a way to work together. And when I see the panoply of rules and regulations that have been coming out on everything, it is overwhelming, and it is overwhelming to my neighbors.

We have a tradition of livestock grazing in our community. Three century-old sheep ranches are going out of business this year because they can't get labor. The H–2A process, which is for legal labor, is broken. It is broken in a way that is terrifying for us to figure out. And I have had the opportunity to come back here occasionally and meet with various people in the Administration and on the committees, and with my best efforts, I only have ⅓ of them in.

This year, I can tell you stories about $750,000 worth of blueberries plowed under, $1 million of the strawberries plowed under, livestock dead, my livestock. I shouldn't be here, I should be at home tending my livestock, but we can't get any people. It is a nationwide program, and problem, and we have to address is.

I attended all of the Western Governors Endangered Species meetings, except for the one in Hawaii, which I couldn't afford, but there was a great message that came out of those meetings. And they were a real cross-section of people from conservation groups to oil and gas, to agriculture. The message is local, local, local. The answers are going to be done at the local level. My community is one of the ones showing the way that we do that, but the overwhelming regulatory stuff that is coming out, particularly from the

EPA. When this Administration decided that the EPA would replace Department of Agriculture, Department of the Interior, it is a whole new world. And one of the things you learn from the Family Farm Alliance is, if you understand what is going on in the West, in my ranch, at the head waters of the Colorado River, the water is going off so fast we know that we have to have storage. I guarantee you that the regulatory systems that are being implemented right now will eliminate the ability to permit. It is difficult now. It will be virtually impossible. That is why your role is so critically important right now.

You have probably all heard this. I spent this weekend with the American Farmland Trust. My son is on that Board, and they allowed me to sit in. One of the most chilling descriptions of American agriculture right now is the fastest growing category of farmers in America is 70 and above. The fastest losing category is 35 and below. And if you ask me, I have spent a year on a thing called AGree in this town. Probably some of you are aware of it. How do we feed ten billion people sustainably. And so I have had access to all of the information that is being presented. We have to double the food supply, and yet we have now—Federal agencies are looking at paying farmers not to irrigate. Federal agencies that are coming up with criteria on the sage-grouse that are impossible, impossible to fulfill.

And what we have to do is get our arms around—I say the revolution has already happened. People are doing wonderful things on the land, but what we are doing now is we are implementing so quickly, pages and pages and pages of regulatory gibberish.

I have shared some things on the mitigation strategy of the Fish and Wildlife Service. Both people on the left and the right read them and they can't understand them because it is not quality, it is not interconnectedness of the committees and the parties, it is an agenda being driven. And I would just ask you with all my heart to think about how important it is to keep this American agricultural structure together.

Thank you very much.

[The prepared statement of Mr. O'Toole follows:]

PREPARED STATEMENT OF PATRICK O'TOOLE, PRESIDENT, FAMILY FARM ALLIANCE, SAVERY, WY

Good morning, Chairman Thompson, Ranking Member Lujan Grisham, and Members of the Subcommittee.

My name is Patrick O'Toole, and on behalf of the Family Farm Alliance (Alliance), I thank you for this opportunity to present this testimony on the impacts to western irrigated agriculture of Federal environmental regulations and the potential for voluntary conservation solutions. The Alliance is a grassroots organization of family farmers, ranchers, irrigation districts, and allied industries in 16 western states. The Alliance is focused on one mission: To ensure the availability of reliable, affordable irrigation water supplies to western farmers and ranchers. We are also committed to the fundamental proposition that western irrigated agriculture must be preserved and protected for a host of economic, sociological, environmental, and national security reasons—many of which are often overlooked in the context of other national policy decisions.

Our family prides itself on incorporating conservation practices within our ranching operation. Our ranch, the Ladder Ranch, was the 2014 Wyoming Stock Growers/Sand County Foundation Leopold Award winner in recognition of the importance we place upon maintaining and improving natural resources, all the while operating a viable ranching business. Our family, like many, are descendants of folks who headed West in response to President Lincoln's charge and the Homestead Act.

There are many critical issues that the western family farmers and ranchers we represent are confronted with at this time. At the top of the list is the daunting number of Federal regulatory policy initiatives that are facing western agricultural producers. These types of Federal water resources actions and regulatory practices could potentially undermine the economic foundations of rural communities in the arid West by making farming and ranching increasingly more difficult. American family farmers and ranchers for generations have grown food and fiber for the world, and we will have to muster even more innovation to meet this critical challenge. That innovation must be encouraged rather than stifled with new Federal regulations and uncertainty over the water supplies and basic operations for irrigated farms and ranches in the rural West.

My testimony will provide some background describing the unique nature of western agriculture and water, and will summarize key concerns we have with just a small sampling of the administrative regulatory proposals we are grappling with. Since the mission of the Family Farm Alliance is water-focused, our emphasis in this testimony will similarly place more attention on those regulations that can impact water use for western farmers and ranchers. However, this testimony is also intended to demonstrate the conservation and open-space benefits provided by western farms and ranches, and also to investigate the unique opportunities to advance further voluntary, grassroots-driven conservation efforts in those areas.

I. The Unique Nature of Western Agriculture

It is critical to understand the wide variety of types of western agriculture (defined as those activities occurring west of the 100th meridian [1] where rainfall is generally below 20″ per year) and the unique nature of western agricultural challenges. Vast differences exist between the circumstances faced by western producers and their counterparts in the eastern, southern and midwestern regions. These primarily derive from three drivers that have tremendous impacts on western farmers and ranchers: (1) the large amount of federally-owned lands in the West; (2) explosive population growth in recent decades (expected to continue into the future); and (3) the recent rapid and proposed development of energy resources.

The unique nature of the West presents challenges and opportunities to find creative solutions. western food and fiber producers face many core challenges today, including:

- Attempting to align agricultural and food production with improved environmental outcomes;
- Seeking ways to find common ground with the urban public; and
- Water scarcity and competition with other demands, including growing water needs for expanding energy development. Regulatory challenges, climate change and an aging water infrastructure complicate efforts to find meaningful long-term solutions.

This testimony seeks to provide perspective on these matters and offers specific recommendations in several areas important to western agriculture: water supply, conservation of biological diversity and nature resources, and immigration policy. It also offers reflections on the future role of the Federal Government. One of the defining principles underscored in this testimony is that policymakers need to change the model from "top-down" Federal management to an emphasis on partnerships among private, public and non-governmental interests in order to take care of landscapes and produce food.

The recommendations proposed here can help keep western agriculture productive and profitable, which promotes sound communities, viable economies and healthy landscapes in the West. Good policies will drive the programs and activities that lead to great public investments. These will pay for themselves over and over and demonstrate positive long-term impacts.

II. Western Water Regulatory Concerns

A. Overview

Water is the key to economic, social and environmental prosperity in the American West. Food security is as vital to our homeland security as other national security concerns, and the certainty and stability of the production of food and fiber on western irrigated lands is critical to our nation's and the world's ability to feed a growing human population. As the West's population has grown, water issues have become increasingly important—and polarized. Growing urbanization has led to in-

[1] Source: Intermountain West Joint Venture. *2013 Implementation Plan—Strengthening Science and Partnerships.* Intermountain West Joint Venture, Missoula, MT

creased public demand for available water supplies to provide recreational and environmental benefits. This places heavy demands on western water supplies, which were historically developed and continue to be relied upon for the production of agricultural goods.

Contributing to the loss of productive agricultural land in the western United States is growing competition to secure agricultural water rights—some of the most senior water rights in the West—to meet growing municipal, energy and environmental demands. In essence, agricultural water has become the default water supply for meeting other demands in the modern West. Unfortunately, the only large potential for moving agricultural water to other uses will come from fallowing great swaths of farmland and transferring that water to meet other demands, which has grave implications for our country's ability to produce food for a growing world population. This factor alone could significantly threaten the luxury Americans currently enjoy—spending a very low percentage of their disposable income on food. These issues and other growing domestic and global food security and scarcity concerns must be considered as Federal water policies are developed and implemented.

B. Regulatory Challenges and Recommended Solutions

The very significant Federal presence in the West presents unique challenges that producers may not face in other parts of the United States, particularly with respect to the reach of the Endangered Species Act (ESA). Federal agency implementation of this law can have very significant impacts on how producers manage land and water. Importantly, once-certain Federal water supplies that were originally developed by the Bureau of Reclamation (Reclamation) primarily to support new irrigation projects in recent years have been targeted and redirected to other uses. So, in the West, once certain water supplies—one of the few certainties in western irrigated agriculture—have now been added to the long list of existing "uncertainties." The ESA and Clean Water Act (CWA) are not working in the West. Environmental pioneers dealt well with the issues of their day, but the water supply and delivery "tools" they built only got us so far. We need to develop the next generation of tools that build on our successes but also recognize our limitations. Today, more than a third of the 3.6 million stream miles in this country are designated as impaired under the CWA. Under the ESA, 28 types of salmon have been listed and none have recovered. Though listing of waters as impaired and species as endangered might be perceived by some as victories, they have by and large not translated to real improvements to the species on the ground.

It is very clear to those who work the land that the ESA and CWA need to be addressed using a performance-based approach. We need to empower those who can actually implement substantive benefits to their environment; and we believe private landowners are the key here. Of course, these improvements cannot be done mostly out of their own pockets and without appropriate assurances (these activities provide societal benefits and thus should be societal expenses). Second, there needs to be regulatory and statutory changes made to these major acts to empower environmental markets and to establish proven approaches and data considerations for decision making. The constructive scientists working for Federal and state fish and wildlife agencies are becoming increasingly hamstrung with paperwork and legal deadlines driven by lawsuits from a handful of activist groups. For example, a legal settlement reached between these groups and the Obama Administration could potentially add hundreds more western species to the ESA list.

A prime factor concerning western irrigators is the employment of the ESA by Federal agencies as a means of protecting single endangered or threatened aquatic species under the ESA by focusing on one narrow stressor to fish: water diversions. For the second time in a decade, Congress in 2010 directed that the National Academy of Sciences (NAS) convene a high-level, independent scientific review of Federal restrictions on water deliveries affecting thousands of western farmers and ranchers. In 2009, those restrictions—based in large part on ESA biological opinions in California's Sacramento-San Joaquin River Delta (Delta)—were a primary cause for the water cutbacks and rationing afflicting hundreds of communities throughout the state and the resulting economic devastation in the San Joaquin Valley. The NAS report stated, in part, that the large number of stressors, their effects and interactions in the Delta lead to the conclusion that efforts to eliminate any one stressor (such as water diversions) are unlikely to reverse declines in listed species. Opportunities exist to mitigate or reverse the effects of many stressors. Continued effects

analyses, modeling and monitoring are necessary to ensure actions taken to rehabilitate the ecosystem are cost-effective.[2]

A similar decision to focus exclusively on one stressor—a Federal irrigation project—was made by Federal agencies in the Klamath Basin in 2001, and that decision and the science used by Federal fish agencies to support the decision, was criticized later in a review conducted by the NAS.

The California and Klamath stories are very similar. The NAS stepped in after Klamath Irrigation Project supplies from Upper Klamath Lake were cut off by Federal biological opinions under the ESA in 2001. The NAS' objective scientific review[3] concluded that there was insufficient evidence to support these biological opinions in restricting agricultural diversions from the Klamath system, which had led to the near collapse of the local agricultural community. In Klamath, the Federal regulators looked at only one of the stressors contributing to the fisheries' decline and they focused on only one solution—cutting off water supplies to agriculture.

Not surprisingly, the listed species apparently are no better off today than they were in 2001, yet the agricultural community struggles with operating capital, input suppliers and sales contracts for agricultural products, due to the lack of a reliable water supply that has been redirected with uncertain benefits to ESA-listed fish. Likewise, in California today, the same Federal agencies have refused to assess the impacts of the many stressors affecting the health of the Delta. And, for more than 15 years they have been restricting or cutting off water deliveries, even though their experience during those 15 years have conclusively demonstrated that long-term agricultural water restrictions have not prevented fisheries from declining in the Delta.

As in California, the effects of the Klamath restrictions were immediate and far-reaching, creating losses not just to the economy, but also to wildlife resources as water was diverted away from farms and ranches (and two Federal wildlife refuges). And yet, the Federal regulators failed to perform any environmental impact analysis before they ordered irrigation water cutbacks in California and Klamath. Clearly, ESA implementation by several biased scientists within Federal agencies must also be addressed, primarily with improved peer review and adherence to laws like the Information Quality Act. Best available science is not simply a slogan for Federal agencies to trumpet; such science must truly be used in natural resource decision-making.

Boots-on-the-ground efforts and actual recovery of species should define success under the ESA, not endless litigation and what appears to be the opportunistic pursuit of attorney's fees by certain environmental groups. According to a recent Government Accountability Office (GAO) report,[4] in just 4 years, litigating environmental groups raked in more than $15 million from taxpayers, with some of these groups' attorneys being paid as much as $500 per hour from the public treasury. These environmentalist lawsuits are the poster child for what has become an environmental litigation industry. While others are busy fixing the problems outside the courtroom, including implementation of the historic Nez Perce Water Rights Agreement (IDAHO) and collaborative efforts by ranchers to prevent listing of the western sage-grouse, litigious groups continue to drain resources and time, distracting everyone from the real goals of the ESA.

The goals of the ESA, CWA, National Environmental Protection Act (NEPA) and other Federal environmental laws are laudable. However, these decades-old laws are in need of some targeted reforms, including commonsense changes to make them work better, encourage incentive-driven recovery efforts, and discourage litigation:

- Agencies should focus on applying the ESA in a way that fosters collaboration and efficiency of program delivery and is incentive-driven.
- Standards for scientific and commercial data that are used to make decisions under the ESA must be established.
- Peer review of ESA listing decisions and ESA Section 7 consultations should be provided by a disinterested panel. Administrative guidelines and/or legislation can be crafted to create procedures for that process.

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[2] *Sustainable Water and Environmental Management in the California Bay-Delta* (2012), NAS Water Science and Technology Board (*http://dels.nas.edu/Report/Sustainable-Water-Environmental-Management/13394*).

[3] *Scientific Evaluation of Biological Opinions on Endangered and Threatened Fishes in the Klamath River Basin: Interim Report* (2002), NAS Board on Environmental Studies and Toxicology (*http://dels.nas.edu/Report/Scientific-Evaluation-Biological-Opinions/10296*).

[4] *Information on Cases against EPA and FWS and on Deadline Suits on EPA Rulemaking.* GAO–15–803T: Published: Aug. 4, 2015. Publicly Released: Aug. 4, 2015.

- For ESA litigation settlements involving Federal environmental agencies, the Federal Government can provide better oversight on how (and how much) attorney fees are distributed.
- Incorporate ideas for improved "Safe Harbor" for landowners, neighboring landowners and water districts. Programmatic safe harbor (ESA Sec. 9 "take" protections) should be provided for anyone conducting normal operations within a certain radius (probably species dependent) of proposed projects.
- Implement recommendations of the NEPA Task Force[5] (*Report to the Council on Environmental Quality on Modernizing NEPA Implementation 2003*).
- Implement the recommendations of the 2014 ESA Congressional Working Group.[6] These are incremental measures that help change the paradigm in western resource management so that we end up limiting dollars spent on litigation instead of habitat protection and food production.

C. Concerns with Recent Federal Agency Administrative Actions

For generations, American family farmers and ranchers have grown food and fiber for the world, and these farmers will have to muster more innovation to meet the critical challenge of producing even more to meet projected future increases in world (and U.S.) demand for these commodities. Such innovation in agriculture must be encouraged by the Federal Government, rather than stifled with new, top-down Federal policies and regulations that create uncertainty over the very water supplies originally developed for irrigated farms and ranches in the rural West. A handful of some of the more troubling administrative developments is further described below.

1. Principles and Requirements for Federal Investments in Water Resources

Western farmers and ranchers in the past 7 years throughout the western U.S. have feared that new guidelines intended to clarify Environmental Protection Agency (EPA) and Corps of Engineers (Corps) administration of the CWA and the White House Council on Environmental Quality (CEQ) efforts to create new criteria to guide planning efforts for Federal water investments could, in fact, actually bring water project development to a halt. Those fears remain. The process originally proposed by CEQ to implement Principles and Requirements for Federal Investments in Water Resources is daunting, subjective and uncertain, and the costs and delays it would impose could preclude many planning and development efforts. We do not want to see a program that becomes mired in a process that ultimately delays implementation of critical projects. Those projects—especially those that enhance water supplies—already are very time-intensive and costly, and any additional delay for planning and studies will only add to the time frame for providing water supply relief.

2. *Waters of the U.S.*

I have similar concerns regarding the new "*Waters of the U.S.*" (WOTUS) rule adopted by EPA and the Corps. The WOTUS rule was intended to clarify administration of the CWA jurisdictional issues, but is very uncertain, particularly in areas where western farmers and ranchers store, move and apply water for irrigation. This uncertainty brings with it the risk of additional regulations, time-consuming and potentially expensive procedures, expanded opportunities for litigation and a shift from local and state water management towards increased Federal agency regulation and oversight. I do appreciate that the new CWA rule would theoretically preserve current CWA exemptions enjoyed by the agricultural community such as the agricultural return flow exemption and the agricultural ditch and drain operations exemption. However, I fear that the new rule's approach to defining other water features is so expansive and vague that it will be used by opponents of new storage projects to halt further water development in the West. Our farmers and ranchers simply do not need another layer of difficulty added to a profession that is already saddled with significant challenges.

3. EPA's Aquatic Life Hydrologic Alteration Report

Earlier this year, EPA and the U.S. Geological Survey (USGS) issued a draft aquatic life hydrologic alteration report that was developed to serve as a source of information for states, tribes and territories on (1) the natural flow regime and potential effects of flow alteration on aquatic life; (2) CWA programs that can be used to support the natural flow regime and maintain the health of aquatic biota; and

[5] *https://ceq.doe.gov/ntf/report/finalreport.pdf.*
[6] *http://lummis.house.gov/uploadedfiles/esaworkinggroupreportandrecommendations.pdf.*

(3) a flexible, nonprescriptive framework to quantify targets for flow regime components that are protective of aquatic life.

From the day of its public release, Family Farm Alliance members have raised concerns with this report. For example, the report notes that "Clean Water Act programs can incorporate strategies to protect water quality and aquatic life from the potentially harmful effects of flow alteration . . ." and "efforts to implement strategies to protect aquatic life from flow alteration will be most effective if numeric targets are identified for flow-regime components that equate to intact and healthy aquatic communities". It appears that EPA is stating that any that results in altering the "natural" landscape is "bad" and shouldn't be done. This is an area that has always been left to the purview of the individual states based upon state constitutional mandates. Because a state-based water right is a private property right, this amounts to a serious threat to state sovereignty and private property rights and is a direct affront to state water laws. Our initial suspicions have been confirmed by others in the agricultural community; please see the commentary prepared by Budd-Falen law firm, of Cheyenne, WY, which I've included as an attachment to this testimony.

D. Concluding Remarks on Western Water Challenges

Western water users face continued challenges on the ground. The destructive tactics of the environmental litigation industry, which drives and legitimizes the biased implementation of Federal environmental laws by agencies, have eroded once-certain water deliveries to western producers. However, western taxpayers strongly support [7] water for farmers, and elected officials should be bolstered by that fact as they stand up and provide the strong leadership that is needed to protect family farms and ranches.

Our goal is to find solutions to western water conflicts that protect our ability to feed ourselves, export food to others and continue to lead the world in agricultural production while finding ways to accommodate the water supply needs of growing urban areas, energy development, recreation, and environmental preservation. Fair, balanced and long-lasting solutions will not come easily. They will require visionary leadership and a firm commitment to sensible, workable policies.

III. Conservation Opportunities in Western Irrigation Agriculture

A. Importance of Irrigated Agriculture to Western Waterfowl Habitat

When something is devalued—or worse, demonized—it becomes easy, even desirable to cast it aside. We believe that the current regulatory regime under-values western agriculture, and some, not all, environmentalists would have the public and policy-makers believe that growing food is scourge upon the land that should be minimized if not eliminated altogether. Part of the Alliance's mission is to emphasize the economic, cultural and environmental value of farming and ranching in the West, and to have those values recognized by Federal laws, regulations and policies. Such an approach to policy making would be in-step with the public appreciation for open space, land trusts, farmer's markets, and the rapidly growing interest in local, sustainable, organic foods.

Rather than focus exclusively on the alleged depredations of western agriculture, Federal regulators need to recognize that many of our wetlands are sustained by irrigated agriculture, and that much of the private farm and ranch lands adjacent to public lands a provide important buffers from developed areas. We run the risk of losing those wetlands, buffer areas and open spaces when agriculture is devalued and demonized by regulatory policies reflecting the agendas of single-purpose interests groups. Instead, Congress and the Federal agencies that it oversees should support and advance payment for ecosystem services (PES) programs that create opportunities for partnerships with landowners, businesses, non-governmental organizations (NGO), and agencies that can significantly improve the environment, business

[7] A 2009 survey released by Colorado State University (Bright Pritchett, *et al.,* "Public Perceptions, Preferences, and Values for Water in the West—A Survey of Western and Colorado Residents," Colorado State University Water Institute Special Report No. 17, February 2009) is remarkable for the strong support average citizens from the American West give agriculture, especially in times of drought. The report provides very interesting findings that underscore western householders support for water storage projects and irrigation over environmental and recreational water needs in times of shortage. Respondents were keenly aware of the potential for long-term water scarcity and how that could impact farmers and ranchers. For example, among western respondents to the CSU poll, the most popular strategies for meeting long-term needs were to build reservoirs and reuse water, whether it is on private lawns or public landscapes. The least popular alternative was to buy water from farmers. The survey demonstrated broad support in the western United States for keeping water in agriculture.

climate and quality of life within western watersheds. I will expand on the PES program a bit further on in my testimony.

Irrigation has increased agricultural productivity in the arid American West, but media coverage often focuses only on how it has altered the natural landscape. However, irrigation projects also provide important benefits to wetlands. In California's Sacramento Valley, rice production provides vitally important surrogate habitat and food for waterfowl and other species. In northern Colorado, a study[8] by Colorado State University (CSU) researchers found that 92 percent of wetlands were visually connected to the irrigation infrastructure. Though land conversion and water diversions have led to dramatic reductions in historic wetland acreage in some places, it is clear from the CSU study that current agricultural landscapes create wetlands that rely on irrigation water.

The Intermountain West Joint Venture (IWJV), a public-private partnership with a mission to conserve priority bird habitats through partnership-driven, science-based projects and programs, has determined that agricultural producers that flood-irrigate working wet meadows in certain landscapes play a key role in sustaining Pacific Flyway waterfowl populations during spring migration.

For example, the Southern Oregon and Northeastern California (SONEC) region is one of the most important spring migration stopover areas in North America, supporting more than 4.9 million dabbling ducks at North American Waterfowl Management Plan (NAWMP) goal levels. The IWJV's 2013 Implementation Plan states:

> *"Most spring-flooded wetland habitat in the SONEC Region occurs on working ranches where flood irrigation of wet meadows is used for hay production and grazing. The timing of flooding and the annual vegetation management practices conducted on these privately managed ranchlands fits well with the needs of spring-migrating waterfowl. These wet meadows are typically flood irrigated from March through July, hayed in late summer, and grazed during the winter. This productive form of wetland habitat management capitalizes on the snowmelt-driven hydrology of the largely closed-basin SONEC landscape. Used in this way, the wet meadows provide spring migrating waterfowl with abundant food resources and desired shallow, open-water wetland conditions."*[9]

The IWJV's bioenergetics modeling revealed that 64,700 acres of flood-irrigated wetland habitat must be provided annually on private working wet meadows in SONEC during spring migration to support waterfowl populations at NAWMP goal levels. Clearly, agricultural irrigators play an integral role in sustaining migratory bird populations in the intermountain West. This example, which plays out to varying extents for waterfowl and other wetland-dependent birds each spring in other intermountain valleys, is a win-win for achieving wildlife conservation and agricultural production objectives on the same land with the same water.[10]

B. Open Space Values Provided by Western Farming and Ranching

Americans should appreciate the fact that western farming and ranching operations provide valuable open space. In the Southern Rockies, for example, 43 percent of the private land that is located adjacent to public lands is associated with a Federal grazing lease.[11] The approximately 31,000 grazing permits on BLM and Forest Service lands are connected to more than 100 million acres of private land that ranchers utilize for sheep and cattle grazing during the rest of the year.[12] What would happen to wildlife and open space if public land grazing were to end and the private lands were developed? Private lands provide most winter and riparian habitat for many wildlife species. Public lands, being less productive, cannot sustain healthy wildlife populations once the interspersed private lands are developed and reappear as housing subdivisions.

Conservation that works is conservation that works not only for natural communities, but for human communities as well. Actions that benefit one at the expense of the other are not truly conservation. City people want rural landowners to protect wildlife habitat, open space and provide ecosystem services, yet many landowners feel that city people take for granted these societal benefits, without so much as a

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[8] Sueltenfuss, Cooper, Knight, and Waskom, "The creation and maintenance of wetland ecosystems from irrigation canal and reservoir seepage in a semi-arid landscape," Colorado State University, 2012.

[9] Source: Intermountain West Joint Venture. *2013 Implementation Plan—Strengthening Science and Partnerships.* Intermountain West Joint Venture, Missoula, MT. *http://iwjv.org/2013-implementation-plan.*

[10] *Ibid.*

[11] Richard L. Knight, "The Public-Land Grazing Debate is Over (and we won!)," *Working Ranch Magazine,* Spring 2009.

[12] *Ibid.*

thankful nod. Meanwhile, the economic reality is that our efforts to produce food and fiber are increasingly placed at risk by our global economy, by increasing regulation, and by cheap—and questionably safe—food from offshore. The rift between the West's rural and urban societies can be overcome only when we appreciate what each contributes to our collective quality of life and the natural interdependencies that bind us.

C. Working Landscapes and the Protection of Biodiversity

Alongside water, and in many cases directly related to it, western agriculture also confronts the challenges of increased pressure to maintain biodiversity in working landscapes. Recent analyses and regional case studies [13] suggest that formally-designated protected areas are not sufficient in size, heterogeneity or location to capture the bulk of North America's wild biodiversity within their boundaries. In the West, many elements of this biodiversity are better represented and safeguarded on private and tribal lands than on the highly-protected, specially designated public lands managed by Federal agencies. A mosaic of private and public forests and rangelands that include protected areas, but are not limited to them, contributes more to maintaining biodiversity than protected areas alone. Ranch lands already serve as a buffer for public lands against invasive plants, domestic cats and dogs, and the danger of wildfires. We can encourage all appropriate land uses, but importantly, only to the degree that the land can sustainably accommodate those uses.

We do not have to sacrifice production for conservation—we can achieve both objectives. However, we need time to make this happen, and a critical step that could be taken to help would be to place a 10 year moratorium on the loss of grazing Animal Unit Months (AUMs) in order to come up with a long-term balanced plan to integrate food production with conservation practices. We cannot afford to lose any more producers while this process takes place, through which we can:

- Work across administrative boundaries rather than staying within them;
- Integrate social capital with ecological and economic dimensions;
- Encourage bottom-up participation rather than top down initiatives;
- Increase success, reduce expense and eliminate working at cross-purposes through improved interagency cooperation, which would, for example, complement the role of the Natural Resources Conservation Service (NRCS) in regards to water quality. The Interior Department Partners for Fish and Wildlife Program demonstrates a workable process to reconcile inherent conflicts brought about by multiple demands and;
- Explore the nexus where the Federal Government owns the land and the states control the water.

Above all, we need to empower local watersheds to provide leadership, and problem-solve in a unique, locally-driven manner.

D. Support for the "Partners" Approach

The Alliance supports the efforts of a group within the U.S. Fish and Wildlife Service (USFWS) called "Partners for Fish and Wildlife" that helps to fund habitat work on private lands. This program already has the infrastructure and relationships with landowners to get effective habitat work done for endangered species. They have projects on the ground all over the country and are doing yeoman's work to preserve habitat for toads in Nevada, Sage-Grouse in Wyoming, and the Mountain Plover in Colorado, to name just a few success stories.

The Partners program is successful because it employs experts who are on the ground, working with landowners, instead of crafting mandates via biological opinions from far-removed government offices. These Federal officials recognize that if a species exists and thrives on a property—public or private—the practices that currently occur on that property will not harm and could possibly protect that species. So—they learn to recognize, for example, that sage-grouse are vulnerable to predators, and that areas where ranchers run sheep tend to have heavy predator control. They take the time to respect the observations of local landowners, who every day see thriving sage-grouse populations on their lambing areas. Working with landowners, they gain an understanding and shared belief that the predator control that takes place on private lambing grounds has helped to keep the sage-grouse in those areas healthy.

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[13] Gary P. Nabhan, Richard L. Knight, and Susan Charnley, "The Biodiversity that Nature Reserves Can't Capture: How Western Ranches, Tribal Grazing Lands and Private Forests Sustain Ecosystems and Their Diverse Species" in *Saving the Wide Open Spaces,* 2011.

The Partners for Fish and Wildlife is uniquely positioned to fulfill the direction of the ESA for the USFWS to manage threatened and endangered species. The funding for USFWS should be fundamentally re-prioritized to move dollars away from the "regulatory hammer" approach used by some ESA regulators within the agency and towards the Partners program.

E. Payment for Ecosystems Services (PES)

Western farmers and ranchers can also play a key role in using their lands, water and management practices as tools to engage in payment for PES projects. A PES scheme creates opportunities for partnerships with landowners, business, NGOs, and agencies that can significantly improve the environment, business climate, and quality of life within western watersheds. A voluntary system of payments may be more socially acceptable and effective than extensive additional regulation. Critical discussion and reflection in the western farm and rangelands community about PES and market-based approaches more generally is essential. A well-designed PES program can make a ranching or farming operation even more viable.

We need to determine the role for PES. As experimentation with PES expands in farming communities and rangeland systems across the United States, it will be important for ranchers, practitioners, researchers, companies, public agencies, and other stakeholders to investigate, collaborate and critically reflect upon PES design, implementation and evaluation. Existing programs can inform and expedite the development of new programs. Similarly, pilot tests of new approaches are likely to help existing programs become stronger and identify opportunities for expansion. The adjacent sidebar highlights some specific models.

Alongside PES experimentation, it will be necessary to document and evaluate desirable and undesirable outcomes to determine whether the approach is advancing or compromising rangeland sustainability. For everyone involved, questions must be addressed. Will PES programs actually help society better manage ecosystem services that are integral to human well-being? Is it appropriate to "commodify" and price rangeland ecosystem services in the marketplace? What happens if technological substitutes for ecosystem services become cheaper, and therefore the economic argument for ecosystem service protection is removed? Is there a solid scientific basis justifying the ecosystem service benefits that are being paid for? Are landowners in a position to adopt new management practices that will deliver enhanced ecosystem services, and will PES payments lead to more diversified and robust ranch business models?

F. Concerns with U.S. Fish and Wildlife Service Mitigation Policy

On November 3, 2015, the President issued a Memorandum entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." Within our membership, there have been growing concerns that the Memorandum's standards exceed statutory standards set in law by Congress and will result in further regulatory confusion and burdens. There are very polarizing views on the issue; reminiscent of the WOTUS rule. The Memorandum directed all Federal agencies that manage natural resources to avoid and minimize damage to natural resources and to effectively offset remaining impacts, consistent with the principles declared in the Memorandum and existing statutory authority. Under the Memorandum, all Federal mitigation policies are directed to clearly set a net benefit goal or, at minimum, a no net-loss goal for natural resources, wherever doing so is allowed by existing statutory authority and is consistent with agency mission and established natural resource objectives.

In response to the Memorandum, on March 8, the USFWS announced proposed revisions to its Mitigation Policy that has guided USFWS recommendations on mitigating the adverse impacts of development on fish, wildlife, plants, and their habitats since 1981. The revised policy provides a framework for applying a landscape-scale approach to achieve, through application of the mitigation hierarchy, a net gain in conservation outcomes, or at a minimum, no net loss of resources and their values, services and functions resulting from proposed actions.

The goal of providing a mitigation framework for conservation using the mitigation hierarchy is laudable. What is particularly noteworthy here is the new broad scope of public and private activities USFWS is seeking to reach through the policy. According to the proposal, "the Service is authorized to recommend or require mitigation [for those resources] that contribute broadly to ecological functions that sustain species." For example, the Fish and Wildlife Coordination Act covers all classes of wild animals, and all types of aquatic and land vegetation upon which wildlife is dependent. The proposed policy also cites NEPA for authorizing protection of habitat and landscapes. Even though this broad assertion of authority "may overlap

with that of the States", the USFWS proposes no mode of accommodation between these coordinate levels of Federal Government.

Section 10 of the ESA authorizes USFWS to regulate private "take" of species, including the authority to mitigate the take. As discussed above, the current proposal reaches far beyond threatened and endangered species to authorize "recommendations and/or requirements" for all private actions affecting habitat. No comment is offered on how USFWS will discharge this large new workload when Congress has not provided the financial resources for executing the current portfolio of responsibilities. Nor is any comment offered on how USFWS will coordinate its new responsibilities with similar duties carried out by other Federal agencies. Additionally, the proposal suggests no mechanism for how USFWS will engage and encourage landowners to participate in this new, significant Federal requirement for land use. As the proposal explains: "The Service will provide mitigation recommendations under an explicit expectation that the action proponent . . . is fully responsible for implementing or enforcing the recommendations."

We are currently working with other western resource interests to develop comments on this proposed policy, which I urge your Committee to monitor closely and engage on, as necessary.

G. Concerns with Other Administrative Proposals

There are numerous other threatening non-water related regulations and actions that have demanded our attention recently.

I will not discuss these in detail, but here are just a few of the more troubling examples:

- **BLM/U.S. Forest Service (USFS) Plan Amendments addressing sage-grouse** impose unrealistic vegetative standards which cannot be met. In most areas, these standards will lead to reduced livestock grazing or changes in season of use.
- **BLM Planning Rule 2.0.** envisions planning on a broader scale with reduced emphasis on analysis of local socioeconomic impacts.
- **Proposed Grizzly Bear de-listing for Wyoming** expands grizzly bear protections into areas previously determined to be "socially unacceptable". This proposal is troubling to the grazing industry because it emphasizes reduction of livestock conflicts through "voluntary" permit relinquishments.
- **USFS Big Horn Sheep Risk of Assessment** evaluates the risk of big horn/domestic sheep interaction based solely on a questionable analysis of recorded forays of individual big horn rams.
- **Livestock grazing reductions to accommodate excessive wild horse populations.** This is happening today in Nevada.

Other proposals that will impact western farming and ranching operations are Department of Transportation regulations impacting the transportation of livestock, the USFWS listing of the wolverine, and rules and regulations proposed by the Department of Labor on the H–2A program and the need for employees to tend sheep, bees and other livestock. I would be happy to provide further information on any of these troubling developments following today's hearing.

H. Future Role of the Government

We are proud of our organization's track record and of the relationship we have with the Department of Interior, Reclamation, Congress, and other proactive NGOs. I believe we are seen as credible leaders in the western water arena on both sides of the aisle, as evidenced by more than 50 invitations to appear before Congressional committees since 2005.

The Alliance worked hard to create the Western Agriculture and Conservation Coalition, a collaborative effort intended to find ways to improve the environment, protect western irrigated agriculture, and keep farmers and ranchers in business. Other members of our coalition include The Nature Conservancy, California Farm Bureau Federation, Environmental Defense, Wyoming Stockgrowers, Trout Unlimited, and the Irrigation Association, to name a few. I also represent the Alliance on the advisory committee of the AGree process, a long term, collaborative initiative that seeks to transform U.S. policy affecting the food and agriculture system at home and abroad.

It is critical to assess what the future role of government will be. There is tremendous uncertainty as to the effects of Federal budget restraints. Right now, government programs and Federal laws are also creating winners and losers. For example, Federal ethanol policy works for midwestern corn growers, but hurts the livestock industry which relies on corn for feed. Laws and regulations like those imposed by

the ESA are being implemented differently in different parts of the country depending on judicial circuit rulings. Producers in the eastern United States have not experienced the regulatory hammer approach employed by ESA administrators in the West. Also, opportunities are likely to arise for an expanded future role for NGO partners, since government can only afford to do less, at least in the near-term. This is one reason why the aforementioned Western Agriculture and Conservation Coalition was formed. Policymakers and resource managers need to assess those opportunities.

IV. Conclusions

Western irrigated agriculture is a strategic and irreplaceable national resource. It must be protected by the Federal Government in the 21st Century. Properly managing Federal watersheds and encouraging Federal agencies to work with the agricultural community to solve local water challenges are imperative. Ranchers like me and others in the regulated community see increased Federal top-down regulations and controls being proposed and put in place, while proven, collaborative partnership-driven approaches to find lasting solutions to vexing water and natural resource problems appear to have been put on the back burner. I find it difficult to understand why agricultural production finds itself continually under attack when farmers and ranchers continue to provide the affordable food and fiber to feed and clothe the nation and the world. I am troubled why Federal agencies appear to be "biting the hand" that produces the food.

I thank you for the opportunity to elevate our concerns regarding the USFWS mitigation policy and the draft EPA flow study. Unfortunately, these are just the latest examples in a sweeping range of processes and actions that can, individually or collectively, have very real negative impacts to western irrigated agriculture, including the potential for disruption in water supplies and increased production costs.

We appreciate your support in seeking to compel Federal agencies to seriously reconsider the cumulative impacts of the resulting regulatory measures before adding additional chapters to what farmers and ranchers already see as a very large rulebook.

The CHAIRMAN. Thank you Mr. O'Toole.

We will proceed with questioning now by the Members. Each Member will have 5 minutes for questioning. I will take the liberty of going first.

And since Mr. O'Toole, your remarks were the freshest, I am going to start with you. You had described your written testimony as being a bit schizophrenic, I connect well with that, because you really come from a different perspective with your testimony, and certainly with your oral testimony. And we are here really looking at the impact of existing regulations on the farm economy, but sometimes it is the inaction by Congress as well. So I would like to really address the point you made with at least three century old sheep farms, I believe you said that are out of business now, largely not because of market demand conditions, but available workforce. And we know on this Committee, we are very aware that making sure our farmers and ranchers have access to a reliable workforce is so important for us to be able to have food security and fiber security, food, fiber, energy, all those things.

So just real briefly, what recommendations as it relates to workforce, what do you need and what recommendations would you make?

Mr. O'TOOLE. Yes. Well, what is so curious about H–2A is it was a program that worked for our family and for our industry for 40 years. And it is not only the fact that we can't get the sheep herders and the workers, it is the shearers that come mostly from overseas, and they can't get their visas as well.

And so what I understand, and I have been in communication with H–2A and, frankly, the State Department, because it is an

international issue of how these men get allowed to come into the country in a very regulated way. They are overwhelmed by need.

I spoke at the Farm Foundation recently, which is not the West, and talked about the fact that these lack of workers in every state of the Union. And when I mentioned blueberries and strawberries, those are East Coast events that have happened. The Family Farm Alliance represents the entire western United States and Central Valley, California, and we could be in the H–2A discussion business. We are doing water, but every single member is 22 people short, 100 people short, ten people short.

So, some of it is budget. I absolutely do believe it is related to budget, because they are receiving a lot more applications for people, but I think that there is a real need to streamline, and I try not to be cynical, but the way that it has worked in the last year, something that worked for 40 years, it feels like there is a contrived dissonance where it was designed to not work this year.

So streamlining and some budget issues, I would say.

The CHAIRMAN. Thank you.

Mr. Ebert, in your written testimony you draw a clear picture of the challenges of increasing environmental regulations in a volatile agriculture economy. Can you give us a brief overview?

Mr. EBERT. Yes. The challenges that we are facing is of more regulations and the uncertainty of those regulations, and also along with the economic challenges. Being a dairy farmer, this past year I have lost over ⅓ of my income from milk. The biggest challenge is how do we comply with these regulations, or the requests from EPA to implement more practices and not have the funds available. There may be some Federal funding available as a cost-share, but, I don't have the funds to do the other half of it.

So that is a great challenge, and it is the great unknown, it is tough times out there on the farm, of balancing, keeping the farm viable, controlling my costs and then trying to meet all these environmental regulations that we see coming down the road.

The CHAIRMAN. Very good, thank you.

Ms. English, you mentioned the success of the University of Florida's best management practices that were widely adopted by local producers. Why do you feel that the EPA felt the need to choose a burdensome regulatory route when the local solution was proven to be successful?

Ms. ENGLISH. That is a wonderful question.

One of the challenges with water quality law in Florida, it is very much driven by litigation. We have very active environmental groups who are extremely sophisticated in the way that they use litigation to drive agency policy. One of the things that happened was that we had a group of environmental activists who sued EPA over water quality in the State of Florida. In order to resolve the litigation, EPA entered into negotiations with them, and came up with a solution without necessarily bringing all of the stakeholders to the table to resolve those issues.

The environmental community strongly disagrees with the BMP Program, regardless of what we have evidenced. And in a further attempt to satisfy them, not only do we have a BMP Program that has been wonderfully successful, looking at the Everglades' agricultural area, they have far exceeded the goals for the reductions of

phosphorus that they were required to meet, using best management practices, good soil practices, good water management practices.

But this year, in addition to the carrot of the Best Management Practices Program, we now have the stick of the compliance manual that is being developed even now. And the gentleman who is developing it for the State of Florida actually comes from a regulatory program. And one of the challenges he has had in coming up with a compliance manual is we have discussed the history of the program and that it is a very cooperative one, and typically when we see a Department of Agriculture person at our farm gate, we are happy to have them come in and tell us what we are doing right, and, frankly, what we are not doing right. But once this manual is in place, it will be a matter of a compliance and a noncompliance, and a notice of violation, as opposed to a program where we are working hard to improve the water quality for the people of the State of Florida.

The CHAIRMAN. Thank you very much.

Now I am pleased to recognize the Ranking Member for 5 minutes.

Ms. LUJAN GRISHAM. Thank you, Mr. Chairman.

Actually, I don't think I have a question for you, Ms. English, but I certainly appreciated and can empathize with your remarks about the level of expertise it takes in your family to navigate and respond and work to comply with the regulatory burden. I am a lawyer, although I only practiced for 10 minutes, so I don't have nearly your expertise, although I did win all my cases, so it is a better record than Perry Mason. I know, 10 minutes. Do what you can. But my background is in health care, and I feel the same way. You shouldn't have to have a healthcare legal background in order to read your explanation of benefits, or to try to navigate my bill, let alone deal with the decisions for consent in the healthcare system. We can create an environment where it is just too complicated. So people unwittingly, even if it is something that you would want to comply with, can't. And I really appreciate you highlighting those challenges.

My question really is, again, for Mr. O'Toole. And I am looking for the right balances. I understand unequivocally that when we work too hard to create a regulatory environment that is just really focused on the rule of law, or the letter, that we don't encourage or incentivize or create innovation, or work to create partnerships that really do make a difference. And I was struck by your statement that USDA, now that their role has been minimized by EPA, particularly in water quality, but I understand how that happens. So in my state, and I have two issues; first, we are a drought-ridden state, and if we don't figure out different management practices, including irrigation, which I support as a water system. I mean it is a 400+ year, probably older than that, system in New Mexico. But we are in one of the mega drought states, so we are going to have to figure out what we do about that. But in that context, you have local jurisdictions who do well permitting unilaterally, who do septic permitting unilaterally without testing, then you have the State Environmental Department trying to figure it out, we have all sorts of problems. I am struck by what is hap-

pening in Flint, Michigan, where we still have these issues. So I can see how you want to centralize, but not at the expense of best management practices and ideas.

How do we get more stakeholders at the table, and how do we create the balances that you were starting to talk about, as this Committee really works to talk to our partners about making sure that we are investing in your expertise, not moving away from it?

Mr. O'TOOLE. Ms. Lujan Grisham, I really appreciate the question because I happen to live in one of those places where it works. We have leadership, we have a conservation district that works, our NRCS works. I live on the state line, so we have BLM and Forest Service in two states. I have double the regulators of most people, what you have to do first is you build trust. It is all based on trust. And my leader says people support what they help create. That is the key to everything in the future because of the need to work on local watershed levels where you use the tools that we have.

I was on two Congressionally mandated NRCS oversight groups. Only 17 percent of farmers are using NRCS. We have to figure a way to build that trust. And, frankly, when I ask my members of the Family Farm Alliance, or my neighbors that don't use it, they just feel like the system is just so disjointed from their lives and so much paperwork, and I can tell you I do it, I am 25 miles from town, I can't tell you how many times I have run back and forth to sign papers, that people in the office say please get me out of the office. And I have the greatest respect for Jason Weller, the head of NRCS. What he has done with the sage-grouse and integrating USDA and Interior is a model for the future. But somehow, we have to get these people that are on the ground, on the ground with ranchers and farmers to come up with solutions.

What I learned in one interesting conversation, my leader and myself were asked to go to another place and talk about our successes in birds and fish and irrigation. And everything we do has a balance. We do both production and conservation. Our rule is we don't trade off one for the other. And we had 70 people there at that meeting, and we thought, boy, it really went well. And we asked where were the private landowners and there were none. And 5 years later, they haven't done anything. And so you have to trust the private landowners, especially in the West where you have the mixed ownership.

And one quick example. The Partners for Fish and Wildlife Service is a small part of the Fish and Wildlife Service that is incredibly successful. They will be at the Kissimmee River in Florida this year for Partners Day. The ecological service part of the Fish and Wildlife Service are listers, and they are looking to list. And unfortunately, there is too much attention paid to the litigators, and what I call the hatefuls. There are two kinds of conservation going on in America: the hopefuls and the hatefuls. And we have to find a way to empower the hopefuls. That is how we are going to be successful.

Ms. LUJAN GRISHAM. Mr. Chairman, I yield back. I really appreciate that. This Committee is really working hard to figure out a way to invoke more of that partnering, and to create a way that

incentivizes it and/or mandates it inside the bureaucracies that exist.

Thank you very much.

The CHAIRMAN. I thank the gentlelady.

Okay. I am pleased to recognize the gentleman from Oklahoma for 5 minutes of questioning.

Mr. LUCAS. Thank you, Mr. Chairman, and thank you, Mr. Chairman, both, for the opportunity to be here.

I guess my first observation of the panel would be this. Not many months ago, at this very table, in one of the very chairs you are sitting in, we had the Administrator of the Environmental Protection Agency to visit with us, who stood and attempted to defend the *Waters of the U.S.* rule, a regulation basically designed to assert Federal jurisdiction, in my opinion, over all waters, including those dry creek beds that may flow only once a year. And thank goodness, the courts have slowed that process down for a time, but that is not certainty.

Could you take a moment to discuss, in the context of what you have just described to us, if the *Waters of the U.S.* rule is fully implemented, what kind of an effect is that going to have on your operations, ladies and gentlemen, as you understand the rule in its present construction?

Ms. ENGLISH. If you gentlemen don't mind.

Mr. EBERT. Go ahead.

Ms. ENGLISH. I have spent a fair amount of time on this issue, and in reading the rule, and It was with a great deal of relief that I saw that the Sixth Circuit imposed a stay. We have citrus groves that are all within the distance limitations outlined in the rule to existing water bodies. Those trees are going to have to be replaced once we have a citrus variety that is resistant to citrus greening. We are planning for it. We are investing for it. The one thing that we are discussing as a family is what we do with a core permitting process if, when we remove those trees, we have to go back and get a Section 404 permit to replant citrus trees in that space.

In southwest Florida, a core permit takes between 3 and 5 years to obtain. We don't have the kind of money that will allow us not to produce citrus for 3 to 5 years while we wait for a Federal agency to make a decision. Our grove is where it has been since 1870. The fact that it has now magically become a matter for the Army Corps of Engineers, the United States Fish and Wildlife Service, and EPA to review is a little bit disconcerting.

I am not sure how we would deal with that if the rule is approved as it is written, in my opinion, we may be unable to replant our groves.

Mr. LUCAS. Which ultimately means the consumer that has enjoyed the most consistent, awesome citrus products from the southern United States for generations, ultimately, the consumer will pay a price too, correct? But, with the availability of those products going away. So it is not just the effect on farmers, it is the consumer too who will ultimately pay a price.

Ms. ENGLISH. It is a terrible price to the consumer, and it is a terrible price to the industry that has always embraced a wide diversity of interests, from very small farmers to very large farmers. And in the Florida citrus industry, we have large corporations, but

they are owned by families typically who are farming citrus. We are now the second largest producer of citrus in Lee County, Florida. I can remember when we were one of the smallest. The larger ones are gone. The smaller ones are gone. And it is because of these changes.

Mr. LUCAS. Mr. Ebert, Mr. O'Toole, any observations?

Ms. ENGLISH. Thank you.

Mr. O'TOOLE. Yes, sir, I had mentioned in my testimony and in my written testimony the effect on storage. Our valley built a 23,000 acre foot reservoir within the last 10 years. I worked pretty darn hard on it. It took 14 years to permit. And when you look at the combination of *Waters of the United States* and the further use of the rule of EPA to use the Clean Water Act in a much broader fashion than it is being used now, it will be virtually impossible to do. And what I have learned in the attempt to get along with a whole lot of bureaucrats, we have, as I said, almost double the bureaucrats of most people because of the state line issue, it is so office-driven and it is personality-driven. The interpretation of the rule, as I read it, is so broad that there are an awful lot of good people, but there are some that aren't. And when those people have the opportunity to use those rules in the way that they are written, I can see that anybody would be vulnerable in the irrigation world to challenge.

And you may have read the fellow in western Wyoming that just had a settlement. He built a little pond on his ranch, and they threatened millions and millions and millions of dollars in fines. It was finally settled because it was so ridiculous. But when you have the written language that gives those kind of people the ability to do that level of regulation, at a time when we need to be more flexible—and let me just say, the Family Farm Alliance wrote a paper in 2007 about climate in agriculture, and it is about adaptability. We are at a time when we need to be more adaptable, have more flexibility. This rule will do the exact opposite.

Mr. LUCAS. Mr. O'Toole, as an old farmer, we are all concerned about water quality. Ultimately, if you don't use that resource, no matter where you are at in the lower 48 states, it is going to wind up in the Atlantic or the Pacific, correct?

Mr. O'TOOLE. Yes, sir.

Mr. LUCAS. If it is not utilized.

Mr. Ebert, any thoughts, sir?

If the Chairman will indulge me for another few seconds.

The CHAIRMAN. Please.

Mr. EBERT. Yes, Congressman, I appreciate the question because, actually, I am going to give a little different perspective on that. I am a small farmer. I don't run thousands of acres or hundreds of head of cattle, and I certainly represent Pennsylvania agriculture. This rule would be devastating to the small farmer. I am along the Connemara River, so I have some river bottom in that, and if EPA would come in, I mean most of my farm would be, say, within the 1,500′ setback that they would regulate, that would pretty much take out my whole farm. I won't be able to use the crop production products for my crops, because none of them are labeled for use over water. So that is there, that is facing me and my family right now, that they could, if they ruled my whole farm

as a *Water of the U.S.,* I would be out of business. And that would put a lot of other small family farms in Pennsylvania out of business also.

Mr. LUCAS. Thank you, Mr. Ebert.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you.

Just an interesting observation, talking about the same egregious impact of this regulation, but we are looking at impacts from Wyoming to Florida to Pennsylvania. Pretty much covers the span.

I am pleased to recognize the gentlelady from Arizona, Mrs. Kirkpatrick, for 5 minutes.

Mrs. KIRKPATRICK. Thank you, Mr. Chairman.

Mr. O'Toole, I really appreciate your testimony. I represent a huge rural district in Arizona, half the state, and my mother's family were ranchers in my district. And water has always been an issue that we have had to deal with, and so many complexities, and something I have spent a lot of time thinking about. But I just have to tell you, a couple of years ago I was driving from Flagstaff, where I live, to the eastern edge of my district with my legislative director, and we crossed the Little Colorado River, and she said, what was that? And I said, that is the Little Colorado River. And she said, that is not navigable. And I am sure you have had that situation in Wyoming where waterways have been labeled as navigable, and they just aren't. And I just want your thoughts on where do we start with this issue? There seems to me to be a disconnect between what works maybe in Florida and the water you have in Pennsylvania, and what we don't have out West. You seem very commonsense and pragmatic, I would just like your thoughts about where do we start here?

Mr. O'TOOLE. Well, the thing that I have a lot of trouble with is who defines interconnectedness. We are in a state that has 12″, 14″ of precipitation. And so when you look at how a wetland in a National Forest is connected to private land here, that is where we get ourselves into trouble. And it is where I go back, and I just can't say enough about how great it is to have leadership at the conservation district level, which we have. We have had a lot of young people involved from the beginning, so we have a mixture of old and young, and I think it is putting your finger on exactly what happens in that watershed. And we are going to come up with solutions, and we have those solutions now, and in my perfect world I would like to see a world where once a diverse watershed group comes up with a strategy on water, whether it be storage or irrigation or wetlands which we have developed, the largest wetland in Wyoming was in the Pacific, it is on the Continental Divide, so it is now part of the Atlantic and Pacific Flyway. It went from 29 species to 140. That was done locally with people who actually fought EPA over doing it at the first part. Now it is 3,600 acres that includes a tremendous amount of grazing land with it.

So I just keep going back to, if we are going to do solutions, we have to have local people who will come up with how those watersheds work, with a vision for the future.

Mrs. KIRKPATRICK. Is the USDA helpful to you or not?

Mr. O'TOOLE. When it works, it is great. When it works, it is great. Unfortunately, my testimony about experience with the

numbers, that is what is challenging. Because Conservation Districts cross the entire United States, everybody is under a conservation district. When the system is working and empowering, and people feel comfortable with it, it really is great. But when it doesn't exist at all, and the frustration, like even the best ones of getting out of the office, I think that is something that we can focus on.

Mrs. KIRKPATRICK. That has been one of our pushes in Arizona to actually get the regulators out in those towns that are really having struggles with their water sources, and actually seeing, having conversations with the local people about what is going on, rather than just sitting in a remote office somewhere, conjuring up what they think is a solution, but really doesn't work.

In Arizona, we are doing a lot of aquifer replenishment, which has been successful. In fact, I was just meeting with a Tribal leader this morning who said that they can actually see now the grass coming back in these areas, and it really gives the local people hope to know that that water is underground.

Now, do you use that in Wyoming?

Mr. O'TOOLE. No. In fact, the underground storage that we are looking at is some CO_2-type stuff. But not so much, but in California where we have a lot of members, it is a huge tool, and it is a very appropriate the issue, as I keep saying, is that you go to the local area of Central Valley, California, or San Joaquin, in some places it is storage. And I just saw where 1 million acre feet went out to the ocean that would have been in the site's reservoir. A million acre feet this year that went out. Everybody has their own kinds of solutions, but the Family Farm Alliance is very familiar with and supportive of underground storage.

Mrs. KIRKPATRICK. Well, thank you. My time is running out but I really appreciate your thoughts about that. And you are right; one size doesn't fit all, and it is the local communities that know best what is going to work.

Mr. O'TOOLE. Right.

Mrs. KIRKPATRICK. So thank you very much. I yield back, Mr. Chairman.

The CHAIRMAN. The gentlelady yields back.

Now I am pleased to recognize the gentleman from Tennessee, Mr. DesJarlais, for 5 minutes.

Mr. DESJARLAIS. Thank you, Mr. Chairman. And I thank the panel for being here today.

Approximately 2 years ago, the EPA sent a shockwave through the ag community and the business community when they introduced their *Waters of the U.S.* rule. It has been a major concern and a major topic of discussion whenever I reach out to our Farm Bureau, which I would like to announce is the largest Farm Bureau in the country, located in my district in Columbia. Where it was former President, Lacy Upchurch, or our current President, Jeff Aiken, rarely do I have a conversation when this doesn't come up as a major concern to the farmers and ranchers there in Tennessee, and obviously, across the country. The impact of this broad expansion of Federal jurisdiction, well beyond the limits approved by Congress, would have enormous impact, as you all know. The rule defines terms like *tributary* and *adjacent* in ways that make

it nearly impossible for a typical farmer or rancher to know what a specific ditch is, ephemeral drains or low areas at his or her farm will be deemed *Waters of the U.S.* To date, 31 states and many agricultural organizations, including the American Farm Bureau Federation, have filed law suits against the WOTUS rule. And thankfully, in October, the Sixth Circuit Court of Appeals issued a temporary stay on this rule, citing that the burden of the WOTUS Rule outweighed any harm to the agencies in keeping the *status quo.* I, along with many of my colleagues on this Committee, have joined these groups in calling for the EPA Administrator McCarthy to scrap this regulation, and require any similar proposals to be developed only after significant consultation and input from states and local stakeholders, such as you who are here with us today.

Before developing any such rule, what does EPA need to do better to reach out to farmers and to understand their practices? And I will just go down the panel, starting with Mr. Ebert.

Mr. EBERT. Okay. Thank you for the question. EPA does have to sit down with the farmers, and instead of looking at enforcement, let's work together at solving the problems of water quality and water issues. I think that would be the main focus of what we would look at EPA to do, instead of coming out with a heavy-handed proposal with so much uncertainty of where we are going to farm, how we are going to farm, and the uncertainty of the heavy hammer coming down at the farm level, let's go back and rework and discuss the issues, and work forward from there.

Mr. DESJARLAIS. Just before we move on, as the President of the Pennsylvania Farm Bureau, what steps are you taking to educate farmers and ranchers about the rule and how to prepare for its impacts?

Mr. EBERT. We have put a lot of information out to our members. Luckily, the stay is in place right now, but there is so much uncertainty of how the rule is going to affect us. So as I stated before, if EPA came in and ruled my farm a *Waters of the U.S.,* I would be left in the dark of what to do next.

Mr. DESJARLAIS. Thank you, Mr. Ebert.

Ms. English?

Ms. ENGLISH. Thank you for this question. It is helpful to hear what happened when my state President, John Hoblick, and I met with the EPA ag liaison a year and a half ago when we were in Washington for a Farm Bureau meeting, and we had specifically requested a meeting to discuss the *Waters of the United States* rule, which, at the time, was in development, and what it would mean for Florida agriculture. What specifically we were interested in understanding, what EPA wanted to protect and what they felt was not already being protected by the rule. We got into a room that had not just the ag liaison, but a virtual panoply of Agency people who demanded to know why we were there, and then explained to us that they had nothing to explain to us, and that we needed to just leave.

Florida is a real challenge from a water perspective. We are a wet desert. We go through periods of time where we have 40″ of rain in 3 months, but we may also go through a period of time of 4 or 5 months where we get a negligible amount of rain. We have a tremendously managed system. Using the language that EPA

had published, from our perspective, virtually all of the state became jurisdictional for purposes of Army Corps of Engineering's permitting under Section 404. And given the endangered species issues that the State of Florida also has, requires that every single Corps permit, even a nationwide permit, go to consultation with the Fish and Wildlife Service for the protection of these species. Case in point, the Florida Bonneted Bat, which is newly listed, we don't know what to do to protect it. We don't even know where it likes to live or breed or feed, but we are responsible for generating the data that will help them understand how to develop a mitigation program for it.

Right now, if I send a file to the Corps and they put a public notice out, if that has a Florida Bonneted Bat issue, the earliest a staff person can get to opening the file, not reaching a decision, opening the file and looking at it and asking me if there is additional information, is 360 days.

Mr. DESJARLAIS. Thank you.

My time has expired. Mr. O'Toole, perhaps you will get a chance to respond in a later questioning.

The CHAIRMAN. Sure. I now recognize the gentlelady from New Hampshire for 5 minutes of questioning.

Ms. KUSTER. Thank you very much.

I have sympathy for the issue about the bats. In New Hampshire, it is called the Long-Eared Bat, and I am working with my loggers right now to protect the Long-Eared Bats. I am learning all kinds of new words about bat colonies, *et cetera.*

I am actually going to yield to the chair, who has a little bit more testimony or questions. I will save my questions for the second panel, but thanks for being with us.

I yield back.

The CHAIRMAN. To me. Thank you. The gentlelady yields. I appreciate that.

Mr. Ebert, we have heard, obviously, the universal issues with WOTUS, but I know from a Pennsylvania perspective, we have been dealing with water-related regulations long before the Corps of Engineers and the EPA imagined this single largest taking of private property rights with WOTUS, and that came in the form of the Chesapeake Bay regulations. And so my question for you is: you spoke about a few key challenges of the EPA's Chesapeake Bay regulations. Which do you think is the biggest problem for agriculture?

Mr. EBERT. Well, it is both inflexibility and uncertainty, but the biggest problem lies with the model. There are so many false assumptions with the model. It doesn't deal with the real world. And it is such a moving target already. I think they may be on version 7 now with this model. So we may hit one target at one point in time, and then they do a revamp of the model, and we have missed that target but we might have hit something else. It has such uncertainty to it. And there again, with EPA withholding $3 million to the Department of Environmental Protection, and they really never gave us an answer why. So we had to do a reboot strategy to try to re-get those dollars. And even along with those lines of the major impacts, the bad numbers that they are using, NRCS, again, says we are doing 80 percent no-till, where EPA's model is

only saying we are only doing 50 percent conservation. So nothing adds up there.

And also along those lines is EPA's model states that nearly 20 percent of farm ground needs to be fallowed to meet the requirements of a reduction in nutrients. Who is going to tell us what ground we can use or can't use? Sort of an example there is everyone owns a home or an apartment. How would you like a Federal agency to come in and say you can't use 20 percent of your home anymore, but you still have to maintain it and pay taxes on it?

So that is a huge problem for the Chesapeake Bay region right now for us.

The CHAIRMAN. Given all the challenges, what you said up to model 7, that version, all the hoops, all the costs, all the compliance issues, has any of that made a difference in water quality?

Mr. EBERT. Well, I think just the decades of us learning how to farm better with technology, conservation, new practices that we have put in, I am sure it has made a large difference in water quality. We see it in water quality monitoring and that, but the model hasn't accepted those changes. We are doing all the BMPs without Federal funding, and that is why we put that survey together through Penn State and the Department of Environmental Protection, is to try to capture a true picture of what farmers are doing without Federal funds, and hopefully EPA will put that in their model and show what agriculture is actually doing to improve water quality, instead of always being pointed to as the villain here.

The CHAIRMAN. Very good. Thank you, sir.

I thank the gentlelady for yielding. Now I am pleased to recognize the gentleman from the land of corn and soybeans and eggs, and much more in Iowa, Mr. King, for 5 minutes.

Mr. KING. Thank you, Mr. Chairman. I thank all the witnesses for your testimony.

A number of questions come to mind. I turn first to Mr. Ebert.

In Pennsylvania, do you have what you consider to be a water quality monitoring system out there that gives an idea on what is a point source, what isn't, and what you are getting leached into your streams?

Mr. EBERT. Yes, DEP actually does do a lot of water quality monitoring. I can probably get you more information on that.

Mr. KING. Well, I would just ask you, are you confident that the records are good enough now that the science is there to make recommendations, let alone regulations on applications of safe fertilizer?

Mr. EBERT. I think it is always evolving. As we become more attuned to how nutrients move, there is science there, but, it can always be improved upon. And some of that science can be plugged into that model.

Mr. KING. And typical soil in Pennsylvania, would you have a sense on about how long it would take for applied nitrogen to leach through and out of the soil?

Mr. EBERT. I am not attuned to that knowledge. It is there. I can always find out that information.

Mr. KING. Yes. And I ask you this question because it seems to me that you have people in the EPA that are trying to regulate this

without being able to answer that question. And if we don't have a sense on; let's just say, what is the baseline, do you have a sense of what the baseline is? Where I come from, we say what was the water quality when the buffalo were roaming someplace other than upstream.

Mr. EBERT. That is it, how far back do you want to go until you consider the water quality that you want to achieve?

Mr. KING. But isn't that what the environmentalists are after? They want to get back to the time when the buffalo roamed, because they say that is when the ecology was as perfectly balanced as we can imagine? And so anything that you would apply that would result in a leaching into the water, into the stream, that would be in excess of that, they would consider should be regulated before you apply it? Am I close to what you are seeing?

Mr. EBERT. Yes. I mean they want to control all aspects of the farming operation.

Mr. KING. Yes. And I am just submitting that they don't know what it was then. There was no water quality tests then. And they can only imagine, but they also imagine that your application is too much. We have a law suit going on in Iowa. It is the *Des Moines Water Works.* I am glad to see that nod, Ms. English. The *Des Moines Water Works* says, "because they have nitrate records that show there has been an increase over the last 40 years, a 60 percent increase over the last 40 years," and by the way, those records are a little bit dated. They went into my head and stuck there. That they know that it is coming out of our feedlots and off of our farmland because they are taking the tests right out in the river outside the Des Moines Water Works. So they are suing three counties, including mine, in an attempt to establish a precedent case so they can regulate crop inputs all across this nation. And I wanted to just put that into the record.

And I ask Ms. English, you are faced with the acuteness of it in phosphorus down there in Florida. I hopefully can help you with that. And I am quite impressed that the family farm goes back that far, and that your family linkage goes back that far. I want to see that continue.

Do you see solutions coming for the phosphorus problem?

Ms. ENGLISH. Yes, I do. I think that in the State of Florida, and to Mr. O'Toole's point, the local, local, local focus is absolutely key. We are working together, and Florida has numeric nutrient criteria which was imposed upon us through the litigation process, and ultimately when I asked a question of one of my counterparts with one of the environmental groups who filed the litigation, I said, "Why Florida? We have more data than anybody else. We have more systems in place to try to improve water quality than anybody else. Why us?" And he said, "Well, because I had the data." Okay. That was an interesting approach. But from this point, when we are using best management practices, when we see what has happened in the Everglades agricultural area, and they have so far exceeded the goals for phosphorus reduction, and the response from the environmental community was not, that is great, what terrific land management, the answer was, "Well, we didn't reduce phosphorus enough."

Mr. KING. Yes.

Ms. ENGLISH. What is enough? Is it enough when we can no longer biologically meet the reduction standard? And that appears to be the answer.

Mr. KING. And so we are chasing a mirage here with an environmentalist approach and an EPA approach that, well, they have a mission, and that mission is continuing to tighten down regulations. There is no goal for them. Would you agree that that is the sense of it, that they haven't articulated where this would ever stop? There will always be another level and that is the history, would you agree?

Ms. ENGLISH. That would be my experience in the last 22 years of practicing law in the State of Florida. I have nothing that would indicate otherwise.

Mr. KING. They have gone through a lot. That was quite an impressive testimony. I thank you, Ms. English, and all the witnesses here this morning.

Mr. Chairman, I yield back the balance of my time.

The CHAIRMAN. The gentleman yields back.

Now I am pleased to recognize the Chairman of the full Agriculture Committee, Mr. Conaway, for 5 minutes.

OPENING STATEMENT OF HON. K. MICHAEL CONAWAY, A REPRESENTATIVE IN CONGRESS FROM TEXAS

Mr. CONAWAY. Thank you, Mr. Chairman.

There is always a next farm bill on the horizon, particularly for the current Chairman of the Agriculture Committee. Can you talk to us, any of you, about ways that we can prioritize in that farm bill things that would strengthen these locally-led volunteer conservation programs, or incentive-based programs, what can we do to put that in the farm bill that actually helps do what Mr. O'Toole, you, and others have talked about this morning of, like you said, the local folks have as much control about what is going on as possible?

Mr. O'TOOLE. I have mentioned the Partners for Conservation, part of the Fish and Wildlife Service. That is an Interior issue. But, going back to Mr. Weller and his vision of combining USDA and the Interior on this, I think that is an important set of relationships that when you base them on agricultural production, and we all know we are supposed to double the food supply, we don't have enough young people coming in, you understand that the relationships of the cross-section of agencies. What we have allowed ourselves to do, as I mentioned earlier with the EPA, is take the relationships that farmers trust and turn them into relationships that farmers don't trust. I know the NRCS refused to be the policemen for the EPA recently because it would undermine all that trust that we have built over all the years. So, make sure that we understand that establishing trust and realizing nothing happens tomorrow. It took 10 years in our valley, 30 years ago, to begin a process of trust. And I would say to that, how do you legislate trust? I don't know.

Mr. CONAWAY. Anyone else?

Mr. EBERT. No, you go ahead.

Ms. ENGLISH. Go ahead.

Mr. EBERT. Just one point I would like to make is with the Conservation Districts. In Pennsylvania, they are actually being forced to become enforcers now. And there still needs to be a lot of conservation plans written, so they are trying to force the hand of the Conservation Districts.

Mr. CONAWAY. Who is they?

Mr. EBERT. Excuse me?

Mr. CONAWAY. Who is they?

Mr. EBERT. DEP and the EPA. Before, it used to be the Conservation Districts——

Mr. CONAWAY. So how are they doing that? How is the EPA strong-arming the NRCS?

Mr. EBERT. By withholding funding. Like I said, they withheld funding for Pennsylvania DEP because we weren't meeting the targets and goals. But we need the funding at the conservation district level to get these plans written and in place and on the ground. And some of the trust for the Conservation Districts are going to be lost because they are becoming enforcers now, instead of actually being boots-on-the-ground to help the farmer.

Mr. CONAWAY. Right. Talk to us a little bit real quickly, I am a CPA, and you guys need to make money to stay in business, and so how does conservation projects that fold into your bottom line, are there ways that you can do them so that it has a positive on your bottom line, or are these things just are costs on top of what you would otherwise do? In general.

Mr. EBERT. Like the conservation plans help develop a plan for me to rotate crops from a no-till, do better with cover cropping in that. That does help my bottom line. It actually improves my soil quality so I have better yields.

Mr. CONAWAY. Ms. English, are you doing anything from a conservation standpoint that actually helps your farm?

Ms. ENGLISH. The EQIP Program has been wonderful, particularly for farmers who are struggling to implement structural improvements that can aid water quality, the way that they hold water on their property, the term for which they hold it. The EQIP Program has been very helpful for that, especially for small farmers, who I work with. The other program that has been helpful is the Conservation Reserve Stewardship. It has kind of gotten into an interesting space in the new farm bill. But that program that provides funding to help them implement good management practices, and learn those management practices, has been hugely helpful to me particularly with my smaller farmers, and by those I mean people who are producing very small quantities, but very important to the diversity of our farming community.

Mr. CONAWAY. Mr. O'Toole, anything quickly?

Mr. O'TOOLE. Well, I would just say that the mill* levy capability that is used. We use it in our district. Conservation Districts have that authority. When that is used, and in my case, with a real good leadership, leveraging those funds 5 to 1, coming from dif-

*__Editor's note:__ A mill levy is the number of dollars in taxes that a property owner must pay for every $1,000 of assessed value. . . . one mill is $.001 ($\frac{1}{1,000}$ of a dollar). *Source:* Wyoming Taxpayers Association *http://www.wyotax.org/property_tax.aspx*.

ferent places, that has been one of the reasons we have been able to be effective.

Mr. CONAWAY. Okay. Mr. Chairman, I yield back. Thank you.

The CHAIRMAN. The gentleman yields back.

I would like to thank our first panel for all of your experience, your time, your expertise. All of us found your testimony very, very helpful.

And so I will dismiss the first panel of witnesses today, and I would like to welcome to the table, and as they are getting set up, I will introduce our next panel of witnesses. Our next panel, we are going to be joined by Ms. Celia Gould, who is Director of the Idaho State Department of Agriculture, out of Boise, Idaho; Mr. Lee McDaniel who is President of the National Association of Conservation Districts, an organization whose members were referenced many times by the previous panel; Mr. Terry McClure, President of McClure Farms LLC, Grover Hill, Ohio; and Mr. Tom Buman, CEO of Agren, of Carroll, Iowa.

Looks like the panel has been seated. Welcome everyone. Thank you so much for accepting our invitation, coming such long distances to be here today, to be able to share your thoughts, your experience, your testimony as regards to the impact of regulations, specifically on agriculture in the rural economy.

And so, Ms. Gould, please being when you are ready.

STATEMENT OF CELIA R. GOULD, DIRECTOR, IDAHO STATE DEPARTMENT OF AGRICULTURE, BOISE, ID; ON BEHALF OF NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE

Ms. GOULD. Thank you, and good morning and thank you for the invitation to testify on the subject of the farm economy: impacts of environmental regulations and voluntary conservation solutions. I have submitted written testimony for the record.

I am Celia Gould, Director of the Idaho State Department of Agriculture, and I also represent NASDA, the National Association of State Departments of Agriculture. My department is tasked with implementing the majority of regulatory programs affecting Idaho agriculture.

Over 60 percent of Idaho land is managed by a Federal agency. That land ownership and divergent management strategies present unique challenges to our growers. This scenario often makes my department the middle ground between Federal land management and the needs of agriculture on the ground. We need to have officials who make sure that everyone plays by the rules, but just as importantly, we must support an environment where citizens can seize opportunities for voluntary conservation without bureaucratic roadblocks.

I would like to highlight just a couple of examples. Idaho's ranchers are on the frontline when it comes to managing that careful balance. While grazing on Federal lands is a critical component to our strong livestock industry, just as important is what our producers are giving back to that equation. Consider this. Before 2012, ranchers legally were not allowed to fight a wildfire on public land. At stake wasn't simply a public resource, but also private land. A few years ago, Idaho ranchers were the first responders to a small

lightning-ignited fire that broke out on public land. Local ranchers were told to leave the scene. That 5 acre fire later turned into a 40,000 acre fire. Ranchers throughout Idaho felt the BLM policy was unacceptable. So a coalition of producers began negotiating a public-private partnership, which became the genesis of the Rangeland Fire Protection Associations. Led primarily by Idaho ranchers, our RFPAs are often now the first to provide the initial attack on wildfires. Their efforts have resulted in fewer catastrophic, large-scale rangeland wildfires in Idaho. The ranching community set an example for us. We make a good team when Federal agencies see us as partners, not adversaries.

I feel strongly that the states are best poised to coordinate and amplify the voice of stakeholders. To further voluntary conservation, states must serve a more prominent role in the early development and implementation of Federal programs. Take Idaho's lauded Sage-Grouse Plan which initially appeared to be on a good track. Idaho built a plan based on broad input from industry groups, conservation organizations, as well as county, state, and Federal agencies. The outcome was a locally derived, scientifically defensible management plan that was eventually selected as a co-preferred alternative in the BLM and Forest Service's EIS. Months of collaborating with the Idaho BLM Office and the key stakeholders led Idaho to genuinely believe the state-Federal collaboration was going to be a success. However, the plan was changed in the eleventh hour. What began as collaboration ended with the unilateral decision from a Federal agency that fundamentally changed the plan, and turned supporters to adversaries. Idaho is now embroiled in litigation with the Federal Government over its handling of the sage-grouse listing decision.

I have voiced some of my concerns, now I would like to highlight some possible solutions.

Increased productivity, stewardship, and conservation and agriculture are a result of voluntary efforts, as well as public and private investment in research and innovation. But who among us will take on these challenges if our hard work is met with intransigence or flat refusal by Federal agencies which seem to prefer top-down management directives contrived in offices instead of on the ground. This pattern has to change. We need Federal partners to consider doing more of the following. First, engage the states. Second, improve economic analyses to account for real costs. Third, incorporate flexibility and regulatory programs. And finally, renew focus on best available science. An example of this model is the NRCS Regional Conservation Partnership Program which unites partners toward targeted conservation goals.

Federal agencies play an important role in the day-to-day lives of Idahoans, but they don't have the greatest stake in the future of Idaho. The people closest to the land do. Farmers and ranchers are thoughtful stewards. I will look to them and their love of the land as our best chance of meeting growers' demands for resources, while protecting the careful balance which makes Idaho one of the greatest natural landscapes in the world.

Thank you today. I appreciate your attention.

[The prepared statement of Ms. Gould follows:]

PREPARED STATEMENT OF CELIA R. GOULD, DIRECTOR, IDAHO STATE DEPARTMENT OF AGRICULTURE, BOISE, ID; ON BEHALF OF NATIONAL ASSOCIATION OF STATE DEPARTMENTS OF AGRICULTURE

Introduction

Chairman Glenn 'G.T.' Thompson, Ranking Member Lujan Grisham, and distinguished Members of the Subcommittee on Conservation and Forestry: good morning and thank you for the invitation to testify on the subject of The Farm Economy: Impacts of Environmental Regulations and Voluntary Conservation Solutions.

My name is Celia Gould, and I am the Director of the Idaho State Department of Agriculture and a lifelong cattle rancher. I also Chair the Natural Resources and Environment Committee for the National Association of State Departments of Agriculture (NASDA). NASDA represents the commissioners, secretaries, and directors of the state departments of agriculture in all fifty states and four territories. State departments of agriculture serve as the "boots-on-the-ground" for a wide variety of important agricultural programs including, animal disease and pest detection and prevention, environmental protection and conservation as well as promoting agricultural products locally, nationally and throughout the world. For many states agriculture is a key economic driver. Idaho is one of those states. In addition to the famous Idaho potato, our farmers and ranchers produce over 185 different commodities, with over 27 of those commodities ranking in the top ten in the nation. We cannot grow or prosper without a thriving agricultural economy.

In Idaho, over 60% of the land mass is managed by the Federal Government. In fact, Idaho has a greater percentage of land managed by the U.S. Forest Service than any other state in the union. Accordingly, the State of Idaho must interact with Federal land management agencies frequently. We are also co-regulators and partners to some degree with many other Federal agencies, not just those that manage land. As a result we have developed relationships with the Federal Government, some positive and productive, and others that need improvement. Today's hearing is timely for certain issues we are dealing with in Idaho and throughout the intermountain west. I appreciate the opportunity to testify in front of this Committee.

The selection and subsequent management of endangered species, wildfire suppression and mitigation, and public lands grazing are a few important issues for western states. The programs that deal with these issues are primarily the responsibility of one or more Federal agencies. States have, or should have, a critical voice in the direction these Federal programs are headed. More often than not state leaders are left frustrated with the lack of meaningful participation and collaboration on these topics and others that impact, sometimes severely, our agricultural industries in the West. My goal here today is to showcase some of the examples representative of the vast efforts going into voluntary conservation in the West. These efforts are most effective and poignant when Federal regulations encourage the role of the states in land management, conservation, and regulatory decisions. I will be focusing on issues most relevant to the West; however, the basic principles contained within my remarks can be applied throughout the country.

Successes, Challenges & Solutions

In my remarks below, I have highlighted some key conservation initiatives that have been developed at the state level in Idaho. Additionally, I discuss how those conservation initiatives correlate with Federal land management agency core missions and how Idaho has interacted with its Federal partners. Those interactions have not been entirely positive. I also discuss some challenging issues that have left me, my counterparts in other western states and other state level directors frustrated. From my perspective, the relationships between state and Federal agencies do not need to be strained and adversarial. More can and should be done collaboratively. Accordingly, I offer up a few observations for potential solutions going forward. Ultimately, the objective is to provide a regulatory and support structure for our farmers and ranchers to continue the tradition of supplying our nation and the world with an affordable, safe and abundant supply of food and fiber: a goal in which we all have a stake.

Successes

Rangeland Fire Protection Associations (RFPAs) are a major asset in suppressing rangeland wildfires, especially in key sage-grouse habitat. However, local involvement on range fires has not always been accepted or welcomed. Federal policy prohibited ranchers from fighting fires on public lands. Recently that policy came to a head in Idaho when a BLM fire crew showed up on a fire that appeared to be under control and asked two local ranchers who responded to the lightning ignited blaze to leave the scene. A 5 acre fire later turned into a 40,000 acre fire.

Ranchers throughout Idaho felt the BLM policy was unacceptable. During the winter of 2012, Idaho ranchers contacted the Idaho Department of Lands and the BLM to begin building a public-private partnership, which became the genesis for Rangeland Fire Protection Associations. *See generally, Mountain Home Ranchers Form Idaho's First Rangeland Fire Protection Assoc. With Idaho Dept. of Lands, BLM,* Steve Stuebner, *www.lifeontherange.org*. RFPAs are nonprofit organizations established to prevent or suppress range fires and keep them to more manageable sizes. Led by trained local volunteers, primarily Idaho ranchers, RFPAs are often the first to respond and provide initial attack on wildfires until Federal and state fire crews and resources arrive on the scene. Local ranchers are first responders to rangeland fires due in large part to their knowledge of the land and proximity to the fire when it starts. Before 2012, Idaho ranchers were not allowed to fight rangeland fires on public land because of safety concerns raised by Federal fire managers. However, the State of Idaho developed a training program and found equipment and resources to help address those safety concerns. Today our local ranchers are volunteering their time to become professionally trained and are utilizing interagency fire suppression resources to lead the attack on rangeland wildfires. Their efforts have resulted in fewer catastrophic, large-scale rangeland wildfires in Idaho.

This past fire season local RFPAs in Idaho trained 230 members in six different regions protecting nearly 6 million acres of Idaho rangeland, with nearly 1 million of those acres are private rangelands that were previously unprotected. RFPAs often times use ranch equipment but are also acquiring equipment through the Federal Excess Personal Property program and other state programs. Training is provided by the BLM in cooperation with the Idaho Department of Lands. USDA NRCS is also valuable partner with wildfire recovery, especially their EQIP program. We appreciate NRCS's partnership model and the special EQIP dollars they made available for fire recovery last fall.

RFPAs provide Federal and state land managers a quick first response by trained volunteers. With this new opportunity, ranchers are no longer required to watch from the sidelines as forage on private pasture, public grazing allotments and wildlife habitat burn up as a fire grows in size and intensity. Key sage-grouse habitat is better protected from large scale catastrophic wildfire, the number one threat to the survival of sage-grouse in Idaho. The cooperation between these private, nonprofit associations, the State of Idaho and the BLM have made important in-roads towards public-private partnerships that serve as a successful model for future projects. This grassroots initiative borne from a desire and motivation to protect the landscape came from ranchers taking the initiative to work with their Federal and state agency partners. The ISDA does not play a significant role in fire prevention programs. However, things can get extremely busy for our agency when a catastrophic fire has displaced multiple producers that need forage or pasture for their cattle. Producers are typically not allowed back on their allotment for at least 2 years following a fire. I am hopeful that this partnership leads to fewer producers being displaced as a result of wildfires.

The Idaho Range Program was codified by the Idaho Legislature in 2009, directing my department, the Idaho State Department of Agriculture (ISDA) to provide "support, coordination and expertise" to livestock producers and land and wildlife management agencies. See Idaho Code § 22–103(23). This new legislative support provides a framework for the ISDA to build a robust and collaborative Range Program. The ISDA Range Program is modeled after our neighboring State of Wyoming's program. The Wyoming Department of Agriculture has been an invaluable partner in building the concept for our program in Idaho. Other western states are looking at the work and value these programs are providing and developing similar programs suited to the needs of their individual states. This is the best plan for building programs that have the most potential to serve local needs well. We are committed to sharing our knowledge and experience, much like our friends in Wyoming have done for us, to help build productive state-based range programs throughout the West. Cross-border cooperation with neighboring states builds consistency and predictability in issues we have in common.

The ISDA Range Program has a significant role to play in cooperating with and amplifying the voluntary conservation and stewardship of Idaho ranchers. With the help of partners from the University of Idaho, the Idaho Rangeland Resource Commission and the Idaho Cattle Association, range monitoring in Idaho is taking off. One important goal of the ISDA Range Program is to engage, advise and train permittees in monitoring their grazing allotments on an annual basis. Those objectives come to fruition in ISDA's Range Photo Monitoring Program, which relies heavily on the voluntary efforts of ranchers. The information collected as part of this program helps determine if progress is being made toward established rangeland health objectives and goals. The program emphasizes a more coordinated and coop-

erative monitoring process that increases the level of participation between Federal land managing agencies, state agencies and permittees when performing rangeland health assessments and other monitoring activities. Cooperative rangeland monitoring is an important tool to help manage livestock grazing on public lands administered by Federal and state agencies and to maintain or achieve desired range conditions. BLM has agreed to accept and consider the data submitted by permittees when making allotment level decisions. This important data is gathered pursuant to agreed upon photo monitoring protocols to ensure that it meets BLM standards for data collection. This effort is significant because the data represent current conditions on each allotment, whereas before the BLM was relying on old, out of date photo-point monitoring data or none at all.

The Governor's Sage-Grouse Management Plan was developed by a task force convened by Governor Otter in March 2012. The stakeholders participating represented industry, sportsmen, conservation groups and elected officials charged with developing a state plan designed to protect the Greater sage-grouse and preclude its listing as an Endangered Species while maintaining working landscapes. This group developed a plan following eight different meetings and emphasized finding collaborative solutions to address the primary threats to the survival of the bird in Idaho, namely wildfire exacerbated by the spread of invasive species. The group's work culminated into an alternative for amending multiple Federal land-use plans in Idaho that balanced conservation of the species (through addressing the primary threats) with the continuation of traditional land use activities. The Governor's Alternative was later selected as a co-preferred alternative within the planning effort for Federal lands in Idaho. In September 2015, the U.S. Fish and Wildlife Service determined that ongoing conservation efforts had significantly reduced the threats to the point where sage-grouse were no longer warranted for protection under the Endangered Species Act across its entire 11 western state range. Collaborative efforts from state and Federal agencies, private landowners, and conservation groups are credited for the decision to not list the species. The *Idaho Statesman* described the effort as an "'all lands' conservation strategy across the West that officials describe as the biggest land-planning effort ever undertaken for a single species." *See Unprecedented Collaboration Leads to Sage-Grouse Decision,* IDAHO STATESMAN, Rocky Barker, September 22, 2015.

Subsequent to the work of the task force described above, Idaho continues to invest in sage-grouse conservation efforts on state and private lands with willing landowners. State agencies have been implementing the Governor's Sage-Grouse Conservation Strategy which demonstrates Idaho's commitment to preserving sage-grouse. In state Fiscal Year 2016, the State of Idaho was able to leverage $2 for every state dollar spent on conservation actions. To date, these efforts have resulted in almost $2 million for on-the-ground conservation projects and wildfire prevention and suppression actions. At the Idaho State Department of Agriculture, we focus on providing technical advice to decision makers on rangeland health issues, particularly on how correctly managed grazing can be used to reduce fine fuels.

In May 2015, Idaho formed a Sage-Grouse Actions Team, which includes key state and Federal agency partners. This team is charged with identifying projects and funding sources for sage-grouse that can be implemented on the ground quickly. This group has placed a great emphasis on those projects that can aid in ameliorating the threats of wildfire and invasive species on sage-grouse. In fact, a large portion of the state funding available for sage-grouse in FY16 has been allocated towards those types of projects. This included equipping RFPAs, implementing strategic fuel breaks to slow the spread of wildfire, restoring key sage-grouse habitat areas, and monitoring sage-grouse activity and conservation practices.

Unfortunately, actions at the Federal level threaten much of the voluntary conservation and collaborative efforts being undertaken to protect Greater sage-grouse in Idaho. The details of some of those actions are laid out in the next section below.

Challenges

I have highlighted a few success stories that Idaho has achieved by leveraging voluntary conservation strategies and the goodwill that Idaho citizens are willing to contribute to preserve our western heritage and the values that are important to all of us. However, in detailing these accomplishments I have foreshadowed a few frustrations as well. A consistent and pervasive policy within many Federal agencies that can only be described as an overly pejorative and draconian Federal bureaucracy is all too common. Oftentimes, Federal agencies do not view states and their respective agencies as co-managers or co-regulators, but instead minimize the state's role and often ignore or overrule state plans, policies or priorities. If voluntary grassroots and on-the-ground efforts are to have success or continue to be negotiated, the states, which are closest to these efforts, should serve a more prominent

role than they currently are in the development and implementation of Federal programs and their attendant regulations within the borders of their states.

The BLM Planning Rule 2.0 is now out for public comment. The fundamental shift in the BLM's planning process is a good illustration of the problem outlined. The rule claims to enhance state and local government opportunity to participate in the process, however, a more detailed review of the rule does not support that conclusion. The development of the proposed rule itself presented a perfect opportunity for the BLM to engage its state and local partners to identify areas of needed improvement, craft a process that takes full advantage of the important perspectives and priorities that states can provide and roll out the proposal to the public in lockstep with the states. Instead, the rule was developed, like is all too common today, by Washington, D.C. officials, only engaging state partners in the same process it engages the general public. A process that is sure to ignore the important priorities or policies of the individual states and further erode the principles of federalism that are embedded within our history and national charter.

This process of minimizing the states participation is inappropriate given the clear Congressional direction codified in BLM's organic statute. The Federal Land Policy and Management Act (FLPMA) directs BLM, to "establish procedures . . . to give Federal, state, and local governments and the public, adequate notice and opportunity to comment upon and participate in the formulation of plans and programs relating to the management of the public lands." *See* 43 U.S.C. 1712(f). It is evident from the language of the statute Congress perceived the role of state and local governments to be separate from and in addition to the general public's participation. In addition, Congress has stated that land use planning should

> consider[] the policies of approved state and Tribal land resource management programs. In implementing this directive, the Secretary shall, to the extent he finds practical, keep apprised of state, local, and Tribal plans that are germane in the development of land use plans for public lands; assist in resolving, to the extent practical, inconsistencies between Federal and non-Federal Government plans, and shall provide for *meaningful* public involvement of state and local government officials, both elected and appointed, in the development of land use programs, land use regulations, and land use decisions for public lands, including ***early*** public notice of proposed decisions which may have a significant impact on non-Federal lands.

43 U.S.C. 1712(a) sec. 202 (emphasis added). I am here today, in part, because the Congressional mandates contained throughout FLPMA with respect to engaging state and local governments in a meaningful and early way are not being followed adequately.

The Intermountain Region Bighorn Sheep Risk Assessment currently being developed by the USFS is another area of concern for Idaho and other western states. In February 2014, the USFS released a briefing paper which outlined its plan to implement a bighorn sheep and domestic sheep management framework within USFS Region 4. Idaho responded by outlining its concerns with the proposed framework. Chief among the concerns described and communicated to the USFS is the lack of any role for the State of Idaho in the construction of the proposed management framework. This is a deeply concerning trend, especially given the state's responsibility to manage wildlife within its borders. Nowhere within the National Forest Management Act does it empower the USFS to supersede the state's role in managing bighorn sheep. It is hard to understand why the USFS would silo themselves into developing a unilateral management framework where it is clearly within the purview of the state to manage bighorn sheep populations. Idaho's stated policy is to maintain bighorn sheep populations without causing undue economic hardship on the domestic sheep industry or individual sheep producers. A viable bighorn sheep population and a viable domestic sheep industry are important components to the state's economy and history. The multiple-use mandate that governs the USFS cannot be fully understood or correctly implemented without the input and participation of state agencies and Idaho stakeholders. The proposed management framework as of today's hearing is yet to be completed for Idaho. We are working to improve state and stakeholder engagement at this time. It simply begs the question why the State of Idaho must fight for a seat at the table? This kind of inward-looking process by Federal agencies is yet another example of a trend which contradicts and disincentivizes stakeholder investment into voluntary initiatives, including those that promote conservation.

The Idaho and Southwestern Montana Greater Sage-Grouse Final Approved Resource Management Plan Amendment was released in September 2015, determining the Greater sage-grouse did not warrant endangered species protection. Coinciding with this release, the BLM added an additional regulatory layer

described as Sage-Grouse Focal Areas. This new plan superseded and fundamentally changed Idaho's local, scientifically-based collaborative plan. Most incongruent and concerning to our ranch families in Idaho is the elevation of livestock grazing as a primary threat to greater sage-grouse. The decision to add an additional layer of regulation, including misclassifying livestock grazing, ignores the science, data and collaborative work that so many interest groups contributed to and agreed upon. Importantly, it prevents using proper grazing as a tool to remove fine fuels in and around greater sage-grouse habitat. Moreover, it is an affront to the notion that local collaboration, local ideas, and local efforts garner the greatest results.

In contrast to the Federal plan, Idaho focused the majority of its conservation planning efforts on addressing the primary threats to greater sage-grouse, wildfire and invasive species. The Idaho plan centers on an innovative approach to addressing primary threats through the application of a three-tiered habitat conservation system and an associated adaptive management strategy. This approach allows the state to elevate the level of conservation on certain sage-grouse habitat if an adaptive regulatory mechanism is triggered in Core habitat, regardless of land ownership. The Idaho plan also implements proactive actions that aim to protect key sage-grouse habitat through a greater emphasis on wildfire prevention, suppression and restoration. The creation of Rangeland Fire Protection Associations, for example, has already proven to be an effective tool in decreasing the response time to wildfires in remote areas of sage-grouse habitat and thus helping to prevent large scale wildfires.

Months of collaborating with the local Idaho BLM Office and key stakeholders over the refinements of the co-preferred alternatives led Idaho to genuinely believe that the state-Federal collaboration was going to be a success. The type of collaboration employed for the development of the sage-grouse plan in Idaho mirrored that of the Idaho Roadless Rule collaborative, where industry groups, conservation organizations, counties, and state and Federal agencies came together to craft a locally-derived solution that is preferred to a top-down one-size-fits-all approach. However, the decision by the Washington BLM office to fundamentally change the sage-grouse plan for Idaho at the eleventh hour has undermined the fragile coalition built through the collaborative process. The outcome of all of the above described efforts is now uncertain as a result of litigation.

Solutions

These few examples highlight the fundamental need to seriously re-assess how Federal agencies work and cooperate with state agency partners. Federal agency personnel will never fully understand the unique socioeconomic, cultural and conservation needs unique to the individual states. The standard practice that has increasingly frustrated states, local governments and the regulated community is a top-down, one size fits all decision process. This undermines collaborative, local solutions and deflates enthusiasm for conservation initiatives. State and local leaders are closely connected to the citizens that are affected most by the regulatory framework we are discussing. A more meaningful engagement with state and local governments improves the regulated community's opportunity to interact with its government on all levels and provides a perspective that is otherwise missed. It must be remembered and emphasized, however, that this process should not replace the engagement of the general public, but should bolster and enhance it.

There are several specific actions that officials at all Federal levels should consider, designed to improve collaboration, support voluntary conservation initiatives, develop strong inter-governmental relationships and minimize the threat of costly, protracted litigation. Those actions include:

1. *Engage the States in a Meaningful Way:* Federal agencies should conduct robust federalism consultations early in the regulatory process, and include participation of a wide range of state regulatory agencies, including state departments of agriculture. These consultations should occur *prior* to publication of a proposed rule. Throughout this process, it is important to emphasize state regulatory agencies are not simply stakeholders, but are instead partners with Federal agencies in the implementation of a host of programs. States can—and should—be used more as resources for Federal agencies. Often states have a wealth of data, experience, and expertise that would help Federal agencies better develop and implement regulatory programs.
2. *Improve economic analyses that more realistically account for economic costs to states:* Federal agencies should engage state regulatory agencies and stakeholders to evaluate proposed regulations, availability of required resources, and whether expected outcomes merit those expenditures.

3. *Incorporate flexibility in regulatory programs:* Federal agencies should engage state regulatory partners in creating programs that may provide local and state flexibility. We continue to encourage our Federal partners to look for ways to engage state agencies in creating programs to provide additional flexibility—especially when the alternative may be an undue regulatory burden on the regulated community. Such consultation and robust outreach will facilitate recognition of state equivalency regulatory programs and prevent duplicative regulatory layers. Additionally, Federal agencies should look to state and regional directors within their own agencies to help craft local solutions. States interact frequently with local Federal leaders and have more confidence in their ability to understand local issues.
4. *Renew focus on utilization of best available science:* Regulations must be based on the best available, sound, validated, and peer-reviewed science and rely on science-based risk assessments. Moreover, regulatory agencies must ensure policymakers do not misuse or inappropriately apply invalidated or unrelated scientific findings to policy determinations. We especially appreciate the work the Office of Pest Management Policy (OPMP) executes to ensure policy or regulatory initiatives are based on scientifically sound positions. OPMP is an invaluable resource and advocate for including sound science in the development of regulatory actions impacting agriculture, and we encourage increased support for OPMP's activities, as well as ensuring OPMP's perspectives are advanced in the interagency review process.
5. *Congress Should Hold Federal Agencies Accountable:* Federal statutes commonly provide clear direction to Federal agencies to engage stakeholders, especially states, under the partnership model. For example, the National Forest Management Act provides:

> inasmuch as the majority of the nation's forests and rangeland is under private, state, and local governmental management and the nation's major capacity to produce goods and services is based on these non-federally managed renewable resources, the Federal Government should be a catalyst to encourage and assist these owners in the efficient long-term use and improvement of these lands and their renewable resources consistent with the principles of sustained yield and multiple use;

National Forest Management Act of 1976, 16 U.S.C. 1600, Sec. 2(5).

Conclusion

Federal agencies play a significant role in the day to day lives of Idaho citizens, especially those engaged in agriculture. These agencies, in order to achieve a higher level of success and public acceptance, must not ignore an important responsibility to engage state agencies in a meaningful and productive way. This is not a trivial matter. The examples of success I have included in my testimony have the common denominator of being inclusive and collaborative. There is no reason this model cannot be successfully implemented at the Federal level.

The CHAIRMAN. Ms. Gould, thank you so much.

Mr. McDaniel, go ahead and proceed with your 5 minutes of testimony when you are ready.

STATEMENT OF LEE MCDANIEL, PRESIDENT, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS, WASHINGTON, D.C.

Mr. MCDANIEL. Good morning. Good morning, Chairman Thompson, Ranking Member Lujan Grisham, and Members of the Subcommittee. Thank you for the opportunity to testify this morning on the impacts of environmental regulations and voluntary conservation solutions.

I am Lee McDaniel, President of the National Association of Conservation Districts, and I currently operate a corn, soybean, and alfalfa farm in Darlington, Maryland, where I implement a variety of conservation practices, including grass and wooded buffers, grass waterways, strip cropping, and no-till farming. I have been in-

volved with Conservation Districts since 1997, when I first served on my local district board.

NACD represents America's 3,000 Conservation Districts, and the 17,000 men and women who serve on their governing boards, as well as their respective state and territory associations. Conservation Districts work with cooperating landowners and operators in all 50 states to help manage and protect land and water resources on private and public working lands.

NACD passionately believes in the locally-led voluntary, incentive-based conservation model. We believe a collaborative approach focused on sound conservation planning and technical assistance for landowners at the local level, coupled with farm bill conservation financial assistance is critical for long-term environmental and economic stability. We believe this approach can help producers avoid the need for unnecessary and burdensome regulations.

If voluntary, incentive-based conservation is going to be the first line of defense against the need for regulations, then we need to prioritize funding for it. While the conservation community agreed to cuts in the last farm bill, we must admit that every conservation dollar taken from the hands of farmers makes regulation more of a possibility. We must see the conservation titles are tooled to mitigate risk of environmental concerns and costly regulatory approaches.

Environmental regulations many times do not take into the account that every acre of land needs its own prescriptive conservation plan to meet that land's needs. Under a locally-driven, voluntary conservation system, landowners can work with conservation professionals to tailor a conservation plan to the specific needs of their land. Under a regulatory approach, the most critical resource concerns on a particular operation may be ignored or may not pertain to that piece of land.

Time and again, the collaborative, locally-led conservation approach has shown to work well, addressing a variety of resource concerns. A great example of this can be found in Conservation Districts' works on addressing water bodies that are on a state's section 303(d) list of impaired watersheds. Whether it is using EPA Section 319 grants or farm bill programs, districts in partnership with other local, state, and Federal stakeholders work together to improve quality and remove these rivers and streams from the impaired list.

In Delaware, the Sussex County Conservation District improved the water quality of the Gravelly Branch sub-watershed by working with NRCS to create conservation plans, provide technical assistance, and develop EQIP contracts for local producers. Additionally, section 319 funds were used to assist in developing and implementing the Conservation Reserve Enhancement Program in the area.

The Huntingdon County Conservation District, located in Chairman Thompson's district, partnered with local stakeholders and the EPA's Section 319 Grant Program to restore Miller Run after it was added to the state's section 303(d) list. This Conservation District worked to implement abatement and treatment systems that resulted in a significant improvement in water quality, and can now support a healthy Brook Trout population.

Local management of habitat and species preservation, rather than top-down approaches have also shown success with the Endangered Species Act. In 2006, the New England Cottontail was identified as a candidate species for ESA protection. Since then, Conservation Districts as well as a host of other partners have worked collaboratively to rebuild its habitat. As a result of these efforts, the population of the New England Cottontail increased dramatically, and in 2015 it was removed as a candidate species.

A new addition to the last farm bill is the Regional Conservation Partnership Program, which provides a unique way to promote coordination between NRCS and regional partners to address resource concerns. In Minnesota, the State's Department of Agriculture received funding through RCPP to implement a statewide agriculture water quality certification plan, utilizing Conservation Districts to provide site-specific solutions. By becoming certified, producers can receive regulatory certainty that their operation meets all state regulatory requirements for the next 10 years. Working with the districts has provided landowners a level of trust and familiarity that has allowed this program to be successful in a short period of time, and proof of this success can be seen in the reduced sediment load, nutrient runoff, and soil erosion.

None of these examples would have been successful without consistent funding for technical and financial assistance to landowners. Sound conservation plans developed on the local level, and coordination with landowners and Conservation Districts, coupled with strong financial assistance has proven to provide longer-lasting solutions to our nation's environmental problems.

I am proud of the continued successes achieved by the men and women involved in our nation's Conservation Districts, and I look forward to answering any questions that you may have.

[The prepared statement of Mr. McDaniel follows:]

PREPARED STATEMENT OF LEE MCDANIEL, PRESIDENT, NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS, WASHINGTON, D.C.

Good morning, Chairman Thompson, Ranking Member Lujan Grisham, and Members of the Subcommittee. Thank you for the opportunity to testify this morning on the impacts of environmental regulations and voluntary conservation solutions.

I am Lee McDaniel, President of the National Association of Conservation Districts (NACD), and I currently operate a corn, soybean, and alfalfa hay farm in Darlington, Maryland. I have been involved with conservation districts since 1997 when I first served on my local district board. On my own land, I implement a variety of conservation practices, including grassed and wooded buffers, grassed waterways, strip cropping, and no-till farming.

NACD represents America's 3,000 conservation districts and the 17,000 men and women who serve on their governing boards, as well as their respective state and territory associations. Conservation districts are local units of government established under state law to carry out natural resource management programs at the local level. Conservation districts work with cooperating landowners and operators in all fifty states as well as the territories to help manage and protect land and water resources on private working lands and many public lands in the United States.

NACD passionately believes in the locally-led, voluntary, incentive-based conservation model. We believe a collaborative approach focused on sound conservation planning and technical assistance for landowners at the local level coupled with farm bill conservation financial assistance is critical for long-term environmental and economic stability. Federal programs aimed at supporting these efforts, including many in the 2014 Farm Bill, have a vital role in supporting clean air, clean water and productive soils. They also help producers avoid the need for unnecessary and burdensome regulations.

Part of the voluntary conservation model's purpose, just like the farm bill's Environmental Quality Incentives Program's (EQIP) purpose, is to help producers comply with local, state, and national regulatory requirements and even more importantly, avoid the need for those regulations in the first place. Chairman Conaway put it best in a recent op-ed when he stated that a better alternative to regulation is the Federal Government "sharing in the cost of both time-tested and cutting edge conservation practices."

If voluntary, incentive-based conservation is going to be the first line of defense against the need for regulation, then we need to prioritize funding for it. While the conservation community agreed to cuts in the Agricultural Act of 2014, we must admit that every conservation dollar taken from the hands of farmers makes regulation more of a possibility. Similar to how commodity and crop insurance programs provide a safety net and mitigate against yield and revenue loss, we must see conservation as mitigating risk of environmental concerns and more costly regulatory approaches.

Environmental regulations many times do not take into account that every acre of land is different and single, uniform regulatory requirements often do not solve resource concerns. Each piece of land needs its own prescriptive conservation plan to meet that land's needs. Under a locally-driven voluntary conservation system, landowners can work with conservation professionals to tailor a conservation plan to the specific needs of their land. Under a regulatory approach, the most critical resource concerns on a particular operation may be ignored or may not pertain to that specific piece of land.

Conservation districts throughout the country, in cooperation with the Natural Resources Conservation Service (NRCS), are instrumental in supporting quality soil health through technical assistance for different production techniques from no-till farming to the inclusion of cover crops into a producer's operation. These practices not only help with a host of environmental issues, such as soil erosion, root depth, and moisture control, but in the end can improve yields for producers and help limit input costs, which helps with an operation's bottom line. Unfortunately, many producers, especially beginning and under-served producers, are not aware that such assistance is available to them. Conservation districts take great responsibility with outreach to landowners to ensure that they can take advantage of the opportunities that are available.

Time and time again, the collaborative, locally-led conservation approach is shown to work well addressing a variety of resource concerns, including water quality, air quality, and wildlife habitat protection. NACD has many success stories where regulations were mitigated or avoided because of the work of voluntary conservation efforts.

A great example of success stories can be found in local conservation districts' work on addressing water bodies that are on a state's [section] 303(d) list of impaired watersheds. Whether it is using Environmental Protection Agency (EPA) section 319 grants or farm bill programs like EQIP and the Conservation Reserve Enhancement Program (CREP), districts in partnership with other local, state, and Federal stakeholders worked together to improve water quality.

In Delaware, the Sussex County Conservation District improved the water quality of the Gravelly Branch sub-watershed by working with NRCS to create conservation plans, provide technical assistance, and develop EQIP contracts for local producers. [Section] 319 grant funding was also used to hire a full time CREP coordinator to assist in developing and implementing CREP in the area.

The Peter Francisco Soil and Water Conservation District in Virginia also leveraged [section] 319 dollars with EQIP and CREP to install best management practices on agricultural land in the Willis River watershed which significantly reduced nonpoint source pollution loads reaching the river.

The Huntingdon County Conservation District in Chairman Thompson's district partnered with local stakeholders and the EPA's section 319 grant program to restore Miller Run after it was added to the state's [section] 303(d) list. This conservation district used section 319 grant funding to implement abatement and treatment systems that resulted in a significant improvement in water quality and can now support a healthy brook trout population. All of these success stories prove that working together in a collaborative manner while using incentive-based conservation programs we can solve natural resource concerns.

Local management of habitat and species preservation, rather than top-down approaches, have also shown success with the Endangered Species Act (ESA). Through voluntary locally-led conservation practices, stakeholders have collaborated to enhance both the health of the land and the recovery of species. In 2006, the New England Cottontail was identified as a candidate species for ESA protection due to habitat loss, increased human development, and competition from nonnative species that

threatened the cottontail's existence. Since then, conservation districts, as well as a host of other state and Federal agencies, wildlife organizations, and private land owners, have worked collaboratively to rebuild its habitat. As a result of these efforts, the population of the New England Cottontail increased dramatically and in 2015, it was removed as a candidate species by the U.S. Fish and Wildlife Service (FWS).

For the Lesser Prairie-Chicken, successful efforts by conservation districts and other regional stakeholders increased the bird's population by 25% from 2014 to 2015. These efforts were so successful that a U.S. District Court overturned the FWS's listing as threatened, directly crediting this locally-led effort in the decision. This innovative plan proves that locally-driven conservation solutions can succeed and should be used as a model for future wildlife habitat protections.

A new addition to the last farm bill is the Regional Conservation Partnership Program (RCPP), which provides a unique way to promote coordination between the Natural Resources Conservation Service and regional partners to improve soil quality, water quality, water quantity, and wildlife habitat. Conservation districts, whether taking the lead on the application or participating in delivery, have been instrumental in the successes that have already been achieved.

In Minnesota, the state's Department of Agriculture received funding through RCPP to implement a statewide agriculture water quality certification plan utilizing local conservation districts to provide site-specific solutions and technical assistance to producers in order to reduce risks to water quality. By becoming certified, producers can receive regulatory certainty that their operation meets all state regulatory requirements for the next 10 years, helping them better plan their for their own operation's needs without worrying about future regulatory actions. Working with the local conservation districts has provided landowners a level of trust and familiarity that has allowed this program to be successful in a short period of time and proof of this success can be seen in the estimated 8.5 million pounds of soil saved, over 6 million pounds of sediment reduced, and the prevention of almost 4 million pounds of phosphorus from entering the state's waters.

While each of the abovementioned programs have far more success stories than have been noted here, none would have been as successful as they were without consistent funding for technical and financial assistance to landowners. Sound conservation plans developed on the local level in coordination with landowners and conservation districts, coupled with strong financial assistance, has proven time and again to provide longer-lasting solutions to our nation's environmental problems. I am proud of the continued successes achieved by the men and women involved in our nation's conservation districts and I look forward to answering any questions you may have.

The CHAIRMAN. Thank you, Mr. McDaniel.

Mr. McClure, go ahead and proceed with your 5 minutes of testimony.

STATEMENT OF TERRY W. MCCLURE, PRESIDENT, MCCLURE FARMS LLC, GROVER HILL, OH

Mr. MCCLURE. Good morning, Chairman Thompson, Ranking Member Grisham, and Members of the Subcommittee. I appreciate the opportunity to come before you today and discuss the important issue of voluntary conservation practices in Ohio.

My name is Terry McClure. I am a fifth generation farmer, and along with my son and my father, I operate McClure Farms, a corn, soybean, wheat, cattle, and swine operation in Paulding County, Ohio.

Our farm and our residence is located on the Maumee River watershed of the Western Lake Erie Basin. I am very proud to say that along with multiple other farmers, I have voluntarily allowed edge-of-field water quality testing equipment on my farm for 3 years, providing research on both surface and subsurface drainage. The Ohio Farm Bureau, the Corn Checkoff, Wheat Checkoff, and the Ohio Soybean Council, Ohio Agribusiness Association, and others, joined together to fund this project at a cost of over $2 million,

and it is providing baseline settings, measures, practices, and results.

The information being collected is invaluable, and will be used to modify Ohio's phosphorus risk index, as well as help identify good management practices. In the past, we had to depend on modeling, and even though our universities and our professionals did their best, the only thing even they could tell you for sure is that modeling wasn't accurate. And we know in the future, if we are going to make changes and do a better job farming, we need to know exactly what comes off our farms. So now we know 24/7, 365, with real tests.

While these findings are still being finalized, preliminary results indicate that controlling erosion continues to be important. Particulate-bound phosphate makes up over 73 percent of the total phosphorus in surface runoff. Timing and placement of fertilizer application is important, and, in fact, paramount. Incorporation of fertilizer during and after application can result in more than a 90 percent reduction in phosphorus runoff.

Using this data, the Farm Bureau and NRCS Demonstration Farms Project is located in the Blanchard River. There are three farms researching voluntary models for new innovations that reduce and prevent agricultural runoff. With me today, Anthony Statler from Statler Family Farms, who is one of the farm owner-operators. He operates 243 acres of corn, soybeans, and wheat, and 7,200 head wean-to-finish swine operation, and is further studying conservation practices. They share the results with farmers across the watershed region, land management agencies, policymakers, the media, and the public.

There are numerous other conservation measures by individual farmers and farm organizations, and a much more extensive list is in my testimony, but farmers have invested tens of millions of dollars of their own money in establishing conservation practices on their farm. In 2012, 20 of Ohio's ag commodity organizations wrote a letter to their membership saying we must be proactive to address water quality, and we must embrace the 4R Nutrient Stewardship. The right fertilizer source, at the right time, at the right rate, and the right way of placement.

We started the Healthy Water Ohio to deliver a diverse and voluntary partnership to address water holistically. The 4R Nutrient Stewardship Certification Program was created. Ohio agriculture and conservation organizations committed resources to partner with the Farm Bill Regional Conservation Partner Program. We have provided grants from local initiatives like Knox County and the creation of ONMRK, the Ohio Nutrient Management Record Keeping smartphone app.

Voluntary conservation is making significant headway in reducing nutrient and sediment loss from our farms. The USDA NRCS recently released report on the Western Lake Erie Basin finds between 2006 and 2012, farmers voluntarily reduced phosphorus applications in the Western Lake Erie Basin by more than 13 million pounds. Ninety-nine percent of the cropland acres are managed with at least one conservation practice. Seventy percent of the nitrogen applied is removed by crop harvest. The cost of conservation practices in place represents $277 million, or $56.98 per acre.

As a farmer in the Western Lake Erie Basin, I know these important findings reflect the sentiment of those who work every day to make sure that our land and our water are the healthiest they can be. We have taken extensive measures to become aware of soil health, and we take great pride in being good stewards of both Ohio's land and water. We are committed to implementing voluntary measures that are science-based and will yield results.

Thank you, Mr. Chairman.

[The prepared statement of Mr. McClure follows:]

PREPARED STATEMENT OF TERRY W. MCCLURE, PRESIDENT, MCCLURE FARMS LLC, GROVER HILL, OH

Chairman Thompson, Ranking Member Grisham, and Members of the Subcommittee, I appreciate the opportunity to come before you today to discuss the important issue of voluntary conservation practices in Ohio. My name is Terry McClure and along with my family, I operate McClure Farms—a corn, soybean, wheat and swine and cattle operation—in Paulding County, in Northwest Ohio. Our farm and our residence is in the Western Lake Erie Basin (WLEB) watershed. We are a fifth generation farm.

I am proud of the measures that my fellow farmers have been taking to address nutrient run-off and I appreciate the opportunity to share with you the studies and practices that have been taking place on my farm. From what I share with you today, I hope that one key component you take away is that Ohio is unique and successful because our conservation efforts have been an amazing demonstration of all sectors and entities working together as one for the collective good. The measures taken have been no less than an "all hands on deck" approach.

So, while I could provide you with a history of how farmers have responded to environmental challenges, starting with the Dust Bowl of the 1930s or soil erosion in the 1980s and 1990s, instead, I will begin with a letter written in 2012 that was signed onto by 20 agricultural groups that was a commitment to lawmakers and the public that agriculture would do its part to create healthy water in Ohio.

In a demonstration of unprecedented collaboration, Ohio's traditional and organic commodity organizations, the Federation of Soil & Water Conservation Districts, and The Ohio State University sent a joint letter to all of our organizations' members stating that farmers must proactively solve the issue of nutrient run-off. The letter launched the agriculture community's immediate "4R" effort while we supported and sought out further research for long-term solutions. Education, training and advice began in earnest on "4R" nutrient stewardship—using the right fertilizer source, at the right time, at the right rate and with the right placement.

Farmers began implementing these voluntary 4R measures on their farms as a win-win proposition of reducing fertilizer costs while continuing to be good stewards of the environment.

Soon thereafter was the launch of Healthy Water Ohio. An initiative led by the agricultural community that included a voluntary and diverse partnership of stakeholders charged with developing a 20 to 30 year water resource management strategy for Ohio. I had the privilege of serving on the steering committee of this partnership along with representatives from business and industry, conservation and environment, finance, food and farming, lawn and horticulture, municipal water systems, public health, recreation and tourism and research, education and outreach.

The group conducted multiple information gathering sessions throughout the state and conducted meetings with water quality experts and public officials. The final report from Healthy Water Ohio provides a roadmap of innovative research, policy, education and infrastructure proposals along with an implementation schedule. Voluntary implementation of components of the report has begun including the pursuit of a Water Trust that can fund a variety of water-related needs such as research, monitoring and improvement of gray and green infrastructure.

The agricultural community has committed to address water quality through numerous combined and individual measures. Beyond the study on my farm, there is extensive research being conducted both in the lab and in the field. Farmers have invested tens of millions of dollars of their own money in establishing conservation practices on their farms. Between 2006 and 2012, they have voluntarily reduced phosphorous applications in the Western Lake Erie Basin by more than 13 million

pounds.* As farmers are stepping up to implement conservation practices now, they are committed to finding additional solutions in the future.

Ohio Farm Bureau, Ohio Corn and Wheat Growers Association, Ohio Soybean Association, Ohio Agribusiness Association and others joined together with United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) to fund a project of over $2 million to conduct edge of field research throughout the state to better learn how to prevent nutrients from escaping from fields. I am proud to say that edge-of-field water quality testing research, on both surface and subsurface drainage, has been conducted on my farm for 3 years. The combined efforts of Ohio's agriculture community with the Ohio State University and USDA researchers now have important baseline data, measures, practices and results. The information being collected is invaluable and will be used to modify Ohio's Phosphorus Risk Index as well as help identify good management practices.

While the findings are still being finalized, preliminary results about how phosphorous leaves the field include:

- Controlling erosion continues to be important. Particulate bound phosphorus makes up over 73% of the total phosphorus in surface runoff and over 52% of the total phosphorus in tile flow.
- There is a strong relationship between soil test phosphorus levels and the amount of particulate bound phosphorus transported off site in surface runoff.
- Fertilizer application is a high risk practice—timing and placement is important.
- Incorporation of fertilizer during or after application can result in more than a 90% reduction in phosphorus runoff.

Building upon the foundation of these findings will be a critical component to our continued success in reducing run-off. To that end, Ohio Farm Bureau is collaborating with USDA National Resources Conservation Service along with other partners in creating only the second in the nation Demonstration Farms project. This project is located in the heart of the WLEB along the Blanchard River. The farm organizations involved with this endeavor have voluntarily taken on this project as have the three farmers—two row crop and one swine—whose acreage will be used. Here with me today is Anthony Statelier from Statelier Family Farms who is one of the farm owner/operators. We appreciate that Anthony's family is allowing the use of their 243 acres of corn, soybeans, and wheat and 7,200 head wean to finish swine operation to further study conservation practices.

These demonstration farms will serve as models for new innovations that reduce and prevent agricultural runoff and those discoveries will be shared with farmers across the watershed and the region, land management agencies, policymakers, the media and the public. It is my hope that some of the conservation measures deemed successful due to the research on my farm will be put into practice on these demonstration farms.

In addition to the Edge of Field Study, farmers are also committed to coordinating water research and programming through our land grant's "Field to Faucet" initiative as well as through increased educational opportunities. Ohio Farm Bureau, Ohio Soybean Council and other agricultural organizations have funded three new OSU staff to work with farmers to develop Nutrient Management Plans in the WLEB and one new staff to work with retailer 4R certification.

I would be remiss if I did not note that advisors to farmers are also contributing significantly to conservation efforts. Over 1.5 million acres in the WLEB are now under guidance of Agriculture Retailers and Nutrient Service Providers that have voluntarily earned certification from the 4R Nutrient Stewardship Certification Program.

Ohio's agriculture and conservation organizations also took an active role in supporting the Farm Bill's Regional Conservation Partnership Program and committed resources to this public-private partnership. Farmers have been eager to participate in this voluntary program that allows them to implement on-ground conservation practices for sediment and nutrient management. The Environmental Quality Incentive Program is the perfect marriage of allowing farmers to keep land in production while practicing effective conservation programs. The projects being funded with RCPP dollars are making a significant difference with over $17.5 million committed to the Great Lakes Region. We appreciate that Congress, and this Committee specifically, saw the importance of these programs. In Ohio in 2015 alone, there were 81 contracts signed totaling over $3.5 million. These dollars were used for critical

*USDA–NRCS Special Study Report titled "Effects of Conservation Practice Adoption on Cultivated Cropland Acres in Western Lake Erie Basin, 2003–06 and 2012". (March 2016).

on-farm needs including animal waste systems and storages, lot covers and roofs, controlled drainage structures, cover crop contracts, drainage water management, nutrient management plans, waterways, crop rotations and multi-year cover crops.

Ohio farmers and our membership organizations have been diligent in pursuing unique grassroots opportunities for connecting with all Ohioans and making them aware of our efforts to protect Ohio's waters. Through educational displays at fairs, radio and print outlets, in our classrooms and local water grant projects, we have spread the word that farmers want to be part of the solution. Farmers recognize their role and are working hard to be proactive for water quality. We appreciate the recognition that we are not the only cause of phosphorus loading. We are also committed to work with those who are addressing municipal water and sewer systems, septic systems, and urban run-off as well as other contributors.

In addition to the voluntary measures being taken by farmers across Ohio, two important pieces of legislation have also been passed and are being implemented. Ohio Senate Bill 150 was fully supported by the agricultural community and requires farmers to obtain a commercial fertilizer certification. The materials in the course provide the latest information on the 4Rs I discussed earlier and provide an understanding of how a nutrient management plan can be used on the farm. Ohio was the first state in the nation to require certification for commercial fertilizer application. Farmers have worked hard to be compliant and though certification was not required until 3 years after passage, farmers immediately began filling classrooms and to date over 10,000 farmers have already received their certification.

The second bill, Senate Bill 1, places restrictions in the WLEB on the application of manure and commercial fertilizer on frozen or snow covered ground or under certain weather conditions. This bill was also supported by agriculture because it had a scientific foundation and was based on conservation methods that had been proven effective in reducing run-off. While farmers overwhelmingly prefer voluntary measures, they are not adverse to policies that have been fully researched and allow for input from scientific experts as well as farmers that are working the ground every day.

Farmers also have begun to think creatively on how to best comply with the nutrient application laws with the Knox County Farm Bureau and Soil and Water Conservation District teaming together to create ONMRK (Ohio Nutrient Management Record Keeping), a record keeping smartphone and tablet app that allows farmers to easily record their manure and nutrient applications while they are in the field. The app is a great tool for farmers to comply with both record keeping requirements and weather and soil condition guidelines on when nutrients can be applied in the WLEB.

With nearly 1,000 downloads and nearly 800 nutrient applications logged in the first several months of use, ONMRK is off to a great start in providing a useful tool for not only compliance with laws but improving farming's impact on water quality. ONMRK is currently an Ohio based app with plans to expand nationally by the end of 2016. While ONMRK is one great example, there have also been multiple county Farm Bureau grants leading to local projects such as much needed farm equipment purchases, soil analysis courses and demonstrations, watershed education, rain garden installations and the Ohio Manure Science Review.

With any issue, funding is always a concern. As such, Ohio agriculture has supported state funding that continues water quality research and conservation efforts by lobbying for and obtaining budget increases for OARDC, OSU Extension and the Sea Grant program. Agriculture also won support for additional dollars for the Healthy Lake Erie Program and for dollars to be set aside for Soil and Water Conservation Districts in the WLEB, specifically to provide technical assistance to farmers for S.B. 1 compliance. Ohio agriculture also worked with lawmakers and Ohio's State Treasurer, Josh Mandel, to establish a loan interest rate reduction program to serve farmers making capital improvements needed to comply with S.B. 1. Our efforts also prevented a reduction in funding for the Heidelberg University Water Quality Lab.

For many Ohioans, the Toledo water crisis brought our state's water quality issues home. In its aftermath, Ohio Farm Bureau and the Ohio Soybean Council organized and sponsored a special "Food Dialogues" through a grant from the U.S. Farmers and Ranchers Alliance. The Food Dialogues was a media and community event that brought together farmers, environmentalists, researchers and officials in charge of Toledo's drinking water system to focus on water quality.

Our state's farmers were interested in learning more about the algae blooms in Lake Erie and so Ohio Farm Bureau organized a "Farmer Road Trip" taking 100 farmers from across the state to Lake Erie. Once there, they headed out in research boats to pull water samples and see first hand the challenges facing our Great Lake.

While the results of the edge of field study conducted on my farm are beginning to show us solutions, we also know that the measures farmers are taking to reduce run-off voluntarily are also showing success. USDA–NRCS recently released (end of March 2016) a Special Study Report titled "Effects of Conservation Practice Adoption on Cultivated Cropland Acres in Western Lake Erie Basin, 2003–06 and 2012". This study was designed to quantify the environmental benefits that farmers and conservation programs in the WLEB provide to society. The report, based on farmer survey data in the Basin, shows that voluntary conservation is making significant headway in reducing nutrient and sediment loss from farms. Even so, there is opportunity to improve conservation management across the basin and no single conservation solution will meet the needs of each field and farm. Let me emphasize that there are no silver bullets or no single conservation practice or solution that will meet the needs of each field or farm.

Key findings of the survey on conservation practices in the WLEB include:

- 99% of the cropland acres are managed with at least one conservation practice.
- 96% of the cropland acres are managed to prevent average annual sediment losses of more than 2 tons per acre.
- 70% of the nitrogen applied is removed by crop harvest.
- 58% of the cropland acres are managed with phosphorus application rates at or below crop removal rates.
- The cost of conservation practices in place represents a significant annual investment. Regardless of funding source (Federal, state, local or private) the annual regional investment in conservation is $277 million or $56.98 per acre.
- No single conservation solution will meet the needs of each field and farm. WLEB croplands are diverse in terms of soils, farm fields, farming operations, and management, which creates differences in conservation needs and potential solutions. Field-scale conservation planning and conservation systems are needed to accommodate different treatment needs within and across farm fields, while maintaining productivity.
- Additional progress in nutrient and erosion control will depend on advanced precision technologies directed to unique zones or soils within field boundaries.

As a farmer in the Western Lake Erie Basin, I know these important findings reflect the sentiment of those that work every day to make sure that our land and our water are the healthiest they can be. I have been a farmer my entire life and I have seen many changes in the way we grow our country's food. We have become more efficient, increasing yields while decreasing inputs. We have taken extensive measures to become aware of soil health and we take great pride in being good stewards of both Ohio's land and water. We are committed to implementing voluntary measures that are science-based and that will yield results. No-till farming is a widely adopted practice across Ohio. The same is true of growing cover crops, creating filter strips and windbreaks and conducting variable rate application of nutrients. Farmers stand ready and willing to implement voluntary measures that address water quality and food production simultaneously.

I appreciate the opportunity to address you today and provide just a brief overview of the efforts Ohio's farmers are making to ensure a long future of clean water in our state. If you want to learn more about our numerous efforts go to *www.farmersforwater.com*.

The CHAIRMAN. Thank you, Mr. McClure.

Mr. Buman, did I pronounce that correct?

Mr. BUMAN. That is right.

The CHAIRMAN. All right. Well, Mr. Buman, please proceed with your 5 minutes of testimony when you are ready.

STATEMENT OF TOM BUMAN, CHIEF EXECUTIVE OFFICER, AGREN, CARROLL, IA

Mr. BUMAN. Mr. Chairman, Ranking Member, and Members of the Subcommittee, thank you for this opportunity.

I have worked 34 years in soil and water conservation. My first 14 years, I worked with the Natural Resources Conservation Service, and the last 20 years I have been the CEO of Agren, a small consulting firm in western Iowa.

In that time, farming has become much more complicated. First there was the Chesapeake Bay, then hypoxia in the Gulf of Mexico, then the algae blooms in Lake Erie, and now the law suit from the Des Moines Water Works. All sides agree that we in agriculture are responsible for a portion of this water quality issue and we need to do more, but doing more isn't good enough. We need to do more of the right thing.

For farmers to make a significant impact on soil erosion and water quality, conservation practices need to be targeted. And that is the challenge facing today's farmers: putting the right practice in the right place. To do this, farmers need access to two things. First, they need significantly more technical assistance, and second, they need better technology.

If we look at the technical assistance trend, I don't think help is coming from conservation agencies. In the past 30 years, NRCS has lost 30 percent of their FTEs. Even if this downward trend could be reversed, it simply is not enough.

In analyzing the situation, I have come to the conclusion that technical assistance must come from the private-sector. Specifically, the ag retailer. So why the ag retailer? Because farmers trust them. In a 2012 survey, 5,000 farmers in the Corn Belt were asked who influences their decisions about agricultural practices and strategies the most. The survey results were crystal clear: not the government, not NGOs, not extension service. By a strong margin, ag retailers were at the top of the list. Yes, farmers trust their ag retailers. Further, in a 2015 study, Iowa State found that 60 percent of all farmers agree that their ag retailer should do more to help them address nutrient losses.

Technical assistance through ag retailers is step one, and I am happy to say that several ag retailers, specifically, United Suppliers of Ames, Iowa, and Land O'Lakes of Minnesota, are getting involved, but they need more encouragement and they need more financial assistance.

Step two in providing farmers with better technology for decision making. At Agren, we are developing state-of-the-art software technology. Using a CIG from NRCS, we got our start by developing two programs; one originally designed to design ponds, and the other to design sediment basins. This technology is quite amazing. What used to take me 6 to 20 hours, I can now do in 15 to 20 minutes.

We have also developed a software tool with our own money for designing wetlands and grassed waterways, and we have developed one tool for writing proscribed fire plans. Most recently, Agren has worked with the Agricultural Research Service in Oxford, Mississippi, to commercialize some of their research. Most people would refer to this as technology transfer. I call it unlocking Pandora's Box.

Our software calculates soil erosion at 72,000 points in 160 acres. It identifies the erosion hotspots in a field, and it models sediment transport and delivery. Armed with SoilCalculator, ag retailers can now correlate erosion with yields, and recommend appropriate precision conservation methods.

I wish I had 5 minutes just to tell you about the value of this program for precision conservation. This is powerful technology.

When you can look at a field and determine those areas that are delivering the most sediment to our waters, decision-making evolves quickly.

At Agren, it is just not about our technology; we are integrating other emerging technology into our precision software, including machine control, auto-steer, and collection of survey by drones, which is very exciting.

Public pressure on agriculture is at an all-time high. We in the ag community need to up our game. We need to help farmers speed the adoption of conservation. We know that farmers want to receive conservation information from their ag retailers. We know ag retailers are interested in offering this service. However, to integrate precision conservation into their sales cycles, retailers need motivating incentives. The conservation effort can be accelerated by ag retailers who are equipped with state-of-the-art precision conservation technology.

Thank you for your time.

[The prepared statement of Mr. Buman follows:]

PREPARED STATEMENT OF TOM BUMAN, CHIEF EXECUTIVE OFFICER, AGREN, CARROLL, IA

Solutions through Voluntary and/or Locally-Led Conservation Efforts

Chairman Thompson, Ranking Member Lujan Grisham, and Members of the Subcommittee, thank you for the opportunity to appear before the Subcommittee on Conservation and Forestry and to provide testimony regarding innovative solutions for conservation.

My name is Tom Buman. I was raised on a farm in western Iowa, where my parents instilled in me a deep conviction for agriculture and the environment. Today, I am still connected to my family farm, which my brother operates.

For the past 20 years, I have been the CEO of Agren, where I have married my love of agriculture and the environment to my passion for pioneering innovative solutions to environmental problems. At Agren, I drive concept development and continuously challenge scientists, programmers and subject matter experts to achieve a higher level of innovation. I am also responsible for leading business development and strategic partnerships.

Prior to founding Agren in 1996, I spent 14 years with the Natural Resources Conservation Service in Iowa, first as a Soil Conservationist and later as a District Conservationist. I have a Bachelor of Science degree in Agronomy (1982) and a Masters in Business Administration (1995), both from Iowa State University.

I am proud to say that Agren's suite of precision conservation software is revolutionizing soil and water management. Our online conservation planning tools enable users to get done in minutes what farmers have traditionally waited on for weeks and months. Our customers can now offer practical, value-added soil and water management solutions, empowering farmers and land managers to make profitable decisions that ultimately enhance agricultural productivity and sustainability.

Let's just get it out there. We, in the farming community need to do more conservation. We need to up our game. What we are doing is simply not enough. But just as importantly as doing more, is doing more of the right thing. Yes, doing more and doing more of the right thing are completely different. It's no longer good enough for farmers to place a terrace or waterway, wherever they think it's needed. For farmers to make a significant impact on soil erosion and water quality, the conservation practice needs to be targeted for a specific purpose. And that is the challenge facing today's farmers; putting the right practice in the right place.

I'd like to use a simple health analogy to demonstrate my point. What if your doctor tells you that you have a high risk—1 in 5 chances—of having a heart attack in the next 10 years? What would you do? You're now challenged with making some critical decisions. The research tells you that modifying certain risk factors can improve your odds. You probably have an idea what those risk factors are. Some are simple strategies, while others are more complex. You could exercise. You could cut saturated fat from your diet. You could lose weight. You could take daily baby aspirin or medication to lower cholesterol. You might even envision the need for surgery. A combination of life style change strategies might make a bigger difference, but

you want to be sure. You want the best course of action for the best outcome, based on your current health and lifestyle. So you turn to an expert, your doctor, to distill the information and help you develop an individualized plan.

Farmers also want what works best for the health of their soil and the cleanliness of their water, as well as for their pocketbook. But they lack critical decision-making tools. Just as health decisions are driven by individual health information, today's conservation decisions should be based on individualized, site-specific resource concerns; an individualized plan to put the right practice, in the right place, for the right purpose. This precision conservation, like the practice of medicine, is an art and a science. With recent advances in innovative technology, combined with site-specific information and accessible technical assistance, farmers can do more to achieve the most environmental protection, for the lowest cost, while meeting the goals of their operation.

Let's examine the current status of accessible technical assistance. If we agree that farmers need technical assistance to interpret information, implement conservation and do more of the "right thing," we should ask ourselves, where do farmers get this help? Government? Probably not. Conservation agencies are tapped out. Funding for staff resources at both state and Federal conservation planning agencies has been on a steady decline over the past 30 years. An astonishing 5000 full-time employees, approximately 33% of the total workforce, were cut from the NRCS budget between 1980 and 2016 (Helms, 2010) (Lawrence, 2015). But even if these numbers were restored, it will not make an appreciable difference to reaching enough farmers.

In the spring of 1981, I was a junior at Iowa State University studying agronomy. My dad had one of the first outbreaks of black cutworm in the neighborhood. What did he do? He did what every farmer did at that time. He called the Extension Service. The County Extension Agent came out to the farm, diagnosed the problem, held a field day for Dad and his neighbors, and helped Dad solve the problem. Today, unlike 1981, farmers take their agronomy questions straight to their ag retailer because farmers trust their ag retailer to give them sound advice.

The scale of solving the soil conservation and water quality issue is enormous and farmers should have the option to seek technical advice from professionals, whom they most trust. Given the magnitude of the need for technical assistance, the private-sector is the only resource that can scale to the challenge.

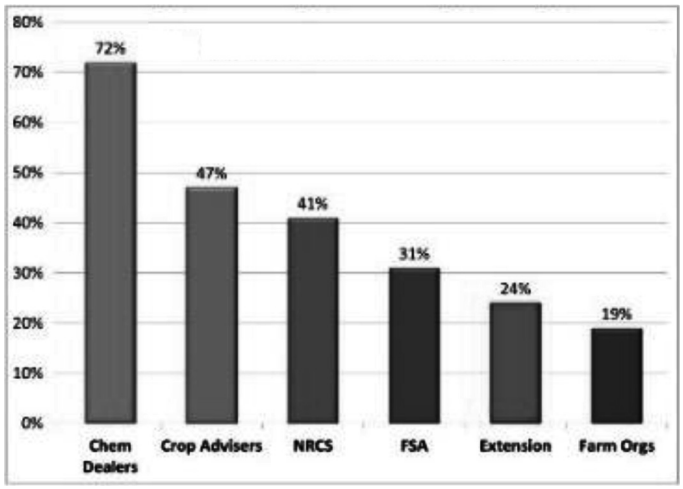
Conservation Through the Private-Sector

Because the traditional stream of information and technical assistance has been constrained and because the private-sector has improved their capacity, farmers turn to the private-sector more often for information and advice. In their trusted role, ag retailers are positioned to be a farmer's first line of information on conservation issues. Furthermore, ag retailers are the only entity with the opportunity to deliver field scale agronomy, including conservation planning, to U.S. farmers.

Several studies demonstrate that farmers implicitly trust their ag retailer and have an appetite for their retailers to do more to protect natural resources. For example, a 2012 survey of 5,000 Midwestern corn producers reported their most trusted advisor, when making decisions about agricultural practices and strategies, was their chemical or seed dealer. As depicted in *Figure 1,* crop advisors came in a distant second, with conservation agencies, university extension, and non-governmental organizations trailing even further (Arbuckle J., 2013). Further, a 2015 study of over 1,000 Iowa farmers found 60% agreeing that their fertilizer or ag chemical dealer "should do more to help farmers address nutrient losses into waterways." Only 9% of the farmers reported they did not think their ag retailer should provide conservation services (Arbuckle & Bates, 2015).

Figure 1

Influence of Selected Entities on Ag Decisions (Percent Moderate or Strong Influence)



Chemical dealers top the list of ag's most trusted advisors.

Throughout the past 2 years, my colleagues and I have communicated with several of the largest precision agriculture providers. They have expressed an interest in, and in some cases excitement about, delivering conservation technical assistance.

An Example of a Private-Sector Offering

In an effort to get more conservation on the ground, United Suppliers, a customer-owned wholesale supplier of crop nutrients, crop protection inputs and seed, with headquarters in Ames, Iowa has stepped forward. United Suppliers is making a significant investment into developing a conservation planning service through the private-sector. They have named their conservation platform SUSTAIN™. To my knowledge, this offering by United Suppliers is the single largest, private-sector investment in soil conservation planning services offered to farmers.

The SUSTAIN™ service platform includes soil loss estimates and initial planning of conservation structures, including grassed waterways, water and sediment control basins, ponds, and wetlands. "The new conservation planning service will provide growers assistance in exploring conservation alternatives that best meet their needs," said United Suppliers President & CEO Brad Oelmann.

United Suppliers SUSTAIN™ Platform

Vision: *SUSTAIN will improve the capabilities and competitiveness of United Suppliers' Owners by positioning them as leaders of the environmentally sustainable agriculture movement, both in the agriculture industry and in the communities they serve".*

Mission: *SUSTAIN offers a leading-edge, economically sound and forward-thinking pathway through which Owners can deliver significant benefits for growers, and do so in ways that are good for the environment and meet the demands of the supply chain for fertilizer optimization and soil health".*

SUSTAIN™
ENVIRONMENTALLY SUSTAINABLE AGRICULTURE

What a change. Even 5 years ago, it was difficult to imagine a major ag fertilizer/chemical dealer developing a platform with such a bold Vision Statement, "*improve the capabilities and competitiveness of United Suppliers' Owners by positioning them*

as leaders of the environmentally sustainable agriculture movement, both in the agriculture industry and in the communities they serve." And following up with a Mission Statement of "*offering a leading-edge, economically sound and forward-thinking pathway through which Owners can deliver significant benefits for growers, and do so in ways that are good for the environment and meet the demands of the supply chain for fertilizer optimization and soil health.*"

To add to this excitement, in October of 2015, United Suppliers entered into a joint venture with WinField Solutions, the crop input business unit of Land O'Lakes, creating WinField U.S. A full merger of the two organizations will be completed in October of 2017. Precision soil and water management has emerged as a high-priority and best fit for the WinField U.S. sustainability platform. WinField U.S. believes that helping their growers conserve soil resources is essential for their productivity and profitability, as well as for the expanding global population. As a major first step, the organization's leadership is working to partner with the Minnesota Department of Agriculture to support farmer participation in the Minnesota Agricultural Water Quality Certification Program via the WinField U.S. cooperative retail network.

Technology and Precision Conservation

Just like technology revolutionized precision agriculture, precision conservation will be accelerated with new, innovative technologies and approaches.

In 2006, Agren entered into the world of high tech software. With a Conservation Innovation Grant from NRCS we developed two software programs; one to design ponds and one to design sediment basins. The technology is amazing. What used to take me 6 to 20 hours, I could now do in 15 to 20 minutes.

However, we didn't stop there. We developed more software. We developed tools for wetlands, prescribed fire, and then one for grassed waterways.

Most recently, Agren worked with USDA's Agricultural Research Service (ARS) to commercialize some of their science and technology. Most people would refer to this as technology transfer; I call it unlocking Pandora's Box.

ARS is the lead agency for developing the RUSLE2 (Revised Universal Soil Loss Equation version2), a computer model that predicts rill and inter-rill erosion caused by rainfall and runoff. Since its inception, this model has been used by conservation agencies to model soil erosion at *one point* in a field. Through a team effort, Agren developed the same modeling engine (RUSLE2) to calculate soil erosion at *72,000 points in 160 acres* with Agren® SoilCalculator. Armed with the outputs of SoilCalculator, ag retailers can help farmers correlate soil erosion (*Figure 3*) to yields (*Figure 4*). Furthermore, ag retailers can begin to help farmers understand if soil erosion is causing a yield drag and recommend appropriate conservation practices.

Figure 2



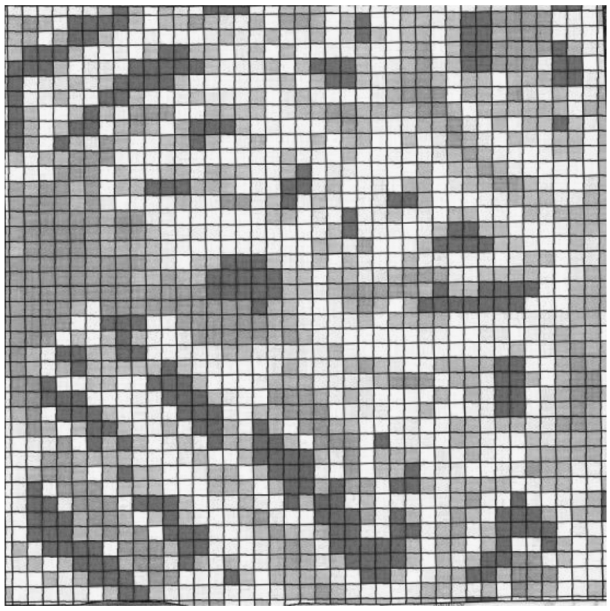
Pond design generated by Agren® PondBuilder.

Figure 3



Erosion map generated with Agren® SoilCalculator.

Figure 4



Farmer yield map.

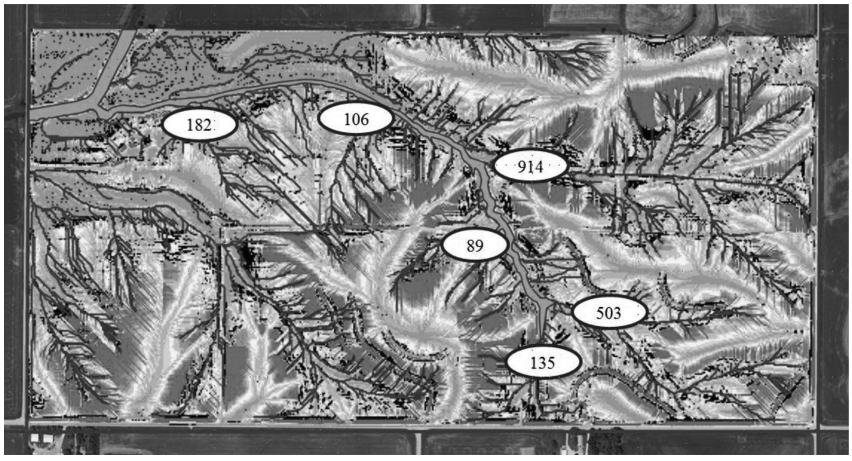
The outputs of SoilCalculator are powerful and can be used to drive several other important environmental models. Agren has collaborated with researchers at the ARS Sedimentation Laboratory and the University of Tennessee to develop two GIS-based soil loss modeling tools, referred to as the Revised Universal Soil Loss Equation 2-Raster (RUSLER) and the Ephemeral Gully Erosion Estimator (EphGEE).

Once sheet and rill erosion could be modeled in a distributed fashion, Agren worked with ARS researchers Dr. Seth Dabney and Dr. Dalmo Vieira, to also develop a physically-based ephemeral gully model. Conceptually, the new model is based on the assumptions and methods similar to those used in the Chemicals, Runoff and Erosion model from Agricultural Management Systems (CREAMS) (Knisel, 1980) and the Water Erosion Prediction Project model (WEPP) (Ascough, Baffaut, Nearing, & Liu, 1997), but with a number of modifications to remove technical limitations of those older models.

By integrating with RUSLER, the integrated application provides a mechanism for the estimation of runoff and sediment loads that control the development of ephemeral gullies. EphGEE simulates ephemeral gully erosion on complex in-field dendritic channel networks, with outputs for channel erosion and sediment transport, deposition, and delivery to a watershed outlet (Vieira, 2014).

This ability to determine the transport and deposition of soil will allow ag retailer to target practices, such as water and sediment control basins, to sensitive areas resulting in significant, positive, environmental impact. With technology like SoilCalculator, ag retailers can effectively and efficiently implement precision conservation.

Figure 5

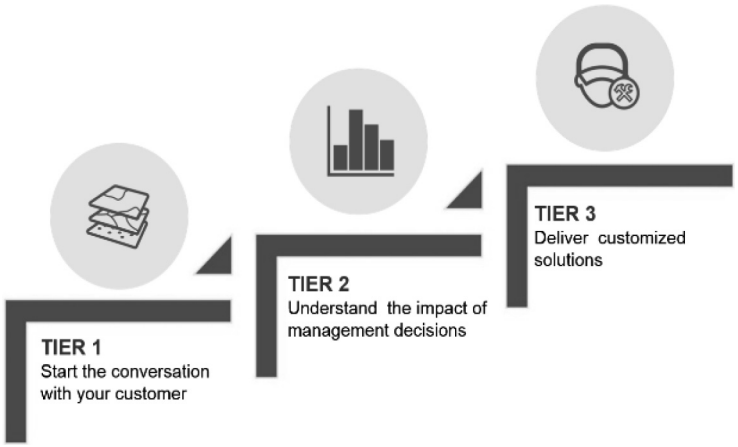


Using SoilCalculator in combination with EphGEE, conservation planners can model the sediment that is transported and delivered to waterways. The number in the oval represents the annual delivery of sediment from a sub-watershed (measured in tons).

Agren's Sustainability Solution Platform

Agren developed the Sustainability Solution platform to allow ag retailers to introduce soil and water management solutions alongside their precision ag offering. The three-tiered platform supports delivery, sales, and documentation of soil and water management services through field agronomists. As farmer response and the market for these services grow over time, the Sustainability Solution allows retailers to provide a full-suite of precision conservation planning services.

Figure 6



Agren's 3-tiered Sustainability Solution.

Agren's three-step model leverages the farm-gate relationship and service-orientation of the agronomy network. It minimizes both the level of effort and specialized skillset required for the retail agronomist to engage with farmers on soil and water management. By utilizing ag retailers' precision ag platform, the delivery process is streamlined into a consultative sales process familiar to the agronomist. Using these tools, the retail agronomist is not overburdened by "one more thing" to sell. Incorporating an experienced and well-trained conservation agronomist into the

process ensures quality conservation planning assistance that builds on core conservation principles and engineering standards. Also, because the retail agronomist is generating and qualifying leads, the conservation agronomist is able to service farmers across many locations.

Other Technologies for Conservation

The use of new technology in agriculture should extend well beyond biofuels, crop protection, automated machine control, and seed varieties. Advancements in agriculture technology should be applied to soil and water conservation, as well. Soil and water conservationists must harness existing technology to reduce the cost of precision conservation and encourage more effective technology and knowledge transfer. Agren is integrating existing technologies, such as auto-steer, machine control, LiDAR and UAVs (un-manned aerial vehicles), into its conservation platform, to improve efficiencies and farmer/ag retailer adoption.

Auto-steer is a computerized guidance system used on tractors. Auto-steer automatically steers the tractor on a specific path with high precision. If the vehicle moves offline, auto-steer adjusts the tractor position to follow the prescribed path.

Conservation application of auto-steer: In years past, field contour lines were flagged manually; farmers would follow the staked line when planting. Today, very few contour lines are staked for farmers. Contouring is still effective, but other priorities have moved contour assistance to the bottom of the priority list. However, the newest precision technology allows ag retailers to draw contour lines on a aerial map and electronically feed that information into a tractor's auto-steer system. Likewise, auto-steer could be used to layout and design contour grass strips for the Conservation Reserve Program (CRP).

Figure 7

Contouring Made Simple



Automated system to design and layout contour and contour grass strip systems.

Machine control is a 3D grade-control system integrated into construction equipment such as a motor grader (or bulldozer). The grader's antenna receives a GPS location signal. The internal GPS technology compares the grader blade position to a pre-defined three-dimensional computerized model. The system automatically controls the hydraulics of the grader and raises or lowers the blade to achieve the grade design requirements. The automatic blade control allows the operator to reach grade in shorter time, translating to higher contractor productivity.

Conservation application of machine control: Imagine a conservationist designing a structure like a grass waterway using LiDAR data. Once designed, the conservationist can easily create a 3D machine control file and e-mail it to the contractor. The contractor then uploads the file into the machine control unit and builds the structure. This could all happen within 1 day, with the elimination of field layout work.

Figure 8



Motor grader with machine control.

In some locations and for some conservation practices, contractors already can obtain a 3D machine control. Given the increased accuracy and productivity, machine control files should be made available to all contractors who build conservation practices.

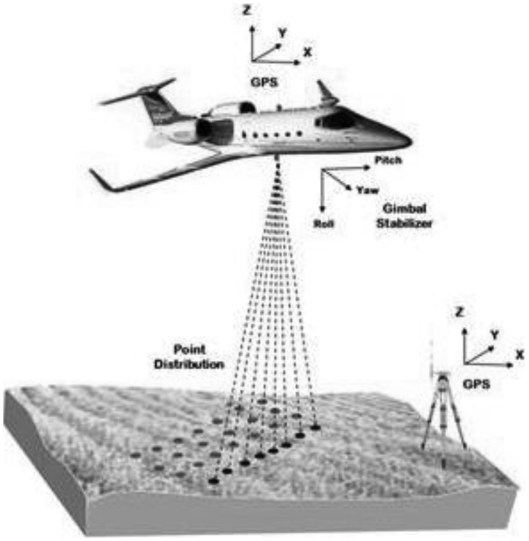
Currently, Agren can output machine control files for waterways. By the end of this year, Agren intends to output machine control files for all structural practices. Developers (companies like Trimble, Topcon, and Leica) are poised and waiting to expand the use of machine control for soil and water conservation. Machine control technology will fundamentally change how conservation structures are designed, staked, and constructed.

Testimonial from a contractor using machine control to build a grass waterway: *https://www.agrentools.com/construction-marketplace/testimonials/*.

LiDAR is an emerging technology that is changing conservation planning practices from coast to coast. An acronym for **Li**ght **D**etection **a**nd **R**anging, this term is used in mapping to describe how location and elevation data is collected, using laser beams. To obtain the data, a small aircraft flies over a land mass and sends out thousands of light beams to define the surface of the earth and the heights of above ground features.

The data initially gathered by a LiDAR system is raw X, Y and Z coordinates. Processing of the data points can result in a highly accurate GIS-based digital elevation model; essentially a plaster relief of the landform made from light. Field verification trials in Iowa, document 8″ or better vertical accuracy under leaf-off conditions.

Figure 9



Collecting LiDAR data (Fancher, 2012).

LiDAR has been used for road and culvert design, fire fuel mapping and to visualize the Grand Canyon.

Conservation application of LiDAR: When LiDAR data is combined with tools like the Agren engineering tools, the information can be used to more quickly and accurately determine optimum locations for conservation solutions like ponds, waterways and basins. Additionally, the opportunity to almost instantaneously provide farmers with a visual representation of how their fields might look with different conservation practices applied is tremendous.

While there is some consensus at a Federal level supporting a national database of LiDAR, this effort has encountered snags. While these snags are being sorted out, cities and states are moving ahead with their own statewide LIDAR collection. Significant regions of the Eastern United States now have LiDAR coverage. Although LiDAR is available in many areas, it unfortunately varies in quality. In some cases, LiDAR is accurate enough for actually engineering practices, but it is always good enough for planning conservation practices.

NRCS is researching the use of LiDAR. According to USDA, NRCS, "LiDAR suitability for conservation engineering work is determined by data quality, such as the accuracy and precision of the LiDAR dataset. Data quality is impacted by aerial flight precision, type and execution of elevational ground control, the rate and density of sampling, and the level of post processing." (USDA, NRCS, 2015).

Unmanned Aerial Vehicle (UAV): Where LiDAR data is accurate enough only for planning soil and water conservation practices, alternative collection methods can be used. Using UAVs is an emerging way to collect low cost topographic data.

Figure 10



UAV used to collect high quality topographic data.

In the spring of 2016, Dr. Rob Wells, USDA Agricultural Research Service, compared photogrammetry measurements, of several data collection methods, to determine the accuracy of UAV-collected topographic data. Dr. Wells found that the UAV methodology provided a highly accurate substitute for more labor intensive ground collection of topographic data. Dr. Wells reported, using a UAV, topographic data with a vertical accuracy 1 cm to 2 cm can easily exceeds the survey quality specified by NRCS for engineering practices.

Conservation application of Unmanned Aerial Vehicle (UAV): Using a UAV can vastly reduce the time spent collecting accurate topographic data for conservation practice design. Additionally, UAVs can collect survey data when soil conditions prevent traditional survey crews from working. In 2016, Agren contracted with Top Intelligence, a regional provider of drone related technology to fly seven different sites at two different times, for a total cost of $7,500, or an individual cost of $530/site which includes process and cleaning the data. The cost of collecting data with UAV in this case, is certainly less expensive than sending a crew to the field to collect survey data.

Conclusion

Public pressure on agriculture is at an all-time high. The public want foods grown more sustainably and improved water quality. We, in the ag community, need to up our game. We need to speed up conservation practice adoption. We know farmers want to receive conservation information from their ag retailers. And, we know ag retailers are interested in providing this service, but they need encouragement and motivation to integrate precision conservation with their precision ag platform. The conservation effort can be accelerated by ag retailers who are equipped with state-of-the-art technology. It all starts with giving farmers the information they need to make a decision and providing fast and efficient technical assistance for implementation.

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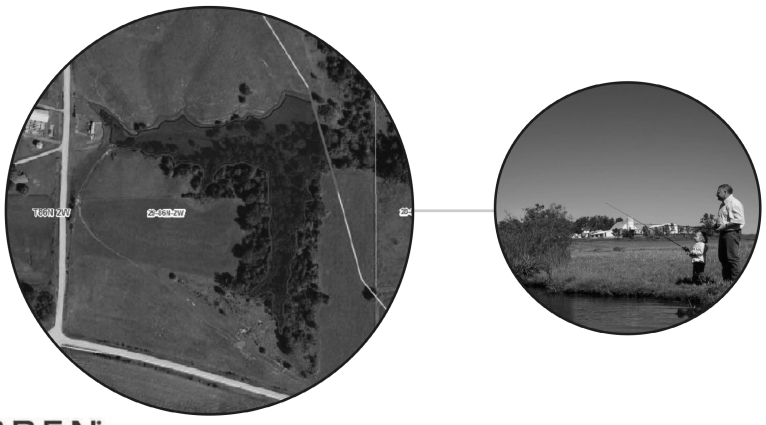
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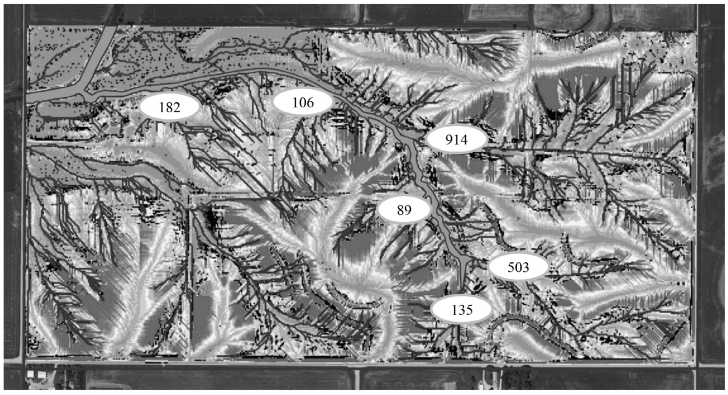
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SoilCalculator

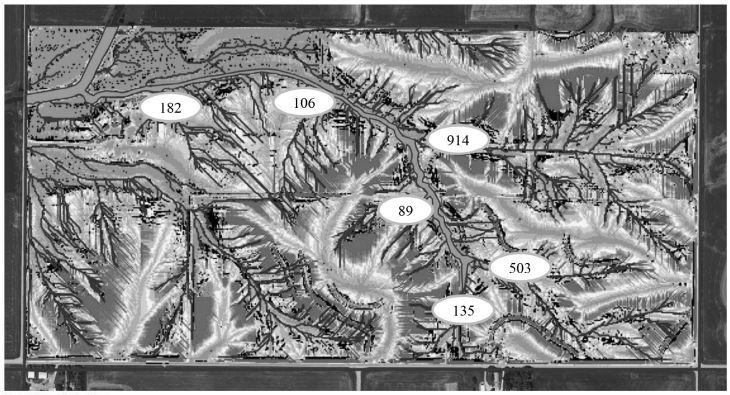


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Corn-Soybean Rotation

Fall Tillage After Corn and Soybean

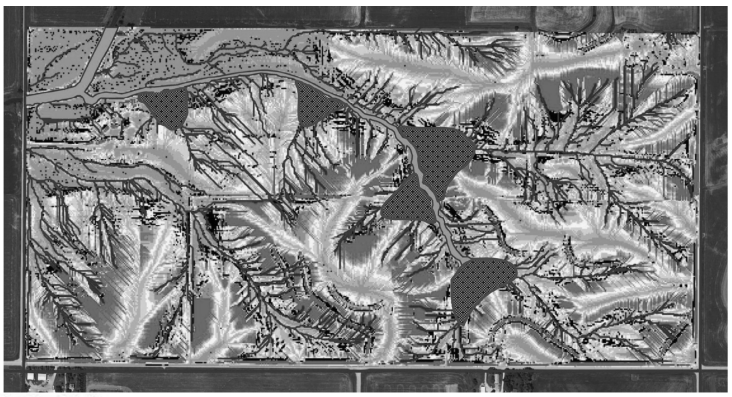


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Option No. 1

Variable Width Filter Strip (Mockup)

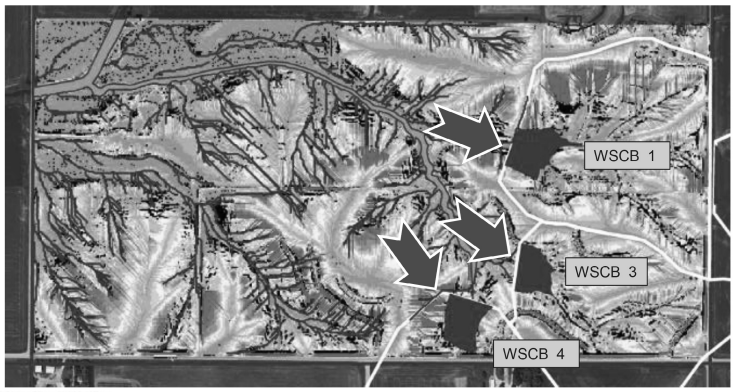


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Option Option No. 2 Mock-up Retention structures Mock-up

Retention structures



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Machine Control

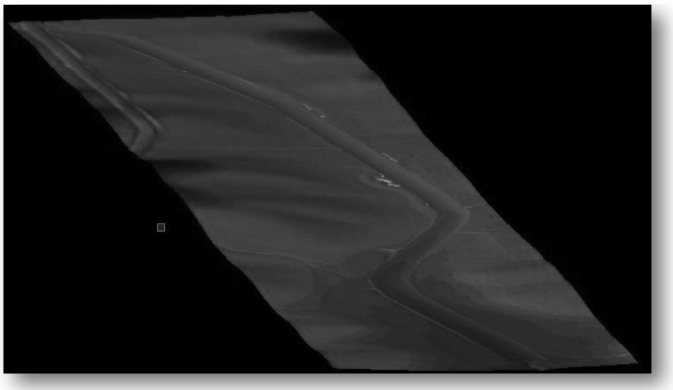




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Machine Control Waterway



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Technology for the Simple Things



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Collection of Topographic Data



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Ag Retailer's Commitment

United Suppliers SUSTAIN™ Platform

Vision: *SUSTAIN will improve the capabilities and competitiveness of United Suppliers' Owners by positioning them as leaders of the environmentally sustainable agriculture movement, both in the agriculture industry and in the communities they serve".*

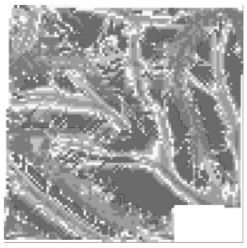
Mission: *SUSTAIN offers a leading-edge, economically sound and forward-thinking pathway through which Owners can deliver significant benefits for growers, and do so in ways that are good for the environment and meet the demands of the supply chain for fertilizer optimization and soil health".*

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SoilCalculator



Fall tillage before corn & soybeans



Fall tillage before soybeans & no-till corn

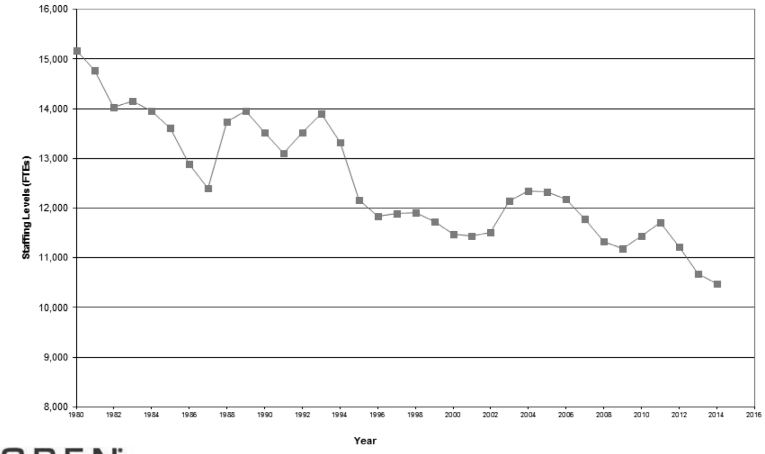


No tillage both years

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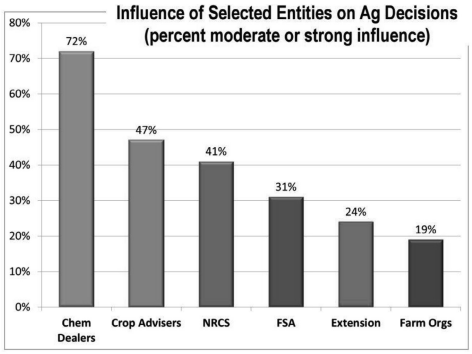
USDA's SCS/NRCS Staffing of FTEs (1980 to 2014)



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Influence of Ag Retailers



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The CHAIRMAN. Mr. Buman, thank you so much.

We will now proceed with questioning by Members. I am going to reserve my time, and I am pleased to recognize the gentleman from Oklahoma, Mr. Lucas, for 5 minutes.

Mr. LUCAS. Thank you, Mr. Chairman. And most of my colleagues know on this Committee, whether it was in the role that you now have, or in the role that Chairman Conaway has, there are very few Members of Congress who are as fanatical about locally-led, voluntary, incentive-based conservation perhaps as I am. But coming from where I come from, the district I represent, the Southern Plains, the abyss of the Dust Bowl, the challenges faced there.

I would first turn in my questions to Mr. McDaniel. My part of the world, a situation created by weather and economics and bad

Federal decisions a century before, 160 acres in Iowa should not have been the same homestead unit as in western Oklahoma. Should not have been. Nonetheless, the mistakes that were created there, in this room 80 years ago approximately, starting in 1935, we moved in a different direction with the Federal policy. Your folks have led that. And to the point that in the last dramatic 4 year drought in my region, 2011–2014, the biggest challenge, and as many people who have read Steinbeck would be amazed, but the biggest challenge was not dust in the air in that 4 year drought, but the wildfires because of the crops that we established, the grasslands we perpetuated, the shelter belts, changed the environment so we weren't concerned so much to the degree of the 1950s or the 1930s with the dust, but we are trying to deal with the fires, dealing with the standing vegetation.

Mr. McDaniel, could you expand for a moment on the concept, and you mentioned this, of course, in your opening statement, but the concept of the importance of locally-led, locally-determined, voluntary incentive-based conservation, and how it has made such a difference in this country over the last 81 years?

Mr. MCDANIEL. Well, thank you for that question. And I feel like I am preaching to the choir in this particular case.

Mr. LUCAS. Yes, brother.

Mr. MCDANIEL. Certainly, we have had 75 to 80 years of success through the voluntary locally-led, incentive-based program. I do appreciate you brought up the question about the wildfires in the West because that is really the environmental disaster of our generation. And just this past week on my farm, which is 70 miles north of D.C., for 3 days I could smell the smoke from Alberta. It is a little bit off the subject in terms of what we are——

Mr. LUCAS. Just as the dust storm in 1935 moved this Committee to take action on soil conservation practices in the beginning.

Mr. MCDANIEL. Exactly. Forestry and conservation is certainly part of the bailiwick of this Committee, so I don't think it is off the subject to bring up the topic, but the Conservation Districts, again, are in a position where they can work with the forestry people and have locally-led conservation practices dealing with the wildfires in the West. Rather than the top-down approach, you get the local people who know the situation the most, do some practice activities in terms of reducing the amount of fuel that is in those areas, do some management proactively rather than reactively, and sending all the foresters from around the country out West to fight the fires. It is like changing the oil in your car, you do it up-front so you don't blow up the engine.

So, there are some real opportunities here. We have the history of 75 years of doing it with conservation. We can address the wildfire situation similarly.

Mr. LUCAS. The comments made by the panel as a whole about the trust issue, the perspective that so much of the Federal Government now, whether it is EPA or other entities, are driving in the direction not of incentives, not the carrot, but the stick, forcing, threatening, harassing, pushing people to go to do things. But the local Conservation District, and I can only speak personally of the Upper Washita District that I live in, locally-led officers hiring

technicians to provide local services, working in conjunction with the NRCS folks, don't you believe it is probably one of the great assets we have that is under-appreciated by the general public, who don't even have a clue the Districts exist?

Mr. MCDANIEL. It is probably the best example of the democratic process that we have in this country to have local leaders stepping up to the plate and addressing these conservation issues.

Mr. LUCAS. And bringing their neighbors along with them in the common spirit of enthusiastic effort to do the right thing for the land.

Mr. MCDANIEL. Exactly.

Mr. LUCAS. Mr. Chairman, I yield back.

The CHAIRMAN. The gentleman yields back.

I am pleased to recognize the gentleman from Iowa for 5 minutes, Mr. King.

Mr. KING. Thank you, Mr. Chairman. Again, I thank the witnesses for your testimony here this morning.

I turn first to Mr. Buman. It caught my attention when you said 72,000 points in 160 acres. How do you arrive at those points to monitor 160 acres, and how big a grid does that work out to be?

Mr. BUMAN. It is actually a 3 meter grid. And what we have done is we have taken the same technology that NRCS uses, the RUSLE2, so we are using the exact same modeling engine that they are using, and we have put it into a GIS system. That makes it easy for anybody to calculate soil erosion.

When I worked for NRCS, I could calculate soil erosion on the back of a napkin, and now it has gotten much more complicated. In order to power private business to help farmers with conservation needs, we need to get back to where anybody can calculate soil erosion, and in this case, much, much better, and help the farmer identify where they need to install practices.

Mr. KING. And you have been at this monitoring how long, Mr. Buman?

Mr. BUMAN. We have been working on developing software since 2006.

Mr. KING. And you have identified those erosion locations where it is affecting yield. Did you have long enough records that you can look back on that and see how you reverse that, the effect of erosion on yields?

Mr. BUMAN. Actually, not. This tool here has been around for about a year and a half, but I can tell you that ag retailers are interested in doing it. We don't do consulting with farmers, we are more of a software company, and our goal is to license this software to people like Land O'Lakes and United Suppliers, and they see it as another layer of helping farmers understand what is happening on their fields. When they feed a level like this, it is like a phosphorus level, when they put it into their software they can help understand what is going on in the field.

Mr. KING. And then you also lease counsel on machine guidance for contractors. Could you explain that a little bit for the panel?

Mr. BUMAN. Yes, absolutely. So we worked with—the best example we have, actually, a video on our website, but we worked with a contractor in eastern Iowa. He was doing a waterway and it had no cost-share, no government involvement, the farmer just wanted

to do it on his own, which a lot of the conservation being done is happening that way now. And so he called me up, and it was a large waterway and he wanted a design, so I spent about an hour working with the design for him, because it was very complicated. And in the end, we put out a machine-control file that I e-mailed to him. We never met face-to-face, we just did it over a webinar. He went out and he built it in days less than what it would have originally taken him. And as you know, a couple of days with a couple of dozers is a lot of money. He was very excited about the technology, and sees it really as the future to enhance soil and water conservation.

Mr. KING. I have long been looking at that technology, and we have utilized it some time back. Just to throw this as an aside, we found ourselves in a situation where we had to grade in 15′ of water, and it was 1983. At that time, we found a red light laser from a pipe operation, and long story short is we graded in 15′ of water with a red light laser. So a lot of progress has been made since that period of time, and I am fascinated by some of this technology.

You heard what I had to say about the length of time it takes for nitrates to leach through the soil if there is an over-application. Would you have a judgment of how long you think that might be?

Mr. BUMAN. No, I don't know what that would be.

Mr. KING. Isn't it curious that generally, that is where we are with this, is that we are seeking to regulate inputs but we don't quite have a scientific idea on the result of regulating inputs. And you mentioned also the law suit of the Des Moines Water Works. If they are successful in that, how would that impact the work you do?

Mr. BUMAN. Well, I actually think regulation is the opposite of precision conservation. Regulation is very much a one-size-fits-all. I understand the desire to want clean water and healthy soils, but I think that if we go towards regulation in a one-size-fits-all, I think that we give up precision conservation, and that is putting the right practice in the right place with the farmer. And so I am not opposed to all regulation, I am not saying that; but, in this case it is the wrong answer to help farmers.

Mr. KING. Yes. And I was once down in your county, down by Willey, and I had one of the conservationists from that county tell me that there was a farmer there that was harrowing on the hillside with a six-sectioner harrow, and the land was so steep that he tipped the six-sectioner harrow over. Would you believe that story?

Mr. BUMAN. I don't know if I believe that story, but it is steep. Very steep.

Mr. KING. Just thought I would toss that in for a little levity. Thank you all for your testimony.

And, Mr. Chairman, I yield back the balance of my time.

The CHAIRMAN. The gentleman yields back his levity.

And I am pleased to recognize the Chairman of the full Committee, Mr. Conaway, for 5 minutes.

Mr. CONAWAY. Yes.

Ms. LUJAN GRISHAM. I am happy to yield to my colleague and really good friend, and my fearless leader, Chairman Conaway. I will go after. Thank you.

The CHAIRMAN. Chairman Conaway is recognized for 5 minutes.

Mr. CONAWAY. Well, thank you. I appreciate that.

Mr. McDaniel, in terms of the 3,000 districts, supervisory role, and all those. Is there a problem with different interpretations of the same rule across that span? Does that cause you guys problems from time to time, I am just curious how do you get consistent processes across a 3,000 unit enterprise?

Mr. MCDANIEL. Probably, Mr. Chairman, when you think about the 3,000 units, there are various subsets within those units, there are partners who are states, some states like Maryland who are very involved with Conservation Districts, other states where the Conservation Districts pretty much fully rely on the Feds, and then there are districts that have local partnerships as well. So it is a challenge to have 3,000 districts all working under the same concept, when you believe in local leadership. And the challenge for us is to make sure that we have good, solid local leadership in all of those districts. I don't know that I am really getting at your question, but————

Mr. CONAWAY. Yes, that is fine.

I will ask the same question that I asked the previous panel. Looking at the next farm bill, are there things that we can do in the structure of the farm bill and the way it relates to the programs that you are using that we need to address or look at, either change, fix, eliminate?

Mr. MCDANIEL. Well——

Mr. CONAWAY. Any of that consideration for the next farm bill?

Mr. MCDANIEL. No.

The whole discussion here is about regulatory *versus* voluntary incentive-based. We have a backlog throughout the country of farmers who are willing to step up to the plate and put conservation practices on their ground. There is a real need to make sure that we have the funding for the technical assistance to work on that backlog to avoid future regulation. It is going to be an either/or type of thing, so if we can properly fund the——

Mr. CONAWAY. Yes. I guess the struggle, of course, is going to be——

Mr. MCDANIEL. Money.

Mr. CONAWAY.—our country is $19 trillion in debt, and as you look to how we find these solutions and voluntary-led, all the buzzwords that you guys are using right now, how do we get that to where you can make money doing it so that there is a private incentive to make that happen?

Mr. MCDANIEL. And maybe the answer is programs similar to RCPP where Federal dollars can be leveraged with nonprofits, with state, local jurisdictions. You are right, this is a big job. No one agency or one division of government can get the job done without partnering and leveraging the funds from other partners. So perhaps that is the way to get to it.

Mr. CONAWAY. Yes. Other comments about where we ought to restructure the farm bill? Ms. Gould or Mr. McClure?

Ms. GOULD. Well, certainly, from my perspective, we would like to see the states play a bigger role in the crafting of the farm bill, and in particular, our National Association of State Departments of Agriculture be instrumental in the crafting of that.

Certainly, we don't always agree when we get together as 50 states on how the farm bill should be crafted, but the one thing that we do all always agree on is it needs to be as flexible as possible to take in the needs of those 50 states. You asked about always dollars are a problem, how do you get the money to the states, how do you hold states accountable, but as you are doing that, we would ask that the benchmarks are not so steep that we can't hit those benchmarks, and we simply turn away from the money that is put out to do good work. And make sure that the Federal agencies hold them accountable so that the regulatory burden doesn't actually take dollars out of our producers' pockets. It is not about just putting money or helping out with programs, it is about regulation that costs them money.

Mr. CONAWAY. Yes. I guess that is one of the struggles, and the question is a constant struggle between the number of folks that NRCS or FSA on the administrative side, those dollars then take away from dollars that are available for the delivery of the program. So how do you walk that balance? That was a rhetorical statement. It is a struggle you have at your agency. You can have everybody you want, and somebody has got to pay, it has to be paid for.

I do have one example recently where I toured Fair Oaks Farm in Indiana, a great example of voluntary compliance, where they have figured out a way to actually capture all of the waste from this 30,000 head dairy, on 15,000 acres, and they monitor all the water coming off that property, and they capture all the manure and they recycle, and all the things they do, most of which has been voluntary. So it is a great example of where the property owner, on their own initiative, decided to do what was best for the environment.

So I appreciate it. Mr. Chairman, I yield back. I thank the witnesses.

The CHAIRMAN. The gentleman yields back.

Now I am pleased to recognize the Ranking Member for 5 minutes.

Ms. LUJAN GRISHAM. Thank you, Mr. Chairman. And thank you for your patience.

And I am really struck by the need to figure out these balances. And, Mr. McDaniel, I agree with you that you can't have all of one and none of the other. We are creating an environment, unfortunately, that looks a lot like that. But I would be of the opinion that smart investments or investments through the farm bill that create the kind of partnerships that take us into the next century of farming, and incentivize these kinds of voluntary conservation practices that make a difference. There is no question that if we do this right, those locally-led conservation practices, in fact, we are seeing that they enhance both the health of the land and the recovery of a species.

And you mentioned an example that I am very familiar with, the Lesser Prairie Chicken, whose natural habitat includes my State of New Mexico, and have been very involved in the struggle, in two parts; first, to really hold onto locally-led voluntary conservation practices, particularly when, if the incentives aren't right for everyone to stay in, bigger states like Texas will pull out of that coalition

leaving smaller states and smaller folks invested and involved without the opportunity to continue their conservation practices. We are actually looking at legislation that would prohibit that in the future. And, of course, I am very pleased, and I know you are aware, that, in fact, we are now seeing that these conservation management practices by the folks who are required and capable of doing them on the ground has led to a de-listing, and that is exactly what we want.

And so we have talked broadly about that we need to be balanced. Is there a sense by anyone on the panel, and I would love to start with you, Mr. McDaniel, is there something specific, an incentive, including that any state, any group ought to be encouraged so if they can get it right, that is what we want, that is the whole purpose of a regulation. What else can this Committee do and can we put in the farm bill that very clearly creates a productive relationship between the stakeholders and the regulators, irrespective of whether it is state government or Federal Government, where we really create those partnerships. We talk about them, and we vacillate between funding them, not funding them at all, and you are right, I agree with you, it creates an all-or-nothing design, and particularly in this environment, we are going to end up with nothing.

Mr. MCDANIEL. I look at conservation, I call it the three legs of conservation. In order to have a good conservation program, the first thing you have to do is have a conservation plan, followed by good technical assistance. The plan needs to prioritize on a particular prescriptive basis what a particular property needs to have, what is the top priority, and whatever the priorities are as they go down the road. But then you need to have the engineering technical support to work with the cooperator to find out how best to achieve those priorities that you set in the plan, and then finally you implement.

A lot of focus has been on the implementation and how much are we getting on the land. Well, until you provide that roadmap up front to show what you are trying to do, and one of the problems with regulations, as has been mentioned several times, one-size-fits-all. It might be the fifth or sixth priority on a particular property. There might be a farmer that is required, say, to fence in his streams, as in Maryland, and this farmer might have issues with waste management, a higher priority on that, or maybe a heavy use area that needs to be addressed. It might be fourth or fifth on the list, but because it is a regulation, the farmer is going to have to use these financial resources to address that regulatory issue, rather than what might have greater economic and environmental benefit, something that is a higher priority.

So I am kind of beating around the bush a little bit on your question, but the three legs of conservation, and the fact that you have to have a plan, have a way to implement that plan, and have some people who can actually help you get there.

Ms. LUJAN GRISHAM. Thank you, and my time has expired, but it is a challenge, and I would love to think about a way, without creating more burdens on ranchers and farmers, for you to be able to say, "Look, I am trying to meet the regulation," and we will work on streamlining and making those more efficient and prac-

tical, less redundant and favor the investments that we are talking about here today. But it would be great if you could say, "That is wonderful, except I have these other priorities and a plan," and require that the Department takes that into consideration before making any final decisions. And it may be something we could think about, as long as it doesn't create yet another burden for both parties. But there has to be some way forward. And I do appreciate the panel's expertise and willingness to talk to us today.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. I thank the gentlelady.

I now recognize the gentleman from Georgia, Mr. Allen, for 5 minutes.

Mr. ALLEN. Thank you, Mr. Chairman. And it is good to be here, and I am excited to learn about voluntary conservation, and I want to focus on the success at the state and local level, and how the Federal Government, I guess, can promote this without getting in the way. Obviously, farm income is down over 55 percent over the last 3 years, so money to invest in programs like this is difficult. There are lots of rules that are constantly coming out from EPA, dealing with all sorts of things, but I do know that in our district, our farmers are committed to conservation. I mean they work the land, they own the land, but there are sick and tired of this top-down, confusing rule after rule, and then, okay, we have the endangered species issues and everything else that goes along with what this government is spewing out on a constant basis.

But, what we are looking for here is we want to incentivize our folks to conserve. And what do you see is the best role of the Federal Government to do that, Mr. McDaniel?

Mr. MCDANIEL. We have a success story to tell that we have done for 75 years. I think probably the biggest thing that the general public doesn't know, we don't tell our story very well.

Mr. ALLEN. I see.

Mr. MCDANIEL. Farmers go ahead and do what is proper and right for the ground, but the general public is not really aware of it. So I don't know if there is a place in a farm bill to actually have some way to let the general public know the work that is being done by the people in agriculture to address these conservation issues and these water quality issues. We are doing it. I don't think we are telling anybody about it. And so I don't know how the Federal Government fits into that, but maybe that is something to look at the next farm bill, how do we tell our story better.

Mr. ALLEN. We do have a problem on messaging up here. In other words, we tend to just talk about the things, the problems, the challenges, and don't do enough to pat our folks on the back and say, "Hey, great job, and we appreciate what you are doing and how you are sacrificing to make these things happen." So thank you. We will work on that, and we are working on that, but it is important.

As far as, Director Gould, working at the state level, what ways as far as collaborating with NRCS, are there any specific challenges that we need to deal with here at this level. I mean just if you have a list, this is your time to say, "Okay, you all need to do this, this, and this, and it will work."

Ms. GOULD. Well, thank you very much. And I have gone through a list, but at the top of that list is, again, work with the states.

Mr. ALLEN. Yes.

Ms. GOULD. It was interesting last night, I stepped out for dinner and I overheard a conversation on wildlife management in my neighboring state, and the couple that was there was appalled at a decision that had been made in my neighboring State of Wyoming. And the young woman said, "Well, you have to recognize that all the rich people live in Jackson Hole, and the rest of the state are farmers and ranchers, and they don't get out much." And it caught my attention because I thought that is probably how people see Idaho. There is Sun Valley and then the rest of the state doesn't get out much.

Mr. ALLEN. Right.

Ms. GOULD. And I just want to say we do get out and we are very involved. And so at the top of my list is, please just allow the states to work with you on the farm bill, include the people and the agencies that are on the ground. We have great people in EPA and USDA on the ground, in the offices, in NRCS, but oftentimes their messages don't go up the ladder and what we hear at the top of the ladder is, I have to check with OGC before we can tell you yes or no.

Mr. ALLEN. Right. Yes. Well, there is a disconnect there, and it is communication.

Mr. McClure, you have anything to add to that—those challenges?

Mr. MCCLURE. Well, what has always worked in our farm bills, and especially on the conservation side, is demonstrating new ideas and new innovations. And when we incentivize that, because there is never going to be enough money to put all these things on each acre, but if the money is there to help us on 40 or 80 acres of a certain issue, and put an innovation in, and then we can see that it helps us on our bottom line, it helps us do a better job, it helps us improve our soil health, then we have adopted it. I can name you different things that we have adopted on our farm that started with SWCD and our Conservation Districts. In our part of the world, the first time we tried to fix particulate phosphate in the lake in the 1980s, it was no-till farming. And it started by our Conservation District buying a few no-till drills and renting them out to farmers, and now the percentage of our county that is in no-till is probably at least 90 percent.

Mr. ALLEN. Wow.

Mr. MCCLURE. It all started by having some dollars available that we could show farmers the new innovation. We didn't buy everybody a brand new drill, we bought a few, and everybody shared, and they saw how it worked and they adopted because it helped their bottom line and it worked.

Mr. ALLEN. Okay. Well, thank you for your efforts.

My time has expired. I yield back, Mr. Chairman.

The CHAIRMAN. I thank the gentleman.

I am going to take the point of privilege to what I have reserved to ask my 5 minutes now.

Truly, there is a consensus, that is what I have heard today, what I have heard in the past, in terms of how voluntary conservation really is the way to go, when you compare that to a punitive, regulatory approach. We have had Chief Weller, who does an outstanding job, before this Subcommittee, and he is certainly singing the praises of voluntary conservation. He talked about the number of endangered species that have been recovered that, under the original punitive approach of the Endangered Species Act, would have never been done. I had Director Ashe from the Fish and Wildlife Service in my office, I believe it was just last week or the week before, it is all kind of a blur, and he was singing the praises of voluntary conservation.

So I want to bring us full circle in terms of the overall purpose of this Subcommittee hearing was really bring that back, and ask all of our panelists to share. Compare and contrast for me the economic benefits in our rural areas. In your thoughts, are there economic benefits that are realized when we utilize voluntary conservation practices, compared to the economic impacts of a more punitive, regulatory, top-down approach?

And so whoever wants to go first, please do. Go ahead, Mr. Buman.

Mr. BUMAN. Well, I would agree that we do need to get the right practice in the right place. Instead of regulation of one-size-fits all, we need to have farmers have technical assistance, and understand what objectives need to be accomplished and how they best do it. I firmly believe that we can reduce the cost of conservation by providing better guidance to farmers. It is a little like health care. If you went in and your doctor said you have a 1 in 5 chance of dying of a heart attack in the next 10 years, you would be thinking about all the things you can do to make yourself healthier, everything from taking a baby aspirin, to triple bypass. The question you are going to start with to the doctor is what do I need to do? What is the best solution to get me to a healthier state? And that takes expertise, and that is where we need to go with conservation and the voluntary approach.

The CHAIRMAN. Very good.

Mr. McClure.

Mr. MCCLURE. Yes, I absolutely believe that voluntary is the only way. We are in a 4 million acre watershed that is losing just a little bit. It is ½ a pound per acre, per year of phosphate that is causing the issue. And so I absolutely believe voluntary is the way. But, it is very important, and what we started out to say is we need to understand what the issues are before we start. Before we can ask our farmers to make big changes on their farm, we have to make sure that we understand what is actually happening, and that is why we started with field-edge research, because we need to know what exactly is coming off that land.

The dollars spent on these projects of understanding is so important because if we go down the wrong road, or we ask our farmers to go in a direction that doesn't work economically or doesn't fix the problem, then they are not going to be as apt to go down that road the next time. Dollars spent early, understanding exactly what the issues, the timing, and what works when we make changes and demonstration projects, is so important, and I would really encour-

age thinking about that in the future before we just go off in a direction and say this will fix it. Let's make sure we always have an understanding.

The CHAIRMAN. Right. Thank you. Mr. McDaniel.

Mr. MCDANIEL. Mr. Chairman, I don't think it is always necessary that conservation and stewardship are in conflict with economics. Sometimes issues like soil health, cover crops, things like that, have both economic and environmental benefits. And there is some sales work that needs to be done there probably by Conservation Districts and by NRCS to let people know this is both an environmental benefit and an economic benefit to your operation.

Now, some of the structural type of things, producers are going to have to have some economic support to get those type of things done, but there are practices that are both economically and stewardship-wise beneficial, and I think that is a win-win situation when we can identify those type of practices.

The CHAIRMAN. Very good. Ms. Gould.

Ms. GOULD. In our state, we have a Range Management Program, and when we talk about conservation, because 60 percent of our state is public land, we often talk about conservation of public lands, and ensuring that they are not just a victim to wildfire year after year. But our farmers and ranchers thought outside the box, and what they wanted was a program that helped them document what they are doing, their stewardship on the land. And it is not a program that costs a lot of money, but it actually helps BLM. We are thinking about going forward with Forest Service, so when they come up to renew permits for grazing allotments, they have the documentation that is in their file, and they can go forward with that. And hopefully it will help with the constant barrage of law suits. There will be documentation that actually assists on every side, and allows our farmers and ranchers to utilize that ground that is vital to our economy in Idaho.

So I would encourage programs that are new, innovative, think outside of the box, and use the resources that are existing, like NRCS and our Soil Conservation Districts.

The CHAIRMAN. Do you have some remarks you want to make?

LUJAN GRISHAM. No.

The CHAIRMAN. No? Okay. Okay, with that, thank you very much to the panel. Thank you for your leadership, thank you for your expertise on this. We have really put on a showcase for voluntary conservation today, but also looking at the impact that punitive, regulatory approach really does make it very, very difficult, puts a lot of compliance costs on our ranchers, our farmers, our forest owners. And as I said in my opening comments, our ranchers, farmers, landowners, forest landowners, they really are the original conservationists. They live there because they love the land, and they want to care for the land and help the land be healthy and be productive. And so certainly, we have seen the effectiveness of voluntary conservation programs. We have great documentation of that, especially most recently the multiple number of endangered species that have come off the list as a result of our collaborative work that is done, and it does that with much less economic stress. And as Mr. McDaniel had noted, when you look at some of the measures we take with healthy soils, where we are producing top-

soil, and actually helps to increase our yields, and helps provide those natural resistance to insects and disease, there are also some, obviously, economic benefits to those approaches.

So I do really appreciate all of your expertise.

And under the rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from the witnesses to any questions posed by a Member.

This Subcommittee on Conservation and Forestry hearing is now adjourned.

[Whereupon, at 12:12 p.m., the Subcommittee was adjourned.]

FOCUS ON THE FARM ECONOMY
(A VIEW FROM THE BARNYARD)

TUESDAY, MAY 24, 2016

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON LIVESTOCK AND FOREIGN AGRICULTURE,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:03 a.m., in Room 1300 of the Longworth House Office Building, Hon. David Rouzer [Chairman of the Subcommittee] presiding.

Members present: Representatives Rouzer, Hartzler, Yoho, Newhouse, Kelly, Costa, Plaskett, Vela, Nolan, Bustos, and Peterson (*ex officio*).

Staff present: Bart Fischer, Haley Graves, John Goldberg, Mykel Wedig, Stephanie Addison, Faisal Siddiqui, John Konya, Liz Friedlander, Mary Knigge, Matthew MacKenzie, and Carly Reedholm.

OPENING STATEMENT OF HON. DAVID ROUZER, A REPRESENTATIVE IN CONGRESS FROM NORTH CAROLINA

The CHAIRMAN. This hearing of the Committee on Agriculture entitled, *Focus on the Farm Economy: A View from the Barnyard,* will come to order. I would like to welcome everybody here this morning. This is the final hearing in our farm economy series. Each of the other five Subcommittees have examined the growing pressure in rural America from the perspective of their jurisdictions, and today, we are going to look at it from our jurisdiction.

Farmers are currently facing a steep drop in commodity prices, resulting in the largest 3 year decline in net farm income since the Great Depression. Razor tight margins are likewise making producers even more vulnerable to factors that impact the cost of production, including additional regulatory burdens. At this point, the real question is: where do we go from here if things do not improve? In this final hearing in the series, we will focus primarily on the market outlook for the livestock, dairy, and poultry sectors.

Prices are down from 2014 across the livestock sector, and market projections for 2017 suggest prices will remain less than favorable.

The reality is that the livestock sector, like others, faces lower prices. These pressures are further aggravated by regulatory burdens as well as pest and disease outbreaks.

In this Subcommittee, we have previously examined the threats from, and vulnerabilities to, livestock diseases such as Highly Pathogenic Avian Influenza and Foot-and-Mouth Disease. Wit-

nesses at today's hearing will raise concerns with recent, as well as soon to be proposed regulations. The Agriculture Committee has been actively engaged in oversight on some of these, like the EPA's WOTUS rule. Others we have not had to deal with for quite some time, but now find that they are back on the table. Most notably, Secretary Vilsack recently announced that proposed GIPSA regulations, which Congress has repeatedly blocked, are once again in the works. It concerns many of us that the USDA is trying again to interfere with livestock markets.

These specific GIPSA regulations were originally proposed in 2010. The economic analysis done at that time indicated that these rules would extract more than $1 billion in value from the livestock markets if they were implemented. Congress wisely chose to block those rules. And Congress continued to do so until last year when, with the understanding and commitment that the USDA had no intention of revisiting these bad ideas, the seemingly *pro forma* prohibition on any USDA action related to them was allowed to lapse.

It remains unclear why the Secretary has decided to once again move forward with these ill-conceived proposals, other than it seems to me to be the standard operating procedure of this Administration in general. When Congress doesn't pass laws the Administration wants, they issue rules and regulations to circumvent the Legislative Branch. Our Founding Fathers created a representative government for a reason. If it had been their desire for the American people to be governed by executive decrees, they wouldn't have created a Legislative Branch in the first place.

While this is not the last time this Subcommittee will discuss these issues, it is my hope that the testimony we receive today will shed light on the disastrous consequences this type of intrusion will have in the already weak livestock markets.

As we discuss the outlook for the livestock markets, it is important to understand the positive dynamic created by the diverse marketing arrangements that have been developed over the past several decades. It is unfortunate that the regulatory proposals the Secretary is now attempting to finalize would likely wipe away these decades of advancement. Fortunately, the House Appropriations Committee has once again adopted language that would prevent the Secretary from moving forward. It is my hope that this language is included in the appropriations legislation Congress sends to the President for his signature later this year.

I want to thank all of our witnesses for being here today and look forward to your testimony.

[The prepared statement of Mr. Rouzer follows:]

PREPARED STATEMENT OF HON. DAVID ROUZER, A REPRESENTATIVE IN CONGRESS FROM NORTH CAROLINA

Good morning. This is the final hearing in our farm economy series. Each of the other five Subcommittees has examined the growing pressure in rural America from the perspective of their jurisdictions.

Farmers are currently facing a steep drop in commodity prices, resulting in the largest 3 year decline in net farm income since the Great Depression. Razor tight margins are likewise making producers even more vulnerable to factors that impact cost of production, including additional regulatory burdens. At this point, the real question is: where do we go from here if things do not improve? In this final hearing in the series, we will focus primarily on the market outlook for the livestock, dairy, and poultry sectors.

Prices are down from 2014 across the livestock sector, and market projections for 2017 suggest prices will remain unfavorable.

The reality is that the livestock sector, like others, faces lower prices. These pressures are further aggravated by regulatory burdens, and pest and disease incursions.

In this Subcommittee, we have previously examined the threats from and vulnerabilities to livestock diseases such as Highly Pathogenic Avian Influenza, and Foot-and-Mouth Disease. Witnesses at today's hearing will raise concerns with recent, as well as soon to be proposed regulations. The Agriculture Committee has been actively engaged in oversight some of these, like the EPA's WOTUS rule. Others we have not had to deal with for quite some time, most notably the soon to be proposed GIPSA regulations that Secretary Vilsack recently announced. It is disconcerting that the USDA will once again attempt to interfere with livestock markets.

These GIPSA regulations were originally proposed in 2010. The economic analysis done at that time indicates that the rules would have extracted over a billion dollars in value from the livestock markets if they were implemented. Thankfully, Congress chose to block these rules.

That is until last year when, with the understanding and commitment that the USDA had no intention of revisiting these bad ideas, the seemingly *pro forma* prohibition on USDA acting was allowed to lapse.

It remains unclear why the Secretary has decided to once again move forward with these ill-conceived proposals. And while this is not the last time this Subcommittee will discuss these issues, it is my hope that the testimony we receive today will shed light on the disastrous consequences this type of intrusion will have in the already weak livestock markets.

As we discuss the outlook for the livestock markets, it is important to understand the positive dynamic created by the diverse marketing arrangements that have been developed over the last several decades. It is unfortunate that the regulatory proposals the Secretary is now threatening to finalize would likely wipe away these decades of advancement. Fortunately, the House Appropriations Committee has once again adopted language that would prevent the Secretary from carrying out his threat. It is my hope that this language is enacted when the Congress sends the appropriations legislation to the President.

I want to thank all of our witnesses for being here today and look forward to your testimony.

I now recognize the Ranking Member, Mr. Costa for his opening comments.

The CHAIRMAN. I now recognize the Ranking Member, Mr. Costa, for any opening comments he may have.

OPENING STATEMENT OF HON. JIM COSTA, A REPRESENTATIVE IN CONGRESS FROM CALIFORNIA

Mr. COSTA. Thank you very much, Chairman Rouzer, and Members of the Subcommittee for this timely Subcommittee hearing this morning. I appreciate the witnesses that are here, to have the opportunity to get your perspective on the current farm economy and it impacts, as we like to say, at the farm gate or the barnyard throughout America. There are numerous issues that we are aware of that I suspect we will hear testimony about this morning regarding the impacts and the views of American ranchers, dairy producers, others in the processing of food that we put on America's dinner table every night. They involve the safest beef, poultry, and pork that is produced anywhere in the world. Clearly, and I will come back to that because oftentimes we get into the details of the challenges we are facing, but what we forget is that nobody does it better, to quote an old Paul McCartney song, than the American farmer. Nobody does it better in terms of producing the highest level of quality of beef and poultry and dairy products that American consumers every night are able to have as a part of their diet. And if done properly, the healthiest diet at the most cost effective level that involves food safety anywhere in the world. And that gets

lost in terms of the average amount that the American consumer pays of their monthly income that actually goes to purchase the food that they and their families consume.

We all have stories to tell here as it relates to impacts of the regulatory framework, and I am one of those that believe that there is a proper balance. Clearly the United States Department of Agriculture, the Food and Drug Administration, all of those are agencies that we have worked with, everything that we do in the American farmland is of the highest quality and that we protect health and safety as it relates to the American public.

But there is always the challenge of overreaching, and let me just give you a few examples that we have been engaged in here with the Subcommittee and the full Committee that I think is overreaching. And as a former Speaker one time said, all politics is local. Well, let me give you some local examples.

In California, we have, as everyone knows, faced the worst drought on record, and the depth of the challenges for our ranchers and our dairy producers is staggering, and all of you have heard about it. Some of us have lived it if you represent ground zero where the devastating drought has occurred.

There always have been and there always will be a number of demands in California, as in other western states, on our water systems, but it is clear that the regulatory actions that have taken place over the last 4 years have made a bad situation worse. We continue to see farm workers who usually have tired hands from working out in the fields standing in line for food banks to feed their families. It is absolutely beyond frustrating when you see some of the hardest working people you ever meet in your lives in some of the richest agricultural regions in the world standing in food lines.

The businesses that help support the agricultural economy in California has been devastated as a result of this regulatory drought combined with 4 of the driest years that we have had on record. However, this crisis that has touched every Californian has the potential to impact food prices for every American if we do not do something to address the regulatory burdens imposed upon these farmers, these processors.

Clearly, we can't change the weather, while farmers like to talk about it, but we can change the course of how the regulatory environment intersects and make it much more effective. The conclusion, obviously, that we are dealing with is that there are other stories that both our dairymen, poultry, and livestock operators struggle with in dealing with government policies. Mr. Chairman, you and I and other Members of this Subcommittee and the full Committee were proud to work with Chairman Conaway and many of our colleagues to finally repeal the mandatory Country-of-Origin Labeling rules. But that is just one example of rules and regulations at the threat of Canada and Mexico imposing tariffs that would have been very, very harmful. The Renewable Fuel Standard is another area with the Grain Inspection, Packers and Stockyards rules, which continues to be problematic, and I know some of my colleagues here, we differ on that issue, but representing beef, poultry, and dairy industries, we have to deal with the challenges of

the impacts of price distortion that takes place as a result of the RFS standards.

But there are a host of other regulations that we are going to have to continue to deal with. I know the witnesses here will offer their own suggestions on changes that we ought to make as it relates to America's livestock industry, America's poultry industry, America's dairy industry, all of those which are critical to the ability for us to not only produce, again, the safest food anywhere in the world at the most cost effective rate to the American consumers, which is always the goal of American farmers and ranchers. And again, no one does it better.

Mr. Chairman, I look forward to the testimony of the witnesses, and as we hear their thoughts and suggestions on how we can do a better job.

The CHAIRMAN. Thank you, Mr. Costa.

I would like to welcome and I appreciate having the Ranking Member of the full Committee here, Collin Peterson, for any remarks that he might have.

OPENING STATEMENT OF HON. COLLIN C. PETERSON, A REPRESENTATIVE IN CONGRESS FROM MINNESOTA

Mr. PETERSON. Well thank you, Mr. Chairman. I will try to be brief, and I want to thank all of the witnesses and I am going to concentrate on dairy. I don't want to minimize your concerns, the other witnesses, and I am looking forward to your testimony.

But, we are getting into a situation now in dairy where we are getting squeezed like we are in the rest of agriculture. And the new Margin Protection Program, I have been disappointed in the level of participation. I have been disappointed in some of the comments I have gotten from my constituents about why they didn't sign up, and the reason is, they tell me, because they didn't think they would get any money out of it. It is understandable. They have been used to a different program that paid when prices went down, but this is an insurance program. It is not a government payment program. You don't insure your house hoping that it is going to burn down. So somehow or another, we have to try to figure out how we can get better participation.

One thing other that is curious to me is why it appears that larger producers who pay more are buying up more coverage than smaller producers who pay less. I don't quite understand exactly what is going on there, but one of the things we learned out of all this is it is not a good idea to write farm programs when prices are high, and so the point of it is that we need to spend a considerable amount of time between now and the next farm bill focusing on this and figuring out what went wrong, what we can to do improve the situation, look at all the different options, including possibly moving this over to RMA as opposed to FSA. All of these different ideas need to be examined, because if we get a situation with $10 milk and we have the kind of participation we have going on right now, it is going to be a disaster and there isn't going to be money to bail people out, I don't believe.

And the last thing that I am curious about, and I had a chance to talk to Dr. Brown yesterday but I forgot maybe here when we get into questions, but in crop farming the banker is going to insist

on you buying insurance, and that is a given. You don't get financed unless you have insurance, pretty much, unless you are pretty well off. I don't think that is going on with the Margin Protection Program, and I don't know exactly why that is, and as margins get tighter, are the bankers going to move in and start saying that these guys have to buy it, that is another thing we have to look at.

I understand that there are concerns out there and that people are getting into a tight situation, and we have to make sure we have a risk management program that works for dairy, and I look forward to working with all of you to do that.

So thank you, Mr. Chairman, and I yield back.

The CHAIRMAN. Thank you, Mr. Peterson.

The chair would request that other Members submit their opening statements for the record so the witnesses may begin their testimony, and to ensure that there is ample time for questions.

I would like to welcome our witnesses to the table. We greatly appreciate you being here today. Our first is Dr. David Anderson, Professor at Texas A&M University there in College Station, Texas. I would now like to recognize Mrs. Hartzler from Missouri to introduce a couple of witnesses that she has from her home state.

Mrs. HARTZLER. Great. Thank you, Mr. Chairman. We are very excited to have two experts today from Missouri here, and it is Dr. Scott Brown and Mr. Randy Mooney.

Dr. Scott Brown is an Assistant Extension Professor at the University of Missouri's Ag Econ Department, and the MU State Extension Agriculture Economist. Scott has worked with U.S. Congress over the past 2 decades on dairy and livestock policies in front of both the House and the Senate Agriculture Committees. Some of you may remember seeing him when we were talking about the farm bill. He was here. Dr. Brown received his doctorate in agriculture economics from the University of Missouri, and his bachelor's in agriculture business from Northwest Missouri State University. And like myself, Scott grew up on a diversified row crop and livestock farm. So we are really glad to have you back.

We are also glad to have Mr. Randy Mooney here from just outside my district, which used to be part of my district, but we still consider you part of it, so we are very, very proud of you. He currently serves as Chairman of the National Milk Producers Federation, and operates the Mooney Dairy in Rogersville, Missouri, with his wife, Jan. Randy was elected Chairman of Dairy Farmers of America's Board of Directors in 2010, and in addition, Randy serves on the boards of several dairy organizations, including Missouri State Milk Board, Dairy Management Incorporated, Highland Dairy, and the Innovation Center for U.S. Dairy. So Randy's expertise in the dairy industry is well-known, and we are really proud to have you here today.

Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. Thank you, Mrs. Hartzler. I would also like to introduce Mr. John Zimmerman from Northfield, Minnesota, on behalf of the National Turkey Federation. We have, from my home district, David Herring from Newton Grove, North Carolina, here on behalf of the National Pork Producers Council. David and I have known each other for a long, long time. David, great to see you. Al-

ways great to have you here and look forward to your testimony. And Mr. Tracy Brunner, Cow Camp Feed Yard, from Ramona, Kansas, on behalf the National Cattlemen's Beef Association.

Mr. Anderson, we will start when you are ready.

Mr. COSTA. Mr. Chairman?

The CHAIRMAN. Yes, Mr. Costa?

Mr. COSTA. Would you yield for a moment?

The CHAIRMAN. Absolutely.

Mr. COSTA. I just want to let the panel members know and the audience that I have another hearing taking place in 10 minutes with the Natural Resources Subcommittee on Water, and I have a piece of legislation up and there is a Members' panel, and I will have to obviously be there, and I intend to come back, but please do not take any offense. We have your testimony and I do have a couple of questions here and if I am not able to come back, I will submit them for the record. But I do appreciate that. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Costa.

Mr. Anderson, when you are ready.

STATEMENT OF DAVID P. ANDERSON, PH.D., PROFESSOR AND EXTENSION ECONOMIST, LIVESTOCK AND FOOD PRODUCTS MARKETING, AGRILIFE EXTENSION SERVICE, AGRICULTURAL AND FOOD POLICY CENTER, TEXAS A&M UNIVERSITY, COLLEGE STATION, TX

Dr. ANDERSON. Chairman Rouzer, Ranking Member Costa, Members of the Subcommittee, thank you very much for the opportunity to be here today to testify representing the Agricultural and Food Policy Center at Texas A&M University.

While often focusing on Title I commodities, the farm bill has direct impacts on the livestock industry as well. In particular, I would mention the Livestock Indemnity Program and the Livestock Forage Disaster Program. Both have been important programs for livestock producers, providing financial assistance to producers really trying to survive unique, catastrophic weather events, whether it is the record drought in the Southern Plains, or Winter Storm Goliath, for instance.

Crop insurance is not just a crop product. There are livestock related products, whether it is Livestock Risk Protection for feeder and fed cattle, hogs, and lamb. Livestock Gross Margin-Dairy is another product that has been available also.

I would like to mention that many of these farm bill and other policy issues are related. Insurance products often rely on futures market prices. For instance, the LGM-Dairy Program, LRP for cattle and hogs, yet questions about the efficacy of the futures market may have important impacts on these mainstays of the producer's safety net. Price reporting and information is related as well. Interpretation and implementation of price reporting has become a critical issue in some markets. Markets and products change over time, making flexibility in this implementation an important consideration, including evaluating confidentiality rules.

The operation of live cattle and feeder cattle futures contracts has been the subject of a lot of concern across the industry. Areas of concern include volatility, the speed of transactions, the role of

high frequency trading, outright cheating, and whether or not the futures market is actually broken and no longer works as an effective price risk management tool. I think there are a lot of areas where there is some needed research on all of those issues.

Cattle prices have certainly declined from their record peak. It is worth remembering that markets and incentives work. Record high prices and drought recovery have provided the profit incentive to increase production of cows, calves, and beef. Increased production leads to lower prices. Certainly beef production has increased year over year. Increasing beef imports and reduced exports have had the net effect of adding about 750 million pounds to our market in 2015. And finally, large financial losses by cattle feeders force them to finally bid lower for feeder cattle prices.

The decline in cattle numbers to multi-decade lows by 2014 meant that the industry had an overcapacity problem in feeding and meat packing. As cattle numbers increase, there are more cattle chasing a smaller capacity, and that also pressures cattle prices.

Trade is more important than ever to all of our livestock, poultry, and dairy sectors. These industries export anywhere from ten to over 20 percent equivalent of our domestic production. Any events that reduce exports, often out of our control, leave us with lower prices. Yet, imports are also important to lamb industries dealing with record imports of lamb from Australia and New Zealand.

Opening new markets and reopening old markets are critically important to our livestock and dairy industries. Our domestic livestock sector is the main customer for most of our crops, and difficult times on the crop side due to low prices mean livestock producers are paying low prices for feed, but as meat production surges due to lower production costs, meat and livestock prices are going to decline. The farm bill safety net that aids crop farmers is also aiding suppliers of feed for all of our livestock, and it was not long ago that record high feed costs created huge financial losses across livestock agriculture, forcing bankruptcies and many to go out of business.

So the health of crop and livestock producers are intertwined. Many livestock producers are also crop farmers, whether it is a dairy producing feed or a farmer with cows on pastureland as part of the total farm operation.

Future challenges will certainly abound in the livestock industry, whether it is trade related, animal diseases, low prices, or regulatory in nature. All of those mentioned above will be in play. Regardless of these challenges, even though some of the farm policies may differ for livestock *versus* crop agriculture, these programs do matter.

Thank you very much.

[The prepared statement of Dr. Anderson follows:]

PREPARED STATEMENT OF DAVID P. ANDERSON, PH.D., PROFESSOR AND EXTENSION ECONOMIST, LIVESTOCK AND FOOD PRODUCTS MARKETING, AGRILIFE EXTENSION SERVICE, AGRICULTURAL AND FOOD POLICY CENTER, TEXAS A&M UNIVERSITY, COLLEGE STATION, TX

Chairman Rouzer, Ranking Member Costa, and Members of the Subcommittee, thank you for the opportunity to testify on behalf of the Agricultural and Food Policy Center (AFPC) at Texas A&M University as you focus on the situation in the livestock sector of agriculture. While a member of the AFPC, I am also a professor

and livestock economist with the Texas A&M AgriLife Extension Service. As many of you know, our primary focus as been on analyzing the likely consequences of policy changes at the farm level with our one-of-a-kind dataset of information that we collect from commercial farmers and ranchers located across the United States.

Our Center was formed by our Dean of Agriculture at the request of Congressman Charlie Stenholm to provide Congress with objective research regarding the financial health of agriculture operations across the United States. For over 30 years we have worked with the [Agriculture] Committees in both the U.S. Senate and House of Representatives providing Members and Committee staff objective research regarding the potential farm level effects of agricultural policy changes.

In 1983 we began collecting information from panels of four to six farmers or ranchers that make up what we call representative farms located in the primary production regions of the United States for most of the major agricultural commodities (feedgrain, oilseed, wheat, cotton, rice, cow/calf and dairy). Often, two farms are developed in each region using separate panels of producers: one is representative of moderate size full-time farm operations, and the second panel usually represents farms two to three times larger.

Currently we maintain the information to describe and simulate 20 representative dairy farms in ten states and 11 beef cattle ranches in nine states. We update the data to describe each representative farm relying on a face-to-face meeting with the panels every 2 years. We partner with FAPRI at the University of Missouri who provides projected prices, policy variables, and input inflation rates. The producer panels are provided *pro forma* financial statements for their representative farm and are asked to verify the accuracy of our simulated results for the past year and the reasonableness of a 6 year projection. Each panel must approve the model's ability to reasonably reflect the economic activity on their representative farm prior to using the farm for policy analyses.

The results I am going to discuss today were developed utilizing FAPRI's January 2016 baseline price projections over the 2014–2020 period and will focus on the outlook for these representative livestock operations. We have developed a color coding system to provide a quick way of showing how the farms are doing. Each farm is evaluated based on two criteria—their ability to cash flow and maintain real net worth. If a farm has less a 25% chance of not cash flowing or losing equity then it is coded green. Yellow farms have between a 25% and 50% chance of not cash flowing and losing equity. Red farms have greater than a 50% chance of not cash flowing and losing equity.

The results indicate:

- 55 percent of the 20 dairy farms are projected to end the baseline period in marginal or poor condition.
- Nine of the 11 cattle ranches are projected to end the period in marginal condition.
- While pressured by falling milk prices, the dairies are aided by low feed costs. Milk prices have declined further since the baseline was developed.
- Record calf prices boosted returns early in the baseline period, but falling prices as national herd expansion occurs quickly pressures their financial position using up any cash balances. The ranches relying on public grazing face increasing pressure from lost grazing access.

An Overall View of the Livestock Industry

- Cattle prices remain historically high, but well below the record high levels of a year ago. For example, 500–600 pound steer calves at Oklahoma City have averaged $188 per cwt to date this year compared to $277 over the same period a year ago (a decline of 32%). Fed cattle have averaged $134 per cwt this year compared to $162 per cwt last year (down 18%).
- Farrow to Finish hog operation returns have remained largely profitable over the last year following unprecedented returns in 2014 (based on the data published by Iowa State University). Barrow and gilt slaughter and pork production have remained close to year ago levels so far through 2016.
- Chicken producers have been buoyed by recent increases in wholesale cut prices, even though prices remain below a year ago and the 5 year average. Even with less expensive feed, low meat prices will likely constrain production growth.
- Dairy profitability continues to be pressured by falling prices as production has not yet declined significantly as a response to lower returns.
- The lamb market remains under pressure from record levels of imports.

- Across the livestock sector of agriculture, producer returns have been aided by dramatically lower feed costs. Even with lower feed costs, producer margins will likely remain lower in the next few years when compared to the rather good year of 2014.

The Farm Bill and Livestock

While often focusing on Title I commodities, the farm bill has direct impacts on the livestock industry as well. In particular the Livestock Indemnity Program (LIP), Livestock Forage Disaster Program (LFP), and the Emergency Assistance for Livestock, Honeybees and Farm Raised Fish program (ELAP) have been important programs for livestock producers. These programs have been successful and popular with producers. These have provided financial assistance to producers trying to survive unique, catastrophic weather events like the 2010–2013 Southern Plains Drought and Winter Storm "Goliath." The drought's impact on Texas livestock producers was an estimated $3 billion in 2011 alone.

Crop Insurance is not just a crop product. There are livestock related products like Livestock Risk Protection (LRP) for feeder and fed cattle, hogs, and lamb. Livestock Gross Margin-Dairy (LGM) has also been available for dairy producers. Pasture, Rangeland, and Forage insurance products have been available for consideration in risk management for livestock producers. In many cases, these products use has been limited in part due to limited funding for the products, but also due to some lack of opportunity or practicality.

Many of these farm bill and other policy issues are related. Insurance products often rely on futures market prices, for example LGM-Dairy and LRP for cattle and hogs. Questions about the efficacy of the futures market may have important impacts on other mainstays of the producer safety net.

Price reporting and information is related, as well. Mandatory price reporting has gone a long way to maintain publicly reported prices aiding the function of competitive markets. The absence of reported prices can affect settlement of futures contracts and reduce information available to aid participants of futures markets. Interpretation and implementation of prices reporting has become a critical issue in some markets. Defining producer or packer ownership in the case of cooperatives may likely become a more important problem. Markets and products do change over time making flexibility in implementation on important consideration, including evaluating confidentiality rules.

Other Issues

Futures Market and Price Reporting

The operation of the live cattle and feeder cattle futures contracts has been the subject of much concern in the cattle industry. Areas of concern include volatility, the speed of transactions, the role of high frequency trading, outright cheating, and whether or not the futures market is broken and no longer works as an effective price risk management tool. There is some needed research on these issues. In addition, some deferred futures contracts suffer from a lack of liquidity limiting their use.

Declining Cattle Prices

Cattle prices have certainly declined from their record peak in late 2014 and early 2015. It's worth remembering that markets and incentives work. Record high prices (and drought recovery) have provided the profit incentive to increase production; of cows, calves, and beef. Increased production leads to lower prices. Fed cattle prices broke lower late in 2015 with falling fed cattle prices. Several important factors contributed to lower prices. Beef production increased, year over year, largely due to record high cattle weights. Increasing beef imports and reduced exports had the net effect of adding about 750 million pounds of beef to our market. Large financial losses by cattle feeders forced them to finally bid lower prices for feeder cattle.

The decline in cattle numbers to multi-decade lows by 2014 (due to poor financial conditions and drought) meant that the industry had an over capacity problem in cattle feeding and meat packing. Packers and feeders bid higher prices to try to keep their operations running at their most efficient levels, but eventually the financial losses led to closing packing plants and feedlots. Beyond just closing packing plants the transition to more closely align capacity with cattle numbers led to changing shifts, changing employee hours, and fitting operations to fewer numbers. As cattle numbers increase there are more cattle chasing a smaller capacity and that also pressures cattle prices lower.

Importance of Trade

Trade is of more importance to all of our livestock, poultry, and dairy sectors than ever. The beef, pork, poultry, and dairy industries export anywhere from about ten percent of our domestic production (beef) to over 20 percent of our domestic production (pork, chicken). Events that reduce exports, often out of the control of producers, like economic slowdowns in major markets, drought in our competitor countries, a strong dollar, and policy changes in other countries reduce our exports leaving us with lower prices. Imports are also important. The lamb industry is dealing with record imports of lamb from Australia and New Zealand. Australian beef played a major role in larger U.S. beef imports in 2015.

Opening new markets and re-opening old markets are critically important to our livestock and dairy industries.

Livestock-Crop Interactions

Our domestic livestock sector is the main customer for most of our crops. Difficult times in the crop side due to low prices means that livestock producers are paying low prices for feed. As meat production surges due to lower production costs (lower feed costs) meat and livestock prices are going to decline.

The farm bill safety net that aids crop farmers is also aiding the suppliers of feed for all of our livestock. It was not long ago that record high feed costs created huge financial losses across livestock agriculture forcing bankruptcies and many to go out of business. The health of crop and livestock producers are intertwined. Low and falling prices for meat and dairy products have been cushioned by low feed costs. Many livestock producers are also crop farmers, whether it's a dairy producing feed for their herd or a farmer with cows on pastureland as part of the total farm operation. Many contract poultry producers also have a cow herd on pastures surrounding the farm buildings. The farm bill safety net also applies to those livestock producers.

Future Challenges

Future challenges will surely abound in the livestock industry. Whether its trade related, animal diseases, low prices, or regulatory in nature. All of those mentioned above will be in play.

I would echo past participants in this series of hearings by saying that some criticism of farm policies is often by parties with little idea and/or care about conditions in agriculture. Regardless of these challenges, even though some of the farm policies may differ for the livestock industry, these programs do matter for livestock producers.

Mr. Chairman, that completes my statement.

The CHAIRMAN. Thank you, Dr. Anderson.

Dr. Brown.

STATEMENT OF SCOTT BROWN, PH.D., EXTENSION ASSISTANT PROFESSOR, DEPARTMENT OF AGRICULTURAL AND APPLIED ECONOMICS, UNIVERSITY OF MISSOURI; STATE AGRICULTURAL ECONOMICS EXTENSION SPECIALIST, UNIVERSITY OF MISSOURI EXTENSION, COLUMBIA, MO

Dr. BROWN. Chairman Rouzer, Ranking Member Costa, and Members of the Subcommittee, thank you for the opportunity to testify regarding the current financial situation for livestock producers. I am an agricultural economist at the University of Missouri, and I have worked extensively on livestock and dairy policy issues.

The previous decade has resulted in the best and worst of times for the livestock sector: 2006 livestock cash receipts totaled $118 billion and nearly doubled to over $212 billion in 2014. Feed costs skyrocketed over the last decade, as weather and other factors drove tight feed supplies. Purchase feed expenses doubled from $31 billion in 2006 to $64 billion in 2014. USDA currently estimates both will move lower this year.

Feed costs, weather, and disease issues place meat availability at a 23 year low in 2014. Meat consumption peaked at 220 pounds in

2007, and fell below 200 pounds in 2014. CY 2016 per capita meat consumption will show that ½ of the 20 pound decline has been recovered, which has led to lower livestock prices.

The extremes of 2009 and 2014 have shown the highest to be breathtakingly high, while the lows have been desperately low, making risk management important. Droughts in major cow/calf regions contributed to record cattle prices in 2014 and 2015. Markets have fallen substantially from the records, yet 2016 will still have positive returns for cow/calf producers. The one million head annual growth in cows this year was the largest in over 2 decades. Beef production expansion will likely lead to even lower cattle prices.

CY 2014 hog returns hit record levels as feed costs eased and disease dramatically cut pigs per litter. As the sector recovered, production has grown and hog prices have declined by more than 30 percent.

All-milk prices hit a record of $25.70 a hundredweight in 2014, but recently fell to $15.30 with the March information, a level we haven't seen since 2010. Current price information shows further declines will occur. Two factors have driven those lower milk prices. Reduced U.S. dairy exports have meant increased dairy product supplies on domestic markets. Second, milk production expansion has continued despite lower returns. April milk production is up 1.2 percent over a year ago, and the cow herd has expanded by over 22,000 heads since the beginning of this year.

Why has milk output grown when milk returns suggest contraction? During the 1980s and 1990s, there were more farmers with higher costs that exited during tough times. Today's operations have larger fixed costs, which makes their exit difficult. Since 2000, annual milk production has only declined twice, while it declined five times over the 1986 to 1999 period.

If true, the only way out of low returns is for demand growth. There has been much discussion that the Margin Protection Program is not providing a strong enough safety net. Before examining the MPP, it is important to understand that it is extremely difficult to construct a stronger safety net for dairy farmers while reducing Federal spending remains a priority. CBO estimates Fiscal Year 2016 Federal outlays at $42 million, and USDA estimates 2016 dairy cash receipts will total $33.2 billion, a drop of over $16 billion from 2014.

Identifying a safety net program that can moderate a $16 billion drop in cash receipts, yet only costs the government $42 million is a large challenge. Lower feed costs have resulted in the MPP margin falling far less than the milk price decline. A comparison between the cost of corn production and the decline in corn prices is instructive. AMS reports Minneapolis corn prices fell from $7.15 to $3.23 per bushel over the March 2013 to March 2016 period. The large decline in corn prices is helpful to dairy producers, yet this direct comparison of corn prices may mask some effects. The Economic Research Service estimates that 63 percent of Wisconsin dairy feed costs are homegrown harvested feed, compared to 26 percent in California. ERS corn production costs have changed little over the 2013 to 2016 crop seasons. The difference in the cost

of growing feed needs and the decline in crop prices may be one of the reasons why producers have struggled with MPP.

The feed costs coefficients used in the formula were reduced by ten percent during the farm bill debate. Record crop prices and high crop price projections drove the change. This change lessened the effect of feed prices on the MPP formula and reduced Federal outlays. Without this adjustment, the feed cost decline would have offset more of the milk price decline.

More work is needed to help producers think through the risk management *versus* program return maximization facets of policy. CY 2016 MPP participation has moved to lower levels of margin coverage when producers may be better served to participate at higher levels.

Mr. Chairman, thanks for the opportunity to discuss the many issues facing the livestock and dairy industries today.

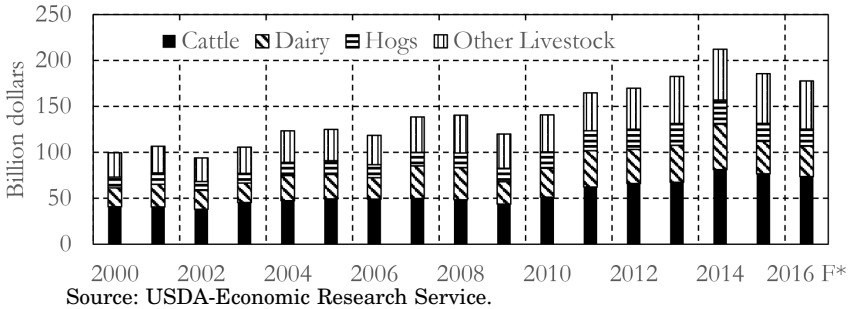
[The prepared statement of Dr. Brown follows:]

PREPARED STATEMENT OF SCOTT BROWN, PH.D., EXTENSION ASSISTANT PROFESSOR, DEPARTMENT OF AGRICULTURAL AND APPLIED ECONOMICS, UNIVERSITY OF MISSOURI; STATE AGRICULTURAL ECONOMICS EXTENSION SPECIALIST, UNIVERSITY OF MISSOURI EXTENSION, COLUMBIA, MO

Chairman Rouzer, Ranking Member Costa, and Members of the Subcommittee, thank you for the opportunity to testify regarding the current financial situation for livestock producers in this country. I am an agricultural extension economist at the University of Missouri and for the last 3 decades have worked extensively on livestock policy issues with a specific focus on dairy policy issues.

The previous decade has resulted in some of the best and worst economic times the livestock sector has ever faced. In 2006, USDA reports that livestock cash receipts totaled $118 billion. By 2014, livestock cash receipts had soared to over $212 billion. USDA currently estimates that livestock cash receipts will decline to below $178 billion in 2016.

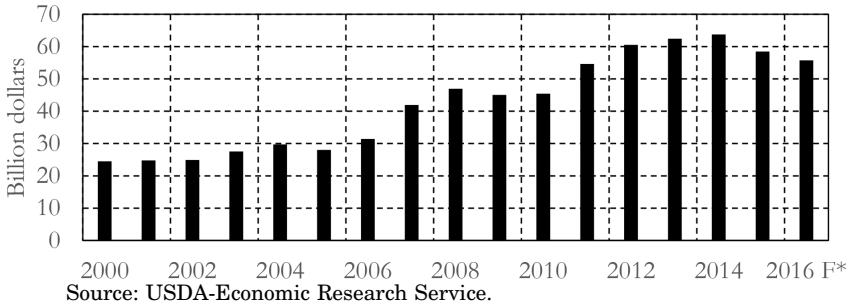
U.S. Livestock Cash Receipts



Source: USDA-Economic Research Service.
*2016 USDA–ERS forecast.

Feed costs, the major input for all livestock industries, skyrocketed over the last decade as weather and other factors drove tight feed supplies. In 2006, USDA reported purchased feed expenses at $31 billion. They rose to $64 billion by 2014. With larger crop supplies, purchased feed costs are currently estimated by USDA to total $56 billion in 2016.

U.S. Production Expenses, Purchased Feed



Source: USDA-Economic Research Service.
*2016 USDA–ERS forecast.

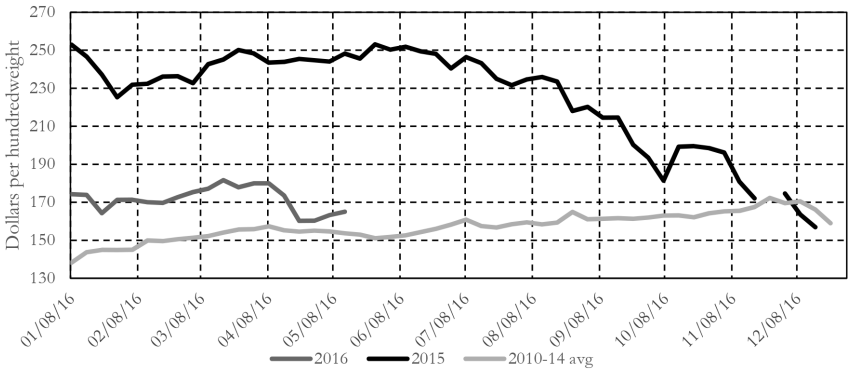
The combination of high feed costs, weather and disease issues placed U.S. meat availability at a 23 year low in 2014. U.S. per capita beef, pork and poultry consumption peaked at nearly 220 pounds per person in 2007 before falling to slightly less than 200 pounds in 2014. 2016 meat per capita consumption will show that at least ½ of the 20 pound decline has been recovered in just 2 years. This additional quantity of meat in the U.S. marketplace relative to 2014 has driven down prices for livestock products.

One thing is clear when looking at the financial picture of the livestock sector, the highs have been breathtakingly high while the lows have been desperately low. While 2009, with its high feed costs and general global economic meltdown, can represent the lowest of lows, 2014 surely will remain in the record books for many years to come for the record shattering high. Although either of these years could be duplicated again, the probability of either of these years occurring again soon is low.

Extreme livestock market volatility has become expected by all. Long-term survival may depend critically on risk management plans adopted by individual operations. Marketing livestock or milk using a cash market strategy is a risk management strategy that works well in rising markets but provides little help in declining markets.

Cattle markets have seen the droughts of 2011 and 2012 in major areas of cow/calf production in the United States contribute to the record cattle prices in late 2014 and early 2015. Although cattle markets have fallen substantially from the record highs, 2016 will still be another year of positive returns.

Oklahoma City, 600–700 lbs, Weekly, Feeder Steer Price



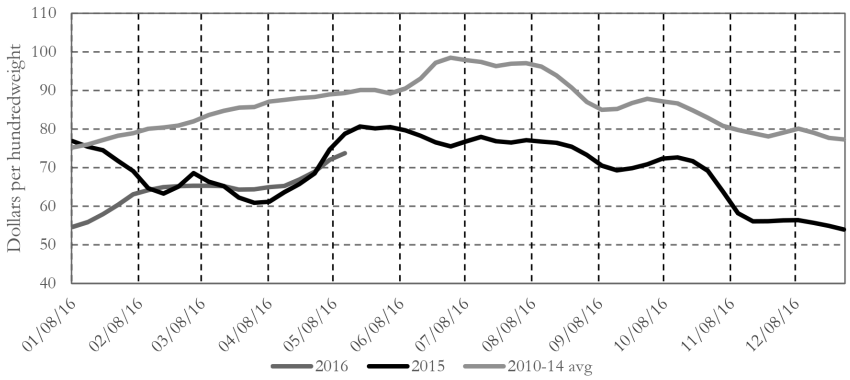
Beef cow expansion that began during 2014 and accelerated during 2015 continues in 2016. The decline in current economic incentives will likely slow future growth in beef cow inventory. The one million head annual growth in beef cows that was reported by USDA for January 1, 2016 was the largest increase experienced in over 2 decades.

As beef production continues to expand, cattle prices are likely to come under further pressure over the next few years. For Missouri combined auctions, 450 to 500

pound feeder steers which reached over $3 per pound in early 2015 but have recently fallen to $1.80 per pound. However, that remains above the $1.25 per pound level seen in early 2010.

Hog producers saw farrow to finish returns hit record levels in 2014 as feed costs eased and PEDv dramatically cut the number of pigs saved per litter. As the sector recovers from disease events, pork production has grown and hog prices have moved lower. Pork production grew by over seven percent in 2015 relative to 2014 and hog prices declined by more than 30 percent.

Hog Price, National Base



The recent growth in barrow and gilt slaughter does highlight the need for additional processing capacity to come on board soon. Current pork processing expansion plans will help handle the flow of additional hogs that will come to market in late 2017. By the fourth quarter of 2016, current processing capacity may be stretched to the limit.

Farrow to finish returns have remained slightly above breakeven in the first quarter of 2016. The return picture for the remainder of this year will depend on the strength of domestic and international demand as well as the size of the U.S. crop currently being planted. If any of these factors raise feed costs or further erode hog prices, the last half of 2016 could be financially challenging.

Dairy producers have seen a similar milk price picture unfold as has been experienced in the other livestock sectors. In September 2014, the U.S. all milk price hit an all-time record at $25.70 per hundredweight. The latest USDA Agricultural Prices report showed that the March 2016 U.S. all milk prices fell to $15.30 per hundredweight. Given current dairy product prices and advanced Federal Order prices, further declines will occur. This level of milk prices has not been experienced since early 2010.

Two factors have been at play in the decline in milk prices seen by U.S. dairy producers. First, a decline in U.S. dairy product exports has meant increased milk and dairy product supplies on domestic markets. After annual U.S. dairy product exports reached a record of over $6.5 billion in 2014, they fell below $5 billion in 2015. U.S. dairy exports have declined another $0.3 billion in the first quarter of 2016 relative to a year ago. A stronger U.S. dollar and growing supplies in Europe have hindered U.S. dairy exports. Although many in the industry continue to call for a turnaround in U.S. dairy export demand, it has yet to occur. If U.S. dairy exports do not begin to increase in the remaining months of 2016, the financial strain on U.S. dairy producers is going to increase even further.

Second, the expansion in U.S. milk supplies has continued despite the economic stress being felt in the dairy industry. The latest USDA milk production report shows that April milk production growth slowed but it was still 1.2 percent higher than a year ago. The report shows U.S. dairy cow inventories have expanded by 22 thousand head since the start of 2016. The growth in milk supplies is expected to continue into 2017 highlighting the need for U.S. dairy export growth.

The dairy industry needs to carefully consider the inability to turn the spigot off when milk returns suggest contraction is needed. During the 1980s and 1990s, there were more dairy farmers with relatively higher production costs to exit the industry during tough times. By the 2000s, the remaining operations tend to have larger fixed costs, which makes their exit more difficult.

Historical data on U.S. milk production highlights past difficulties in reducing milk supplies when producer returns are low. Since 2000, annual milk production has only declined in 2001 and 2009. Milk production even expanded during the drought-induced record feed prices of 2012/2013. In comparison, annual milk production fell five times over the 1986 to 1999 period.

If the assumption of less supply response to poor returns is correct, there are implications that dairy producers must prepare for. Most importantly, the only way out of low returns is for demand growth to catch up to excess milk supplies.

With the current economic downturn in the dairy industry, there has been an abundance of discussion about the new dairy safety net program contained in the 2014 Farm Bill. There has been growing concern that the Margin Protection Program (MPP) is not providing a strong enough safety net for U.S. dairy producers.

Before examining detailed MPP features, it is important to understand the large task of building a solid safety net program with a tight Federal budget. It is extremely difficult to construct a stronger safety net program for dairy farmers while reducing Federal spending remains a priority.

The Congressional Budget Office estimates FY 2016 dairy CCC expenditures at $42 million and USDA estimates that dairy cash receipts will total $33.2 billion in 2016, a drop of over $16 billion from the 2014 level. Identifying a safety net program for dairy producers that can moderate a $16 billion drop in cash receipts yet only cost $42 million to the Federal Government is a large challenge.

The MPP has come under scrutiny as milk prices and dairy farmer returns fall. One of criticisms of the MPP is that the current level of the MPP margin, which measures the U.S. all milk price less feed cost, is not representative of what dairy producers face today. For March, the MPP margin was measured at $7.47 per hundredweight which would only provide a payment to those producers that bought coverage at some of the highest levels.

The reduction in feed costs as represented by national corn, soybean meal and alfalfa prices has resulted in the MPP margin falling far less than the decline in national milk prices. Many producers have reported their financial situation has eroded much faster than the MPP margin has declined. It has led to much speculation on the reasons why. A comparison between the costs of corn production and the decline in corn prices is instructive as to some of the issues that are at play for dairy producers.

In late March 2013 the USDA Agricultural Marketing Service (AMS) reported single car unit Chino Valley California corn prices at $8.76 per bushel. By the same period in 2016 they fell to $4.82 per bushel. AMS reported Minneapolis corn prices fell from $7.15 per bushel to $3.23. Larger corn supplies and cheaper transportation allowed for a 45 percent decline in Chino Valley corn prices while Minneapolis corn prices fell by 55 percent. The large declines in corn prices are helpful to dairy producers, yet this direct comparison of corn prices may mask some of the regional effects of dairy feed costs.

The USDA Economic Research Service (ERS) estimates that 63 percent of Wisconsin dairy farmers' feed costs come from homegrown harvested feed compared to 26 percent in California. Dairy producers that buy a majority of their dairy feed may be in a better financial position today than those that grow more of their feedstuffs, as the total corn production cost reported by ERS has changed little over the 2013 to 2016 crop seasons. ERS reported 2013 total corn production costs at $676.66 per acre while they estimate 2016 at $679.72 per acre. The situation has changed rapidly relative to a few years ago when those growing their own feed were in a better position to manage historically high corn prices.

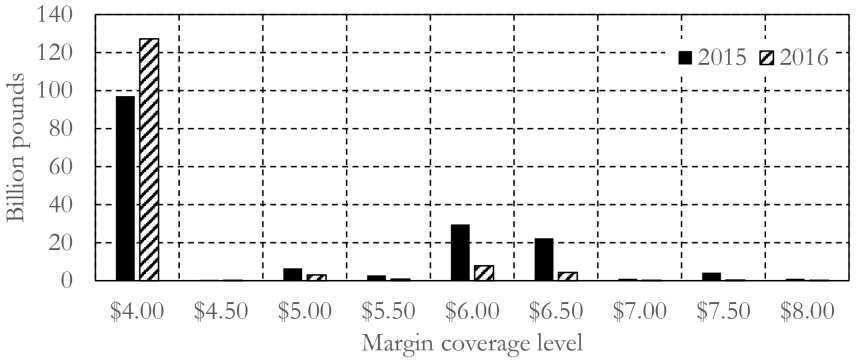
The difference in the cost of growing feed needs for the dairy and the decline in crop prices may be one of the reasons dairy producers have struggled with the safety net provided by the MPP. There has also been discussion around the coefficients that derive the national feed cost used in the MPP formula. The National Milk Producers Federation (NMPF) had a taskforce of industry experts construct rations representative of the dairy industry back during their development of the Foundation for the Future program development. This work constructed rations made up of corn, corn silage, soybean meal and alfalfa. Corn silage was converted to a corn equivalent by valuing a ton of corn silage at 10.1 multiplied by the price of corn per bushel.

These original coefficients were modified by reducing them by ten percent to reduce the MPP program cost during debate on the Farm Bill in 2013. This was a period of time with very high crop prices and many baselines kept crop prices at much higher levels than we are experiencing today. The effect of this change was to lessen the effect of feed prices on the overall MPP formula. If these coefficients had not been adjusted lower, the criticisms of the formula would only grow as feed

would have a larger effect and the decline in feed costs would even offset a larger proportion of the milk price decline.

The MPP was a major change in dairy policy relative to the past safety provided to the dairy industry. The move to policy focused on providing margin risk management from one that provided a floor on milk prices has required moving from an attitude of program return maximization to risk management. More work is needed to help producers think through the risk management aspect of the MPP. [CY] 2016 MPP participation has moved to the lower levels of margin coverage when producers may be better served to participate at higher levels.

Margin Protection Program Participation



There is a fine line that must be traversed in setting parameters of Federal dairy policy. We have had experience with programs that provided too much support to the industry and resulted in large milk surpluses and chronically low milk prices or large government expenditures. Everyone in the dairy industry did not like these periods. However, setting support too low means it may never trigger in those periods of times that it is most needed. This tradeoff will always require modifications as future farm bills are debated and passed.

In summary, it remains clear that U.S. meat and milk supplies are going to continue to increase perhaps well into 2017. Global demand and strengthening U.S. meat and dairy exports will be needed to move livestock and dairy market prices higher. Strong domestic demand must continue as well. Federal livestock and dairy policies must address the added volatility that comes as a result of more emphasis on global markets. Weather will remain another big risk for livestock producers and the support provided by Federal programs like the Livestock Forage Program (LFP) are a much needed help against catastrophic weather events.

Mr. Chairman, thanks for the opportunity to discuss the many issues facing the livestock and dairy industries today.

The CHAIRMAN. Thank you, Dr. Brown.

Mr. Zimmerman?

STATEMENT OF JOHN ZIMMERMAN, MEMBER, BOARD OF DIRECTORS, NATIONAL TURKEY FEDERATION, NORTHFIELD, MN

Mr. ZIMMERMAN. Good morning, Chairman Rouzer, Ranking Member Costa, and Members of the Subcommittee. My name is John Zimmerman, and I am a turkey farmer from Northfield, Minnesota, raising approximately 4 million pounds per year. I am the past President of the Minnesota Turkey Growers Association, as well as a board member of the National Turkey Federation. I appreciate the opportunity to testify today on behalf of the 63,000 men and women that put their boots on every day to keep the turkey industry working.

Our industry raises approximately 238 million turkeys annually, and USDA's latest forecast puts 2016 turkey production at an all-time record of 6.4 billion pounds, 14 percent above 2015.

This year, the turkey industry has made significant strides and learned a lot in recovering from high path avian influenza, after suffering through the worst animal disease outbreak in U.S. history last year. However, our preparation was tested earlier this year in Indiana when a small outbreak occurred in a commercial turkey flock. This outbreak was small precisely because of the lessons we have learned, the most important of which is that immediate action needs to be taken at the local level to limit virus spread. No matter how good the intentions are at the state and Federal level, industry must be given clear permission to act within minutes, not hours or days, to protect other farms from becoming infected. I must emphasize the need for rapid stamping out procedures and methods that ensure humane treatment, while eliminating virus spread. Currently, there is no one method that achieves perfect results in all circumstances.

NTF is deeply appreciative of the indemnification program implemented by USDA APHIS and strongly supported by Congress that helped us manage through this crisis. I would be remiss if I did not take a moment to personally thank my fellow Minnesotan, Congressman Collin Peterson, on behalf of myself, NTF, and the entire turkey industry for all you did for us last year. Thank you.

Finally the billion dollars in losses are well-documented. In order to prevent future outbreaks, the U.S. needs to adopt a forward looking mandatory animal pest and disease prevention program designed to limit the impacts of foreign zoonotic diseases on livestock and poultry producers. We look forward to working with Congress to accomplish this.

All poultry exports were severely damaged by the trade restrictions that resulted from the 2015 high-path outbreak. Specifically, last year turkey exports declined 34 percent and over 33 countries enacted some form of a ban on U.S. poultry. Without the hard work of APHIS, it could have been a lot worse. They reopened closed markets, as well as continued to establish protocols that will limit bans to regional levels in the future.

We also continue to see high-path outbreaks in Europe, Asia, and South America, and now is the time to reengage with our trade partners to discuss how HPAI can be treated, moving forward. This is a global disease, and working with the government we can develop a plan that minimizes export disruptions now.

With regards to non-scientific trade barriers, it is important that USDA's FAS continue to work with both APHIS and the turkey industry to fully understand how we differ from chicken and livestock production. For example, while never covered under the U.S. COOL regulations, turkey has now become subjected to COOL-like regulations by both Korea and South Africa, who banned U.S. turkey raised and processed in the U.S. just because it was hatched outside the U.S. This is not science-based and is a problem for many companies that hope to expand sales into these promising growth markets. Finally, we support TPP as an important step forward in reducing trade barriers and opening new markets to the turkey in-

dustry, and we encourage Congress to approve this agreement as soon as possible.

Recently, USDA proposed a rule to amend the organic livestock and poultry production requirements based on recommendations by the National Organic Standards Board. NTF is concerned about the potential disruptions to existing organic producers and their supply chains, as well as the impacts this proposed rule may have in ensuring that animal health is fully protected. Before moving forward with the rule, the turkey industry feels that USDA should conduct a thorough assessment of the cost of compliance, increased animal health and welfare risks, and alternatives for existing organic growers, producers, and supply chains to ensure minimal impact. Six years ago, USDA proposed sweeping rule changes on farmer contracting. With the expiration of a Congressional prohibition on implementing these changes, USDA is once again threatening to fundamentally change the rules by which our members operate. We believe that the changes would increase costs, reduce productivity, and possibly lead to increased live production ownership by integrated poultry companies, to the detriment of independent farmers like myself. We support the continued prohibition of USDA's implementation of these proposed changes.

A recent report by the National Academy of Sciences found that food made from genetically engineered crops are as safe to eat as those made from conventional crops. Regarding food labeling, NTF actively supports two critical components of any GMO bill that comes out of Congress. First, that the bill maintains Federal preemption for meat and poultry labeling, which is already regulated by USDA FSIS; and second, that it ensures that animals fed GE feed should not have to be labeled GE. We look forward to a bill that prevents a patchwork of state rules that create a labeling nightmare for food producers, but these two conditions must be met.

Finally, we have a worker shortage all across this country, and meat and poultry producers are no different in feeling the pain of this shortage. The turkey industry supports immigration reform that addresses the needs of year round meat and poultry producers and processors. Our members need access to a pool of legal, general labor immigrant workers and a visa program that could address these needs. However politically difficult it seems, we must get this done.

Once again, thank you for the opportunity to testify today on behalf of the U.S. turkey industry and the issues impacting our businesses, and I would be happy to answer any questions.

[The prepared statement of Mr. Zimmerman follows:]

PREPARED STATEMENT OF JOHN ZIMMERMAN, MEMBER, BOARD OF DIRECTORS, NATIONAL TURKEY FEDERATION, NORTHFIELD, MN

Good morning, Chairman Rouzer, Ranking Member Costa, and Members of the Subcommittee. My name is John Zimmerman, and I am a turkey farmer from Northfield, Minnesota and past President of the Minnesota Turkey Growers Association (MTGA). My family and I raise about 4 million pounds of turkeys annually on our farm as well as grow about 500 acres of corn and soybeans. I am also a board member of the National Turkey Federation, which represents the $32 billion U.S. turkey industry. I appreciate the opportunity to testify before you today on the state of the turkey industry. The turkey industry raises approximately 238 million turkeys annually, and provides employment to over 63,000 people nationwide, directly

associated with breeding, hatching, raising and processing turkeys. USDA's latest forecast puts 2017 turkey production at an all-time record of 6.4 billion pounds, 14% higher than 2015. As an industry, we continue to be challenged with a multitude of issues that impact those of us in the turkey business and we look forward to working with each of you to address these issues.

Avian Influenza

In 2016, the turkey industry has made significant strides in recovering from highly pathogenic avian influenza (HPAI), after suffering through the worst animal disease outbreak in U.S. history in 2015. The losses from HPAI were personal and weighed heavily upon the shoulders of farmers, rural communities, and companies from the West coast to the Midwest.

As an industry, we continue to learn new lessons from the outbreak and guard against the potential return of the deadly virus. Our preparation was tested earlier this year in Indiana when a small outbreak occurred in a commercial turkey flock. This outbreak was so small precisely because of the lessons we've learned. The most important lesson is that immediate action needs to be taken at the local level to limit virus spread. No matter how good the intentions are at the state and Federal level, industry must be given clear permission to act within minutes, not hours or days, to protect other nearby farms from becoming infected. I must emphasize the need for rapid "stamping out" procedures and methods that ensure humane treatment while eliminating virus spread. Currently there is no one method that achieves perfect results in all circumstances.

NTF is deeply appreciative of the indemnification program implemented by USDA and the Animal Plant Health Inspection Service (APHIS) along with the strong Congressional support for the turkey industry as we managed through the crisis. I would be remiss at this time if I did not take a moment to personally thank my fellow Minnesotan, Ranking Member Collin Peterson, on behalf of myself, NTF and the entire turkey industry for all you did to help last year.

Our industry continues to work with Federal and state officials on key areas such as: biosecurity, depopulation strategy, disposal, repopulation, vaccine usage and future research. However, the road ahead remains long and as an industry we will need continued support from Congress to assist USDA–APHIS on the avian influenza front. The 2016 Indiana incident is a stark reminder that HPAI is still out there looking for an opportunity to strike again. The 2015 damage to the poultry industry exceeded $1 billion, with much of that cost borne by consumers in the form of higher turkey and egg prices.

In order to prevent future outbreaks, the U.S. needs to adopt a forward-looking, mandatory animal pest and disease prevention program designed to limit the impacts of foreign zoonotic diseases on livestock and poultry producers. We look forward to working with Congress to get this accomplished. As the saying goes, "an ounce of prevention is worth a pound of cure".

Exports

All poultry exports—turkey, eggs and broilers—were severely damaged by the trade restrictions that resulted from the 2015 HPAI outbreak. Specifically, 2015 turkey exports declined to only 533 million pounds, a 34% drop from 805 million in 2014. Over 33 countries enacted some form of ban on U.S. poultry during the height of the HPAI crisis, and I want to make sure to thank the staff of USDA's APHIS for their work in reopening closed markets as well as establishing protocols that will limit bans to regional levels in any future cases of avian influenza. We have seen this hard work pay off in the very limited bans enacted after the two cases in 2016.

However, we continue to see HPAI outbreaks in Europe, Asia and South America. Now is the time, to re-engage with our trade partners to discuss how HPAI can be treated, moving forward. This is a global disease and working with the government we can develop a plan that minimizes export disruptions during future outbreaks.

Additionally, as APHIS knows, there is much more work to be done on the international front to protect all sectors from non-scientific trade barriers enacted in the name of protecting animal health. It is important that USDA's Foreign Agriculture Service (FAS) continue its work with both APHIS and the turkey industry to fully understand how our industry differs from chicken and livestock production. For example, while never covered under the U.S. COOL regulations, turkey has unfortunately seen restrictions in response to COOL, with both Korea and South Africa banning U.S. turkey "hatched" outside the U.S. This causes significant problems for many companies that hope to expand sales in these promising, growth markets.

Finally, we support the Trans-Pacific Partnership Agreement (TPP) as an important step forward in reducing trade barriers and opening new markets for the turkey industry. We encourage Congress to approve the agreement as soon as possible.

Organic Rule

Recently, USDA proposed a rule to amend the organic livestock and poultry production requirements based on recommendations by the National Organic Standards Board. NTF is concerned about the potential disruption to existing organic producers and their supply chains, as well as the impacts this proposed rule may have on ensuring that animal health is fully protected. Before moving forward with the rule, the turkey industry feels that USDA should conduct a thorough assessment of the costs of compliance, increased animal health and welfare risks, and alternatives for existing organic growers so that producers and supply chains directly impacted by these changes will be minimally impacted.

USDA's Grain Inspection, Packers and Stockyards Administration (GIPSA)

Six years ago, USDA proposed sweeping rules changes on farmer contracting. With the expiration of a Congressional prohibition on implementing those changes, USDA is once again threatening to fundamentally change the rules by which our members operate. We continue to believe that the changes would increase costs, reduce productivity, and possibly lead to increased live production ownership by integrated poultry companies, to the detriment of independent farmers. We support the continued prohibition of USDA's implementation of the proposed changes for the simple fact that the unintended consequences would outweigh any purported benefits.

Food Labeling

A recent report by the National Research Council—the working arm of the National Academy of Sciences, Engineering and Medicine—found that foods made from genetically engineered crops are as safe to eat as those made from conventional crops, and that GMOs generally improve farmers' yields by controlling pests and weeds. With regards to food labeling, NTF continues to actively support the two critical components of any GMO bill that comes out of Congress: (1) That the bill maintains Federal preemption for meat and poultry labeling, which is already regulated by USDA–FSIS and (2) that it ensures that animals fed GE feed should not have to be labeled GE. We look forward to having a bill that prevents a patchwork of state rules that create a labeling nightmare for food producers. The U.S. needs a single set of labeling rules that are common-sense and based on the most respected science known.

Immigration

We have a worker shortage all across the country, and meat and poultry producers are no different in feeling the pain of this shortage. The turkey industry supports immigration reform that include policies and provisions that will maximize benefits to the turkey industry and ensure a strong and durable immigration system that meets the needs of the U.S. economy. Most turkey plants are located in rural, low-unemployment areas. To fully staff these plants, producers must recruit from outside of their local areas and in many instances must rely on first-generation Americans. There are very few permanent visas for less skilled workers and the existing temporary programs only apply to seasonal labor. This effectively leaves year-round meat and poultry manufacturers with no good options. Our members need access to a pool of legal, general labor immigrant workers, and we support a visa program that addresses the needs of the meat and poultry industry. There is currently no one bill that provides a "silver bullet," but it is time to resolve the immigration debate for the good of the country.

Once again, thank you for the opportunity to testify today on the state of the U.S. turkey industry and the issue impacting our businesses. I will be happy to answer any questions at this time.

The CHAIRMAN. Thank you, Mr. Zimmerman.

Mr. Mooney?

STATEMENT OF RANDY MOONEY, CHAIRMAN, NATIONAL MILK PRODUCERS FEDERATION AND DAIRY FARMERS OF AMERICA, ROGERSVILLE, MO

Mr. MOONEY. Thank you, Chairman Rouzer, Ranking Member Costa, and distinguished Members. Thank you for the opportunity to testify before the Subcommittee, and I want to thank Congresswoman Hartzler for the kind introduction.

To be clear, times are tough on America's dairy farms. For the second year in a row, USDA projections indicate that revenues from milk sales will drop this year to $31.5 billion, the second lowest level in the last decade, and more than a $20 billion plunge from 2014's high. As U.S. milk production has grown and we have had to rely more heavily on world markets, our fortunes are now more closely tied to the extreme volatility that are a feature of global commodity markets.

Because of volatility in both milk and feed, we must continue to reassess our risk management tools. For most of the 8 years that I have been Chairman of the National Milk, I have worked with our member cooperatives and dairy producers to build a better safety net. Our request to Congress after the economic disaster our industry suffered in 2009 was to create a risk management tool that would provide protection against the prolonged and catastrophic cost price squeeze we had experienced. In the 2014 Farm Bill, Congress created the Margin Protection Program. Approximately 23,000 dairy producers are in the program, representing 80 percent of the milk supply. In 2015, U.S. dairy producers paid $73 million in premiums and fees to USDA, while USDA only paid out $700,000 under the program. This year, dairy farmers have paid in another $23 million. I firmly believe MPP is the right dairy program for the future. That said, our experience today is that MPP is not completely fulfilling its intended objective as an effective safety net, but we remain confident that the improvements can be made by the Congress for this still evolving program.

For many farmers, the current program is simply not enough to protect them in this economic environment. Since the farm bill was signed into law, MPP margins have fallen 52 percent, with further declines expected. While MPP is similar to the initial proposal put forward with National Milk, the plan was altered during the farm bill process. One change reduced the feed cost component of the margin so the current formula no longer reflects the true cost of feeding the herd. Second, while the feed cost component was changed, farmers' premiums were not, when they should have been reduced to accommodate the reduced feed component. MPP has been less effective as a result. I have heard from many dairy farmers that their financial challenges will only increase if the prices do not improve before 2017. We continue to discuss ways forward with our member cooperatives, USDA, and the Congress.

Clearly, adjustments to the feed cost calculation and the farmer paid premiums would improve MPP's effectiveness as a safety net for all dairy producers. The feasibility and timing of such adjustments are issues we want to explore with the Committee.

Our industry is also impacted by numerous other policy issues that are described more fully in my submitted comments, but I want to highlight two of them today. First is the critical importance of Congress acting immediately to pass legislation to ensure that a single Federal standard is established on labeling of a genetically modified food. I cannot emphasize enough how important it is that Congress resolve this matter before July 1, when the Vermont law takes effect. Failure of Congress to address this issue threatens the viability not only of my farm, but also the 30,000

farmers I represent. It also threatens our ability to feed the world's growing population.

Trade is another area of importance to dairy farmers. Our nation has gone from exporting less than $1 billion worth of products in 2000 to more than $5.2 billion of exports in 2015, an increase of 435 percent. This enormous growth can be largely attributed to the market opening free trade agreements negotiated by our government. We support the TPP agreement because it can help U.S. dairy exports continue to grow in key world markets, but in order for farmers to realize any benefit, important implementation and enforcement issues must be addressed as Congress prepares to consider TPP.

Separately and finally, any trade agreement with the European Union must first prioritize how to tackle our trade deficit with Europe, while also addressing the non-tariff barriers, like geographic indicators and sanitary barriers the EU uses to limit our access. The EU has not demonstrated a good faith commitment to open agricultural trade. The U.S. must proceed cautiously by securing clear commitments from the EU to guard against the imposition of future trade barriers.

Mr. Chairman, I want to thank you for holding this important hearing. America's dairy farm families stand ready to help this Committee as you review current policies and consider new legislation that impacts our industry. Thank you.

[The prepared statement of Mr. Mooney follows:]

PREPARED STATEMENT OF RANDY MOONEY, CHAIRMAN, NATIONAL MILK PRODUCERS FEDERATION AND DAIRY FARMERS OF AMERICA, ROGERSVILLE, MO

About Randy Mooney

My wife, Jan, and I operate Mooney Dairy in Rogersville, Missouri. I serve as Chairman of the National Milk Producers Federation (NMPF) and Chairman of Dairy Farmers of America (DFA), the nation's largest dairy cooperative. In addition to my duties as chairman of NMPF and DFA, I serve on the boards of several dairy organizations, including Missouri State Milk Board, Dairy Management Inc., Hiland Dairy and the Innovation Center for U.S. Dairy.

About NMPF

National Milk Producers Federation develops and carries out policies that advance the well-being of dairy producers and the cooperatives they own. The members of NMPF's cooperatives produce the majority of the U.S. milk supply, making NMPF the voice of more than 30,000 dairy farmers on national issues.

Opening Statement

Chairman Rouzer, Ranking Member Costa, and distinguished Members, thank you for this opportunity to testify before the Subcommittee.

I am here today as Chairman of the National Milk Producers Federation, the voice of America's dairy cooperatives and their 30,000 farmer-members. For 100 years, National Milk has advocated on behalf of our nation's dairy farmers. I also serve as Chairman of Dairy Farmers of America, the nation's largest dairy cooperative.

Dairy Market Situation

To be clear, times are tough on America's dairy farms for the second year in a row. USDA's projections indicate that farm revenue from milk sales will drop this year to $31.5 billion—the second-lowest level in the last decade and. That's more than a $20 billion plunge from 2014 highs. Unfortunately, the value of the fresh milk I produce today is worth 22 percent less than it was 10 years ago, and nearly 40 percent less than only a few years ago.

The difficult economic conditions and tighter operating margins over the last 10 years have resulted in the loss of more than 18,000 dairy farms in the United States. I fear the present environment of depressed market prices could result in

even more farm closures. USDA projects the 2016 U.S. all-milk price to average $14.85 per hundredweight. If realized, this price would represent a milk price decline of nearly 40 percent from 2014 and is second only to 2009 in terms of low milk prices over the last decade. For a small family farm milking 100 cows, this price decline equates to a farm revenue decline of approximately $200,000.

In my home State of Missouri, the situation is even worse. Over the last 10 years, I've seen more than 600 of my home state dairy farmers quit the business. We always knew dairy was a boom and bust industry, but the recent swing of the pendulum back toward low prices is taking a lot of farmers with it. Unlike other parts of the country where dairy cows are absorbed by other operations, in Missouri we are producing less milk year after year, and we are being paid less than the U.S. all-milk price for that milk. USDA's mailbox milk prices for northern and southern Missouri during 2015 indicated that the price Missouri dairy farmers actually received was 14¢ to 22¢ per hundredweight less than the U.S. average. The value of dairy to our state's economy has also been diminished. The value of milk produced on the farm, and paid to the farmer, has declined by more than $100 million over the past 18 months. The upstream effect is that dairy farmers in Missouri have less money to reinvest in the local economy and less money to hire workers. But it doesn't end there; a weaker dairy economy results in fewer jobs supported by the industry in the processing and retail channels.

Milk Prices, Feed Costs, and MPP Margin

I'd like to provide some economic context to the dramatic situation in the dairy industry I just described. The USDA monthly all-milk price reached a monthly record high of $25.70 in September 2014, and averaged a record high of $24 for the year. Following this record, the monthly all-milk price declined in 13 of the next 18 consecutive months. In 2015, the average all-milk price was $17.10, down 30 percent from 2014.Through the first 3 months of 2016, the all-milk price has averaged $15.70 per hundredweight. USDA currently projects the annual average 2016 price to range from $14.60 to $15.10 per hundredweight.

The decline in milk prices can be traced directly back to sharp declines in the price of nonfat dry milk, dry whey, and cheese since late-2014. Nonfat dry milk prices reached a high of $2.09 per pound in March 2014, and for the year averaged $1.77 per pound. By 2015, the nonfat dry milk price average had dropped $0.90 per pound. As recently as April 2016, the nonfat dry milk price dropped to $0.73 per pound. This most recent price is the lowest nonfat dry milk price reported since Federal Order reform was instituted in 2000 and, importantly, is below the $0.80 per pound price previously supported under the dairy price support program. Similarly, in 2015 the average cheese price was down 51 percent to $1.65 per pound; and the dry whey price was down 27 percent to $0.38 per pound.

Butter prices have been the bright spot in terms of dairy commodity prices. The monthly USDA price reported for butter reached a record high in September 2014 of $2.85 per pound. For 2014, the average butter price was $2.14 per pound. During 2015 the annual average butter price declined only slightly to $2.07 per pound and was as high as $2.80 per pound in November 2015. This strength in the butter price resulted in the value of milkfat contributing as much as 52 percent to the value of Class III milk—up 13 percentage points from the 2000 to 2014 average. Without this support in butter prices, dairy farmer milk checks would have been substantially lower in 2015 and 2016.

Average feed costs during 2014, based on USDA's MPP dairy ration, were $10.67 per hundredweight. This price dropped in 2015 to an annual average of $8.77 per hundredweight. While these prices are well below the $13 per hundredweight average during 2012 and 2013, they continue to pressure income-over-feed-costs as milk prices move lower. During 2014 the MPP margin, defined as the all-milk price minus the MPP ration, averaged $13.29 per hundredweight and reached a record high of $15.62 in October 2014. Since this time, weaker milk prices and stronger feed prices pushed the MPP margin to a low of $7.50 per hundredweight in April 2015 before increasing to $10.01 by November 2015. Since November 2015, MPP margins have deteriorated by $2.55 per hundredweight, approximately 25 percent, to $7.47 per hundredweight in March 2016. This March 2016 MPP margin is the lowest since the program was introduced in September 2014.

Supply of Milk and Dairy Products

Following the record high prices and margins of 2014, the industry expanded by approximately 58,000 milking cows to accommodate the growing export demand for dairy products. The total number of milking cows in the U.S. now stands at 9.3 million head as of March 2016. In addition to an increase in the population of the milking herd, average milk per cow also increased from the 2014 total of 22,258 pounds

per year, to 22,383 pounds per year in 2015—up 125 pounds per cow. USDA data on milk per cow through March 2016 indicates this pattern will continue. As a result of the additional milking cows and improved productivity, milk production in the U.S. grew by 2.6 billion pounds between 2014 and 2015, reaching 208.6 billion pounds last year. Current USDA projections call for 212.4 billion pounds of milk to be produced this year. This total would represent an increase of 3.8 billion pounds of milk over last year's levels.

The additional milk that has come online flowed into additional cheese, butter, and milk powder production. During 2014, American-type cheese production totaled 4.59 billion pounds. Production increased by 107 million pounds in 2015 to 4.7 billion pounds, an increase of two percent. This expansion is in line with recent growth rates of one to four percent per year. For other cheese categories, total production in 2014 was 6.9 billion pounds, rising by nearly 220 million pounds in 2015 to 7.1 billion pounds—an increase of three percent. Additional milk produced in 2015 also made it into butter churns, up only slightly from prior year levels. During 2014, butter production totaled 1.855 billion pounds, increasing marginally by 2.7 million pounds in 2015 to 1.858 billion pounds. Finally, similar to cheeses and butter, additional milk powders were also produced in 2015. Nonfat dry milk and skim milk powder production were 1.82 billion pounds in 2015, a bump up of 58 million pounds, or three percent, from 2014 levels. Similarly, dry whey production in 2015 totaled 975 million pounds and was up 105 million pounds, or 12 percent, from 2014.

With milk production in 2016 also expected to rise compared to last year, production of cheese and butter are also expected to increase. Non-leap year adjusted U.S. production of all cheese is up 1.8 percent year-to-date through March, and butter production is up 5.9 percent through March.

Domestic Demand and Dairy Trade

Consumption of dairy products produced in the U.S. is broken down into the domestic market and the export market. Domestic consumption of cheese, butter, nonfat dry milk, and dry whey are all up in 2015 compared to 2014 levels. Domestic consumption of cheese was up 385 million pounds to 11.4 billion pounds during 2015. Domestic butter consumption in 2015 was up 54 million pounds to 1.8 billion pounds. Domestic consumption of nonfat dry milk in 2015 was up 65 million pounds to 1.1 billion pounds. Finally, domestic consumption of dry whey was up 216 million pounds to 579 million pounds.

With respect to dairy trade, all products except for nonfat dry milk have seen their export volumes erode from the record high levels of 2013 and 2014. Butter product exports reached a high of 178 million pounds in 2013, before falling to a 7 year low of 37 million pounds in 2015. Year-over-year, the decline in butter exports during 2015 was down 93 percent from 2014 levels. Total cheese exported reached a record high in 2014 at 812 million pounds. However, in 2015 total cheese exported from the U.S. declined 14 percent to 698 million pounds. Nonfat dry milk and skim milk powders were one of the few bright spots for dairy exports in 2015. Record low powder prices resulted in record high export volumes in 2015. In 2015, nonfat dry milk exports were up three percent over 2014 levels and totaled 1.2 billion pounds. Combined, the value of dairy product exports in 2014 was $7.1 billion. The decline in dairy product prices and the export volume resulted in the value of U.S. exports in 2015 totaling $5.2 billion—a decline of $1.9 billion.

As U.S. prices rose in 2014 to record highs, it created a pricing opportunity for dairy exporters around the world to access the U.S. market. Imports of dairy products, especially in the higher fat cheese and butter product categories, have contributed to weaker U.S. domestic prices. For example, in 2013 the U.S. imported approximately 36.5 million pounds of butter and butter products. By 2014 that total had surged 28 percent to 47 million pounds, and then again in 2015 it increased another 22 percent to 57 million pounds. The net effect: over a period of 2 years, butter product imports into the U.S. have increased 229 percent. For cheese a similar pattern was observed. Cheese imports into the U.S. totaled 288 million pounds in 2013, and since then have grown by more than 90 million pounds, 32 percent, to reach 379 million pounds in 2015. On a value basis, dairy product imports into the U.S. have never been higher—reaching $3.4 billion in both 2014 and 2015.

Stock Levels

The preceding set of numbers is manifesting itself in the real world as a logjam of dairy products, resulting from slower exports, increasing milk production, and imports displacing domestically produced products. These conditions create larger dairy product inventories. A variety of news sources including *Bloomberg* and the

Wall Street Journal are now reporting on the record volumes of cheese in inventory. In addition to cheese, butter inventories are well above prior year levels.

Stocks of cheese at the end of 2014 were slightly higher than 1 billion pounds. By the end of 2015 this total had increased 13 percent to 1.15 billion pounds. Now, at the end of March 2016 total cheese in inventory reached 1.19 billion pounds. This is the highest level of cheese held in cold storage since the early 1980's, and is the second highest total in March going back to 1917.

Stocks of butter at the end of 2014 were 105 million pounds—and were at the lowest levels for December since 2010. Tightness in the butter market provided support to domestic prices and also incentives to import butter or butter alternatives. As a result, by the end of 2015 butter in cold storage increased 48 percent to 155 million pounds. Now, at the end of March 2016, a point in time when butter inventories reach a seasonal peak, butter in cold storage has reached 243.6 million pounds. This is far from a record, but remains well above butter storage levels of recent years.

Perspective on the Margin Protection Program

Because of the volatility in both milk and feed prices, we must continue to reassess our risk management tools. And by we, I mean both farmers as well as the Congress. For most of the 8 years I've been Chairman of National Milk, I've worked with our member cooperatives, and dairy producers across the country, to build a better safety net. The previous elements of dairy policy had failed to evolve with the industry. Our request to Congress after the economic disaster our industry suffered in 2009 was to create a risk management tool that would offer protection against prolonged and catastrophic income-over-feed-cost margin declines like we experienced in 2009. In the 2014 Farm Bill, Congress created the Margin Protection Program. Approximately 23,000 dairy producers are in the program, representing 80 percent of our milk supply.

MPP is a voluntary program to provide support when the difference between the milk price and feed costs falls below certain thresholds. Every fall, dairy farmers must decide on coverage options for the following year. In 2015, U.S. dairy producers paid $73 million dollars in premiums and fees to USDA, while USDA only paid out $700,000 under the program. This year, dairy farmers have paid in another $23 million.

I firmly believe that MPP is the right program for our industry for the future. That said, our experience to date is that MPP is not completely fulfilling its intended objective as an effective safety net. We remain confident that improvements can be made by the Congress to this still-evolving program. Since the farm bill was signed into law, MPP margins have fallen 52 percent. The MPP margin is already at its lowest level since the program was enacted, with further declines expected. Specifically, USDA's MPP decision tool now projects the margin to drop below $6 per hundredweight by June. If realized, this would be the lowest margin since 2013, and already the MPP margin is at its lowest level since the program was introduced in 2014. In this environment, farmers naturally expect that the farm safety net would provide some minimum level of support.

So why is the program not operating as expected? While MPP is similar to the initial proposal put forward by National Milk, the plan was altered as Congress finalized the Farm Bill in 2014. One change reduced the feed cost component of the margin so the current formula no longer reflects the true cost of feeding a herd. Second, while the feed cost component was changed, farmer premiums did not (and some were even adjusted upward), when they should have been changed to accommodate the reduced feed component. MPP has been less effective as a result.

Let me describe this situation in greater detail. During the farm bill negotiations Congress reduced the MPP feed ration by ten percent. While this may not seem material, it had significant financial implications for those farms participating in MPP. During 2015, the average MPP margin was $8.30 and ranged from a low of $7.50 in the spring to $8.65 by the end of the year. These margins triggered MPP at only the highest coverage level of $8 per hundredweight and only 264 farmers received payments. Had Congress not reduced the feed ration calculation, MPP margins would have been approximately $1 per hundredweight lower and more than 8,500 dairy farmers would have received a benefit from MPP. At a time when margins are depressed, missing out on these important safety net benefits due to budgetary concerns resulted in tens of million dollars of lost dairy farmer revenue.

It is clear that while the effectiveness of the program was reduced, the premiums remain at the original level, which at this time should have been changed to accommodate forecasted risk environment. The ten percent reduction to the feed ration hurt program performance and also farmers' perception of the program. Many farmers saw that the MPP didn't pay out much, even at the highest levels, in 2015. So, in 2016 they opted for the least expensive level of coverage required by law. Ap-

proximately 77 percent of the farmers and 88 percent of the milk enrolled in MPP during 2016 were are at only this $4 coverage only. Had Congress not reduced the feed ration, more farmers would have seen benefits in 2015 and participated at higher levels this year. More participation means protection in this current high risk environment. However, given the current feed ration, even with margins expected to reach the lowest levels in years, total program payments are not expected to exceed premiums for the second consecutive year.

In addition, U.S. dairy farmers simply could not have anticipated the impact a highly-subsidized European dairy industry would have on U.S. dairy prices following the April 2015 expiration of the EU milk quota system. Since April 2015, EU dairy farmers have increased milk output by more than 12 billion pounds over prior year levels. The additional milk being produced by EU farmers is equivalent to 30 percent of California's annual output, 42 percent of Wisconsin's annual output, and is 800 percent higher than production from dairy farmers in my home state of Missouri. This milk is not staying in the EU. Instead, it is being absorbed in the global market at extremely low prices. It is finding its way into EU public stockholding programs and delaying global price recovery. And, finally, this milk is displacing U.S.-produced dairy products domestically and abroad through additional imports and increased market share in competitive export regions. Actions in the EU are having a very real impact in rural America. The net effect is larger inventories here at home, and U.S. producers enduring a longer period of depressed dairy market prices. MPP is not designed to provide support against highly subsidized EU dairy producers oversupplying and undercutting us in the global market.

In my role as NMPF Chairman I've toured the country talking to dairy farmers about MPP. The overwhelming concern has been the feed ration and the premium rates. Congress also adjusted the premiums rates higher (the wrong way) due to budgetary concerns. During 2014 and 2015 Congress did provide a 25 percent discount to the lower tier premiums under $8 per hundredweight. This made MPP more affordable to small family farms like my own, as we explored risk management for the very first time. However, this past year the premium discounts were removed and MPP premiums increased substantially. With balance sheets already thin due to the depressed price environment of 2015, and MPP under-performing relative to expectations, many farmers could not justify buy-up MPP coverage in 2016, even though it was sorely needed. The expected benefits of MPP did not outweigh the costs and is likely to result in 2 consecutive years of premium payments without a measurable return. At the end of the day, dairy farmers just want consistent access to affordable risk management tools.

We appreciate all of the recent improvements made by USDA, including monthly premium payments, decoupling $4 coverage from the buy-up provisions, and providing additional time to make coverage decisions. But the program remains a work in progress. For many farmers, the program is simply not enough to protect them in the current economic environment.

I have heard from many dairy farmers that their financial challenges will only increase if prices do not improve before 2017. Lower commodity prices and slow-adjusting input costs are impacting the ability of dairy farmers repay loans and forcing many farmers to finance operating losses. These difficulties will have ramifications throughout the dairy economy, and unfortunately USDA economists and dairy industry experts all seem to be in agreement that dairy prices may be very slow to recover. That's why it is important, now more than ever, to ensure that problems with MPP are addressed head-on and the program is improved in such a way that makes it a valuable risk management tool to all dairy farmers in the U.S.

We continue to discuss ways to improve MPP with our dairy farmer, USDA and the Congress. Clearly, adjustments to the feed cost calculations and the supplemental coverage costs would improve its effectiveness as a safety net for all dairy producers. The feasibility and timing of adjustments to the program are an issue we want to explore with the Agriculture Committee.

Biotechnology

NMPF has long supported the right of consumers to know how their food is produced, and where it comes from. In fact, few industries have been more transparent than we in the dairy industry have. We are proud of the standards that guide our farmers and the care they put into their cows and the milk and dairy products that they produce. That is why we supported legislation introduced by Congressman Mike Pompeo of Kansas, known as the Safe and Accurate Food Labeling Act (H.R. 1599). On that note, I want to thank this Committee and those Members who helped advance this legislation last year.

It is of critical importance that Congress act immediately to pass legislation to ensure that a single, Federal standard is established on the labeling of bioengi-

neered foods. I cannot emphasize enough how important it is that Congress resolve this matter, before July 1st when the Vermont law takes effect. Failure by Congress to address this issue threatens the viability of not only my farm, but also 3,000 farmers I represent. It also threatens our ability to feed the world's growing population I than this Committee for its previous work on this issue and urge immediate action to bring this matter to final resolution.

Trade Policy

Our nation has gone from exporting less than $1 billion in dairy products in 2000, to more than $5.2 billion of exports in 2015, an increase of 435 percent. (Sales in 2014 were even greater at over $7 billion, before retrenching during a global dairy recession last year, as noted previously). This enormous growth can be largely attributed to the market-opening free trade agreements negotiated by our government, including the Uruguay Round which took steps to reduce export subsidies and implement the first SPS agreement. These agreements lowered and ultimately removed tariffs and in many cases they gave our products a preferential advantage over other supplying countries. They also helped remove technical and regulatory barriers to our trade. Over that period, our exports of dairy products to free trade agreement (FTA) partner nations grew by 489 percent as compared to 384 percent to non-FTA countries.

We must acknowledge that dairy exports last year dropped from the record $7.1 billion achieved in 2014. This was due in large part to a significant drop in global prices for milk powders and cheeses. In addition, the increased value of the dollar and the strong global milk supply have contributed to the decline in prices. But it is also worth noting that, while our exports to non-FTA countries contracted by 32 percent, they fell by only 20 percent to our FTA partner countries.

Our FTAs have created important new market access opportunities for us and we have worked very hard through our market development efforts to ensure that we are taking full advantage of them. It is not a foregone conclusion, however, that all trade agreements will be beneficial. Their terms matter extensively, as does the level of follow-through to ensure we secure the full scope of the benefits for which the U.S. negotiated.

We support the Trans-Pacific Partnership agreement because it can help U.S. dairy exports continue to grow in key world markets. But, in order for farmers to realize any benefit, important implementation and enforcement issues must be address as Congress prepares to consider TPP.

Diligent implementation of U.S. free trade agreements is a vital component to ensuring their effectiveness. Past experience in the dairy industry has demonstrated to us the clear value in strong engagement with our trading partners to foster compliance with their obligations to the U.S. It has also demonstrated just how important the terms of an agreement are. Past negotiations with the EU have led to trading terms and regulatory conditions that drive the current $1.4B dairy trade deficit with the EU.

Any future agreement with the EU must first and foremost prioritize how to tackle this tremendous trade deficit and attack the non-tariff barriers, such as the Geographical Indicators as well as sanitary barriers that the EU uses to limit our access. Critically, fully addressing those barriers requires not just a focus on today's problems but a clear commitment through the trade agreement that new requirements will not be laid on top of any resolutions reached on the current range of issues. The EU has not demonstrated a good-faith commitment to open agricultural trade; the U.S. must proceed cautiously by securing specific and clear commitments from the EU to guard against the imposition of future trade barriers.

Immigration Reform

Our current immigration system is failing America's dairy farmers. When dairy farmers seek employees, they often find that Americans are unwilling to do the difficult job of dairying. However, unlike other industries which have codified access to foreign workers, dairy does not. This is due to the year round nature of our industry which makes us ineligible to participate even in the deeply flawed, though well-intentioned, H–2A program. As such, the current labor situation we are experiencing now threatens the livelihoods of dairy farmers in every region of this country.

According to a University of Texas A&M report released in August 2015 (and conducted in coordination with NMPF), 51% of all dairy farm workers are immigrants, and the farms that employ them account for 79% of the milk produced in the United States. Without access to a steady and reliable workforce, our industry will not be able to thrive, let alone survive, in the future. That is why NMPF has led the way to urge this Congress to pass immigration reform addressing the needs of American

agriculture. While I recognize the delicate balance you must strike politically regarding this issue, America's dairy farmers cannot wait any longer for real reform.

Environmental Sustainability

Dairy farmers are the original environmentalists, and care deeply about the land, air, and water that they manage on and around their farms. In recent years, however, Federal and state regulators have applied significant pressure on the dairy sector to reduce nutrient output to improve water quality in dairy producing regions from the Chesapeake Bay Watershed to northern Wisconsin all the way to central Washington.

We as an industry have invested significant resources to proactively respond to this challenge, and we continue to work to embrace the best possible environmental practices. In 2008, the dairy industry voluntarily set a goal of reducing greenhouse gas (GHG) emissions from fluid milk by 25 percent by 2020, and has since undertaken several projects intended to help meet that goal. Importantly, since 1944, GHG emissions per pound of milk produced have decreased by 63 percent and total GHG emissions from dairy production have decreased by 41 percent.

Like other sectors of the economy, dairy farmers are impacted by the current climate of political, legal, and regulatory uncertainty. To help us stand on a stronger footing, we have begun to advocate for proactive policy solutions that will help us turn an environmental liability such as manure into a valuable asset. The dairy industry is working with bipartisan Members of the tax-writing Ways and Means Committee to propose an Investment Tax Credit to cover the up-front capital costs of biogas systems and nutrient recovery technologies, which can play an important role in reducing the environmental impacts of dairy farming.

Closing Statement

Mr. Chairman, I want to thank you for holding this important hearing today. America's dairy farm families stand ready to help this Committee as you review current policies and consider new legislation that impacts our industry.

The CHAIRMAN. Thank you, Mr. Mooney.

Mr. Herring?

STATEMENT OF DAVID HERRING, MEMBER, BOARD OF DIRECTORS, NATIONAL PORK PRODUCERS COUNCIL, NEWTON GROVE, NC

Mr. HERRING. Good morning, Mr. Chairman, Ranking Member Costa, and Members of the Subcommittee. I am David Herring, a Member of the Board of Directors at the National Pork Producers Council from North Carolina and Vice President of TDM Farms, a sow farrow-to-finish operation, incorporated out of North Carolina.

The U.S. pork industry is in good economic shape after a couple years of dealing with disease issues and weather-related high feed grain prices. It now appears to be moving into a period of cautious, calculated expansion. Pork production is forecast by USDA to increase this year by two percent to almost 25 billion pounds, and in 2017 by 2.6 percent, to more than 25½ billion pounds. Of course, producers' fortunes can be affected for good or for ill by any number of factors, some controllable, some not so controllable such as disease and weather.

I was going to first address an opportunity that would be very positive for hog farmers like me, and that Congress can control, the Trans-Pacific Partnership, or TPP. But another issue recently has come up that if not addressed would wipe out any benefits we gain from TPP. Pork producers are very concerned about the so-called GIPSA rules. As many of you know, the rule was born out of the 2008 Farm Bill, which included five specific issues, mostly related to the poultry industry, Congress wanted USDA to address. But the Grain Inspection, Packers and Stockyards Administration in 2010 proposed an expansive rule that would have had a significant

negative effect on the livestock industry. A November 2010 Informa Economics study of the rule found it would have cost the pork industry more than $330 million annually. Tens of thousands of comments, including 16,000 from pork producers, were filed in opposition to the rule, and Congress several times included riders in USDA's annual appropriations bill to prevent it from finalizing the regulation. Such an amendment was not included in the USDA's Fiscal Year 2016 bill. Now the agency is moving forward with the rule, and we have grave concerns it will mirror the 2010 proposal. If it does, the livestock industry will be fundamentally and negatively changed and the increased exports and jobs created from TPP will or could be negated.

Additionally, the fact that we have to deal with this GIPSA rule issue is diverting valuable resources away from the pork industry's top priority, approval of TPP.

TPP, the benefits of which will exceed all past free trade agreements, represents a great opportunity for U.S. pork producers and for the entire U.S. economy. TPP includes the United States and 11 Pacific Rim countries. Those nations include nearly ½ billion consumers and represent 40 percent of the world's GDP.

The agreement has become the *de facto* global trade vehicle and other countries in the region are already lining up to get on it. Because other Asian Pacific trade agreements are being negotiated without the United States we can't afford either economically or geopolitically to walk away from the fastest growing region in the world.

To give you an idea of the importance of free trade agreements to the U.S. pork producers, the United States now exports more pork to 20 countries with which it has FTAs than to the rest of the whole world. Congress must pass the TPP, and it must be done soon.

Finally, a challenge that would be out of everyone's control but that could be tempered by preparedness is a foreign animal disease outbreak. Specifically, an outbreak of foot-and-mouth disease. An FMD outbreak in this country would be economically devastating to U.S. pork producers and other food producers. USDA and the livestock industry have been working on a plan to combat an outbreak, but the only practical way is through vaccination. Unfortunately, we currently don't have the ability to produce the number of doses needed for an initial outbreak with the capacity to produce more. The U.S. pork industry believes consistent with Homeland Security Presidential Directive 9 that an adequate FMD vaccine bank must be established. This will require an offshore vendor-maintained bank that would have available antigen concentrate to protect against all of the 23 most common FMD types currently circulating in the world. A vendor-managed inventory of ten million doses, which is the estimated need for just the first 2 weeks of an outbreak, and a contract with an international manufacturer or manufacturers with a reserve capacity to produce at least 40 million additional doses.

Given the cost of dealing with an FMD outbreak and the economic impact on the livestock industry, and indeed on the entire U.S. economy, Congress should appropriate enough money to set up such a vaccine bank. Those are just a few of the opportunities and

challenges that pork producers face. I thank you for your time and I would be happy to answer any questions.

[The prepared statement of Mr. Herring follows:]

PREPARED STATEMENT OF DAVID HERRING, MEMBER, BOARD OF DIRECTORS, NATIONAL PORK PRODUCERS COUNCIL, NEWTON GROVE, NC

A Review of the U.S. Livestock and Poultry Sectors: Marketplace Opportunities and Challenges

Introduction

The National Pork Producers Council (NPPC) is an association of 43 state pork producer organizations that serves as the global voice for the nation's pork producers. The U.S. pork industry represents a significant value-added activity in the agricultural economy and the overall U.S. economy. Nationwide, more than 68,000 pork producers marketed more than 115 million hogs in 2015, and those animals provided total gross income of nearly $24 billion. Overall, an estimated $23 billion of personal income and $39 billion of gross national product are supported by the U.S. pork industry.

Economists Daniel Otto, Lee Schulz and Mark Imerman at Iowa State University estimate that the U.S. pork industry is directly responsible for the creation of more than 37,000 full-time equivalent pork producing jobs and generates about 128,000 jobs in the rest of agriculture. It is responsible for approximately 102,000 jobs in the manufacturing sector, mostly in the packing industry, and 65,000 jobs in professional services such as veterinarians, real estate agents and bankers. All told, the U.S. pork industry is responsible for nearly 550,000 mostly rural jobs in the United States. The U.S. pork producers today provide 25 billion pounds of safe, wholesome and nutritious meat protein to consumers worldwide.

Exports add significantly to the bottom line of each U.S. pork producer. U.S. exports of pork and pork products totaled 2.13 million metric tons in 2015, representing more than 24 percent of U.S. production, and those exports added more than $48 to the value of each hog marketed. Exports supported approximately 110,000 jobs in the U.S. pork and allied industries.

Cautious Expansion, Continued Focus on International Markets

The state of the U.S. pork industry has been shaped in recent years by disease: recall the H1N1 flu in 2009 and the Porcine Epidemic Diarrhea virus (PEDv). The latter first was documented in the United States during the spring of 2013, and over the next 18+ months killed between eight million and ten million piglets. The dramatic reduction in the supply of available market hogs led to record hog prices throughout 2014 after 4 straight years of economic losses primarily because of record-high feed costs.

Pig mortality since then has fallen dramatically, with the U.S. Department of Agriculture's Quarterly Hogs and Pigs report for the fourth quarter of 2015 showing the highest level of live births per litter in history at 10.53 pigs.

Seemingly recovered from the worst of PEDv's catastrophic effect on production, the U.S. pork industry appears to be moving into a period of cautious, calculated expansion. Pork production in 2015 increased year-on-year by a whopping 7.3 percent, albeit from the PEDv-ravaged calendar year 2014. Pork production this year is forecast by USDA to increase by two percent to 24.99 billion pounds, and 2017 production is forecast to increase 2.6 percent to 25.64 billion pounds. The total hog herd in the United States today is 67.6 million head, up slightly from 2015.

The typical cycle of barrow and gilt prices peaking in the summer and bottoming out in the November–December timeframe was essentially abandoned in 2014 and 2015 but is expected to return this year. The annual average for barrow and gilt prices received by producers, at $50.23 per carcass weight hundred (cwt.), fell dramatically in 2015 from its 2014 high of $76.03/cwt. Prices are expected to remain in the $46–$48/cwt. range for the remainder of the calendar year and lose another six percent throughout 2017. Estimated returns for farrow-to-finish producers continue to be positive for the year as a whole, with fourth quarter 2016 forecast at or below breakeven price levels.

There is currently a tremendous amount of red meat and poultry in the marketplace and coming down the pipeline. Per capita consumption of pork registered at just under 50 pounds in 2015, and pork retail prices have been historically low relative to beef retail prices over the past 18 months. Moving into grilling season (roughly Memorial Day through Labor Day), it will be interesting to see what happens to consumer demand and how it plays out in the marketplace.

Per capita consumption of pork is forecast to remain nearly even in 2016 before increasing by 1.8 percent in 2017. That marginal increase, coupled with the growing production expected throughout this year and next, highlight the importance of being able to send pork products to consumers outside the U.S. borders.

But economic growth in importing countries has been lackluster, and the value of the U.S. dollar has served as a headwind to growing exports of U.S. pork products, particularly in 2015. The Russian import ban on Western products and other global geopolitical events also have served as barriers to export growth. Total U.S. pork exports fell in 2015 on a value basis by 16.4 percent and on a volume basis by 2.1 percent. The top four markets for U.S. pork products on a value basis (Japan, Mexico, Canada and China/Hong Kong) all imported less in 2015 than they did in 2014. U.S. pork producers lost a tremendous amount of market share in the Chinese market to European producers, particularly from Germany, Denmark and Spain.

Through the first quarter of 2016, U.S. pork exports were down nine percent year-to-date on a value basis and up 2.5 percent on a volume basis. In particular, the volume of exports to China/Hong Kong were up 83 percent year-on-year, marking the largest first quarter pork shipments the United States ever has made to that market.

World economic conditions are expected to improve some, especially in Asian countries. The Chinese hog market, for example, currently is in flux, with red hot demand for imported pork and Chinese hog farming profits larger than ever. Rapid pork inflation potentially presents an opportunity for larger shipments of U.S. product into the Southeast Asian nation, but economics does not always drive reality in China.

USDA forecasts pork export volume to grow 5.2 percent in 2016 and two percent in 2017, but geopolitical events, the strength of the dollar and removal of non-tariff trade barriers will play an important role in realizing those export gains.

Looking forward, there is no shortage of both opportunities and challenges for the U.S. pork industry. As the world becomes more globalized, so too do grain and livestock markets. A flood in Argentina or a drought in Brazil are felt locally and have an impact on U.S. producers' bottom line. Since each finished hog consumes approximately 150 pounds of soybean meal and 10–11 bushels of corn, feed price levels and volatility are of the utmost importance to pork producers. The recent run-up in soybean meal prices has caught many by surprise, as did the initial estimate of prospective corn plantings.

Total U.S. red meat and poultry production is projected to be above 2016 levels. Hog supplies will be adequate over the summer and will be plentiful in the fall. Strong competition for slaughter hogs by packers could support hog prices, and the prospect of at least four new packing plants coming on line in the next couple of years could help boost producers' bottom line, moving forward. The pace at which these new plants come on line and begin processing hogs will be an interesting storyline to watch and will have significant implications for both domestic pork supplies and the availability and competitiveness of exports overseas.

While the vagaries of Mother Nature—diseases affecting production and weather affecting feed grains—are out of anyone's control, the pork industry's fortunes can be affected, for good or for ill, by what passes through the halls of Congress; government policies can and do offer opportunities or pose challenges for pork producers.

Trade and the TPP Benefit Agriculture

One of the policies that could have a positive effect on the U.S. pork industry—and indeed on all of U.S. agriculture—is trade, specifically expanded trade.

Through free trade agreements (FTAs) and bilateral and multilateral trade initiatives, the United States has been very successful in removing barriers to U.S. exports and increasing trade in U.S. goods and services.

U.S. exports of pork, for example, have increased by 1,550 percent in value and nearly 1,300 percent in volume since 1989, the year the United States implemented the FTA with Canada and started opening international markets for value-added agricultural products. The importance of trade deals is evident given that the United States now exports more pork to the 20 countries with which it has FTAs than to all other nations combined.

Exports add to the bottom line of producers, spur economic growth and create tens of thousands of U.S. jobs. Last year, U.S. pork producers shipped 2.13 million metric tons of pork worth $5.6 billion to foreign destinations. Those exports added more than $48 to the price producers received for each hog marketed, and they supported more than 110,000 pork industry jobs. (USDA's Economic Research Service calculates that every $1 billion in U.S. agricultural exports generates more than 7,500 jobs across the U.S. economy.)

The United States has been, on average, the top global exporter of pork over the past 10 years, and given continued economic growth in the world and rising per capita incomes, U.S. pork producers stand to benefit significantly from new FTAs that eliminate tariff and non-tariff barriers to U.S. exports.

The importance of FTAs is evident by the fact that the U.S. pork industry now exports more product to the 20 countries with which the United States has FTAs than to the rest of the world combined.

That's why the U.S. pork industry has been among the most aggressive pro-trade voices in the U.S. private-sector and why it is a strong supporter of the Trans-Pacific Partnership Agreement (TPP).

NPPC was among the biggest cheerleaders for the U.S.-lead Asia-Pacific regional FTA negotiations from the beginning of the Obama Administration. It was instrumental in getting Japan included in the TPP talks, which were concluded last October after nearly 6 years of negotiations.

The organization also led agriculture's efforts to gain Congressional approval for Trade Promotion Authority to permit the Administration to carry through with the TPP negotiations and conclude an agreement.

The TPP, which includes the United States, Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam, presents an opportunity to open and expand markets to U.S. pork that include ½ billion consumers and nearly 40 percent of the world's GDP.

The three key markets for U.S. pork producers in the TPP are Australia, Japan and Vietnam. Those countries account for the overwhelming majority of economic benefits that will accrue to the U.S. pork industry. While NPPC continues to have TPP implementation concerns, it is confident that the issues will be resolved. Here's a look at the benefits U.S. pork would gain from the TPP countries:

- **Australia**—Tariffs on pork were eliminated under the U.S.-Australia FTA. But while pork is the top U.S. agricultural export to Australia, it is not eligible to be sold at retail in that country because of non-science-based sanitary-phytosanitary barriers. NPPC is working with the U.S. Government to facilitate a review of the matter in Australia. While the issue is not technically part of the TPP negotiations, NPPC is working closely with the U.S. Government to facilitate a review of the matter in Australia. There is no credible scientific reason to prohibit the sale of U.S. pork at retail in Australia.
- **Chile**—Tariffs on U.S. pork are zero under the U.S.-Chile FTA.
- **Japan**—The largest value and second largest volume market in the world for U.S. pork exports, Japan will eliminate tariffs on all pork products, including its Gate Price—a complex system of protection—on processed pork, in 6 to 11 years from entry into force of the agreement. For processed products not subject to the Gate Price such as seasoned ground pork and sausages (the United States shipped more than $400 million of these products in 2014), tariffs will be eliminated in year 6. Japan also immediately will reduce the impact of the Gate Price on chilled and frozen pork upon entry into force of TPP. The Gate Price will remain at 524 Yen per kilogram indefinitely. However, the specific duty that is assessed when products do not meet the Gate Price will phase down to 50 Yen per kilogram in year 10. There will be one safeguard on processed product and two safeguards on chilled/frozen pork. These safeguards disappear in year 11.
- **Malaysia**—Nearly all of Malaysia's tariffs on pork and pork products will be eliminated upon entry into force of the agreement. In addition, Malaysia dropped its non-tariff-barriers on U.S. pork in December 2014.
- **New Zealand**—Currently, pork exports from Australia, Canada and China enter New Zealand duty-free, but the United States must pay an import tariff. Under TPP, New Zealand will eliminate all pork tariffs for the United States and other TPP nations upon entry into force of the agreement except on hams and shoulders, which will go to zero in year 3.
- **Peru**—Tariffs on U.S. pork either now are zero or will be within 3 years under the U.S.-Peru FTA.
- **Singapore**—Tariffs already are zero on U.S. pork as a result of the U.S.-Singapore FTA. Separately, NPPC is working with the U.S. Government to facilitate a review of certain non-tariff measures in Singapore.
- **Vietnam**—Despite being a larger consumer of pork than Mexico (the largest volume destination for U.S. pork), pork imports represent less than two percent of Vietnam's pork consumption. U.S. pork exports have been limited by tariffs and a series of non-tariff barriers. Under the TPP, Vietnam will eliminate tariffs on pork and pork products, currently as high as 30 percent, in 5 to 10 years.

It will eliminate tariffs on frozen cuts and shoulders in 8 years and on preserved pork, fresh pork cuts and shoulders in 10 years. Additionally, Vietnam's non-tariff barriers, which are being eliminated, are the subject of a side letter.

The TPP represents for the U.S. pork industry the biggest commercial opportunity ever negotiated. Economist Dermot Hayes, with Iowa State University, estimates that if the deal that was concluded last October is implemented—that is, if all tariff and non-tariff barriers are eliminated on pork in each TPP nation—U.S. pork exports to those countries will increase exponentially and more than 10,000 new U.S. jobs tied to those exports will be created.

But the reality is that if Congress does not expeditiously pass TPP, there will be no implementation, and that means the U.S. pork industry and the rest of American agriculture not only won't get the benefits of expanded trade but will lose market share in the fastest growing economic region in the world. The European Union and other nations are negotiating FTAs with Japan and other TPP countries. Of even greater concern is that if TPP fails, a much bigger regional trade agreement is likely to fill the void. The Regional Comprehensive Economic Partnership (RCEP) is comprised of 16 countries, including Australia, China, India, Japan, Korea and New Zealand as well as the ten countries of the Association of Southeast Asian Nations (ASEAN). It does not include the United States. Make no mistake, U.S. exporters will be significantly prejudiced if TPP is not soon passed by the Congress.

NPPC urges Congress to quickly pass the Trans-Pacific Partnership Agreement.

Vaccine Bank Needed To Address FMD

On the disease front, while PEDv is still an issue for the pork industry, producers seem to have the disease in check. But other bacterial and viral diseases are lurking around the world. The pork industry has devoted significant resources to endemic and foreign animal diseases, funding more than 120 research projects and spending more than $5 million for studying, monitoring and addressing swine diseases over the past 10 years.

And while there have been significant improvements in the systems for safeguarding U.S. agriculture and the nation's food supply, there are still significant vulnerabilities and challenges that must be addressed.

The House Agriculture Committee Nov. 4, 2015, held a hearing on "American Agriculture and National Security" that highlighted the vulnerability of the U.S. food supply to the potential for a foreign animal disease (FAD) to be introduced by terrorists or by accident.

Additionally, the bipartisan Report of the Blue Ribbon Study Panel on Biodefense—the panel was co-chaired by former Department of Homeland Security Secretary Tom Ridge and former Sen. Joe Lieberman—released Oct. 28, 2015, concluded that improvements are needed to the U.S. system for protecting the U.S. livestock herd and the nation's food supply from FADs.

Foot-and-Mouth Disease (FMD) is one of the most economically devastating FADs affecting animal agriculture. It is highly contagious and spreads easily through livestock movement, by wind currents, on vehicles that have traveled to and from infected farms and even on inanimate objects that have come in contact with the virus. It affects all cloven hoofed species, including wildlife such as deer and elk.

FMD is endemic in Africa, Asia, South America and the Middle East. The FMD virus has seven viral serotypes and more than 60 subtypes, with wide strain variability. Managing and ultimately eradicating FMD requires strain-specific vaccines, making vaccination challenging and very expensive. Sporadic outbreaks with different types continue to pop up in countries around the world.

Because North America is free of FMD, an outbreak of the disease in the United States would immediately shut off all exports of U.S. livestock, meat and dairy products, creating a precipitous drop in livestock markets. Since U.S. consumers have little knowledge of the disease, there also likely would be serious disruptions in the domestic market because of decreased demand for those products. According to one recent study, prevention of FMD is estimated to be worth $137 million a year to the U.S. pork industry.

With support from the livestock industry, USDA's Animal and Plant Health Inspection Service (APHIS) changed its policy on managing an FMD outbreak from culling all infected and exposed animals to one of vaccination in all but the smallest of outbreaks. Based on experience with outbreaks in the United Kingdom and South Korea, the United States simply cannot euthanize its way out of an outbreak; vaccination is the only realistic alternative. When discussing how this policy would be implemented, it became apparent that to deal with an outbreak there was not enough vaccine available nor could a sufficient quantity be obtained in time to implement an effective control program.

The United States is the only country in the world that maintains its own vaccine antigen bank, and it serves all of North America. The bank is maintained at the Plum Island Animal Disease Center (PIADC) on Plum Island, N.Y., and has a limited number of antigens. Under the current manufacturer(s)' contract, antigen is shipped to Europe where it is made into finished vaccine that then is shipped back to the United States. After 3 weeks, this process would produce only 2.5 million doses of vaccine. Dr. James Roth, professor and researcher at Iowa State University, estimates that at least ten million doses would be needed during the first 2 weeks of an outbreak. Currently, there is no surge capacity to produce additional doses of vaccine. All the vaccine production capacity in the world is currently in use by other countries.

The Subcommittee on Livestock and Foreign Agriculture held a hearing Feb. 11, 2016, on the FMD vaccine shortage at which the livestock industry made clear that a solution to the shortage must include a contract for an offshore, vendor-maintained bank that includes antigen for all 23 FMD types that are currently circulating in the world and that a contract be awarded for surge capacity to produce sufficient quantities of vaccine for an outbreak in the U.S. livestock herd. But there are factors that make this difficult.

The U.S. FMD vaccine bank is currently funded at just $1.9 million, and there have been no requests for a substantial increase in the President's budget despite the fact that Homeland Security Presidential Directive 9 (HSPD9) requires an adequate vaccine stockpile to be maintained.

Another factor complicating upgrades to the vaccine bank is that it also serves as the North American Bank and thus includes Canada and Mexico. NPPC believes it is appropriate to include those neighboring countries, but the United States should not wait for negotiations with those countries to be completed before making necessary improvements, which are critical to the U.S. livestock industry.

NPPC knows that fixing the vaccine shortage will require a significant increase in budget outlays. However, that cost pales in comparison to the cost of an FMD outbreak. Iowa State University economist Dermot Hayes estimates revenue losses to just the U.S. pork and beef industries from an FMD outbreak at nearly $13 billion per year over a 10 year period; the corn and soybean industries are estimated to lose $44 billion and almost $25 billion, respectively. A recent study by Kansas State University estimates cumulative losses to consumers and livestock producers at $188 billion, with an added cost to the government of $11 billion for eradication efforts if vaccination is not employed. If vaccination is employed, the study estimates—depending on the strategy used—the losses to consumers and producers could be cut by 48 percent.

The history of government involvement in disasters like an FMD outbreak is that, once an outbreak occurs, unlimited resources are committed to getting control of the situation. In the case of FMD, there is a clear opportunity to invest in a robust vaccine bank that would limit the economic impact on producers, feed suppliers and consumers and reduce the government's cost for control and eradication of the disease.

NPPC urges Congress to work with the Administration to address the alarming gap in the preparedness for an FMD outbreak. Whether the disease introduction is the result of terrorism, careless travelers or carried on traded commodities, the calamitous result is the same: devastation to the U.S. livestock industry and a significant hit to the U.S. economy.

Legislation and Regulation

Finally, the U.S. pork industry is, or can be, greatly affected by Federal legislation and regulation.

NPPC works on behalf of America's pork producers to ensure that laws and rules don't impose unnecessary costs on the U.S. pork industry, restrict it from meeting consumer demands in an economical manner or prevent market-based solutions to issues. The structure of the pork production and packing sectors should be allowed to change with the demands of the growing global marketplace. This includes allowing producers and packers to adopt new technologies and pricing and marketing mechanisms that enable the former to reduce their risks and the latter to capture economies of scale.

The U.S. pork-packing sector is the envy of the world in terms of efficiency and food safety, and legislation and regulation should not take away or hamper that source of international advantage. Allowing producers and packers the freedom to develop new ways of doing business will only enhance the value of U.S. pork products, at home and abroad, and reduce costs and risks.

Today, the U.S. pork industry has developed a variety of marketing and pricing methods, including contracts, to meet the changing needs of a diverse marketplace.

U.S. pork producers will not be well served if certain contracting mechanisms are eliminated, a move that only would force livestock markets to revert to a system used more than half a century ago in which animals were traded in small lots and at prices determined in an open-market bid system. Such a system was inefficient and makes no economic sense in today's economy.

That is why NPPC is very concerned about the revival of USDA regulations to amend the Packers and Stockyards Act, which is administered by the Grain Inspection, Packers and Stockyards Administration (GIPSA). The regulations, collectively known as the GIPSA rule and first proposed in 2010, would regulate the buying and selling of livestock and poultry. Congress in the 2008 Farm Bill asked USDA to address five specific issues related to production contracts:

- Criteria for determining whether an undue or unreasonable preference or advantage has been given to any producer.
- Whether a poultry dealer or swine contractor has provided sufficient time for a grower to remedy a breach of contract that could result in contract termination.
- Whether a poultry dealer has given reasonable notice of any suspension of delivery of birds to a grower under a contract.
- When a requirement of additional capital investment during the life of a contract constitutes a violation of the Packers and Stockyards Act as an unfair practice.
- The factors that comprise a fair usage of arbitration, including notification and the option for producers to opt out of automatic arbitration to resolve disputes.

U.S. pork producers were stunned in June 2010 when USDA proposed a rule that not only went well beyond the five issues Congress asked it to address but included provisions considered and rejected by Congressional lawmakers during the 2008 Farm Bill debate.

One provision included in the rule, for example, would have required meat packers to justify and document, including with revenue and cost analyses, price differences paid for livestock, making it difficult for producers to negotiate premiums based on certain production practices, or accept lower prices for livestock of lesser quality. Such a "justification" provision was considered and rejected by the Senate.

The rule would have had a devastating impact on livestock producers. According to an analysis of the regulation conducted by Informa Economics, it would have cost the U.S. pork industry more than $350 million annually. Industry analysis of the rule concluded that it likely would have had a chilling effect on innovation and flexibility, leading to a race toward mediocrity. It would have created legal uncertainty, driving costs higher and causing an increase in vertical integration in the livestock sector, forcing producers out of business and possibly affecting meat supplies. All of those effects would have harmed the U.S. pork industry's international competitiveness, costing U.S. on-farm and pork-processing jobs as well as negatively affecting the U.S. balance of trade.

While there was overwhelming opposition to the GIPSA rule, including more than 16,000 public comments from pork producers, it took yearly action by Congress to prevent its implementation. Unfortunately, no such action—in the form of language in USDA's annual appropriation—was forthcoming for fiscal 2016.

In March, at a meeting of the National Farmers Union, which supported the 2010 GIPSA rule, Agriculture Sec. Vilsack indicated that his agency will move forward with implementing the regulation, and NPPC confirmed last week that several of the regulations are with the White House Office of Information and Regulatory Affairs, the last step before rules are proposed final or become final.

Pork producers again are very concerned that USDA's GIPSA rule will be too expansive, limiting farmers' ability to sell animals, dictating the terms of private contracts, making it harder to get farm financing, raising consumer prices and reducing choices, stifling innovation and leading to more vertical integration in the livestock industry.

The U.S. pork industry opposes any legislation or regulation that restricts marketing opportunities and interventions into hog markets unless such actions address a clear, unequivocal instance of market failure or abuse of market power. To date, USDA has not presented any evidence that either is taking place.

NPPC urges Congress to ensure that any USDA rule to amend the Packers and Stockyards Act not restrict producers' ability to sell or packers' ability to buy animals and not limit their ability to use technologies and pricing and marketing mechanisms that work for their mutual benefit.

Another regulation that could have a profound negative effect on U.S. pork producers is the *Waters of the United States* (WOTUS) rule issued last year by the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers.

The rule was promulgated ostensibly to clarify the agencies' jurisdiction under the Clean Water Act (CWA) over various waters. Historically and based on several U.S. Supreme Court decisions, those waters were limited to navigable waters, their tributaries and adjacent water bodies that are hydrologically connected or that otherwise affect navigable waters.

Certainly, pork producers are concerned about water quality, and they take a broad view of what it means to be environmentally responsible farmers and business people and have embraced the fact that their operations must protect and conserve the environment and the resources they use and effect. Producers have made major commitments to environmental conservation, including meeting EPA's stringent zero-discharge standard that is part of the 2008 CAFO (Concentrated Animal Feeding Operation) rule and participating in a historic study of air emissions from farms.

But the WOTUS rule issued by EPA—over some objections from the Corps of Engineers—is overbroad, vague and fails to let regulated parties know what conduct violates the law. It includes, among other water bodies, upstream waters and intermittent and ephemeral streams such as the kind farmers use for drainage and irrigation. It also encompasses lands adjacent to such waters.

The rule, for example, would cover any discernable feature that possesses (or previously possessed) a bed, bank and high water mark. This would create uncertainty, confusion and significant legal liability for farmers. In short, the regulation as written could affect farmers' ability to use their land. Moreover, under the CWA, there is an absolute prohibition on discharging any pollutant—whether manure, a chemical pesticide or fertilizer or even a seed of corn—into a WOTUS without a Federal permit. Violations of the prohibition are subject to significant criminal penalties as well as civil fines of up to $37,500 per day per discharge, with the power to enforce the penalties open to private citizens.

It's not so much EPA enforcement but the threat of activist groups suing—using the CWA's private right of action—over alleged WOTUS violations that will have a chilling effect on farmers.

A number of lawsuits brought at the U.S. District Court level were filed against the regulation, which took effect Aug. 28, 2015. (The North Dakota-based District Court in September 2015 issued a temporary injunction against EPA implementing the regulation in the 13 states that brought suit against the rule in that court.) The government wants the District Court cases to be consolidated in the U.S. Court of Appeals for the 6th Circuit in Cincinnati, which in October 2015 issued a stay of the rule until disposition of the cases before it.

In reaching its decision to stay the rule, the 6th Circuit found that there's a substantial likelihood that the WOTUS regulation fails to comply with the U.S. Supreme Court's instructions in previous Clean Water Act cases and that the actions of EPA in the rulemaking process, to which NPPC objected at the outset, are "facially suspect."

Despite its hints about the outcome of the consolidated cases, the possibility exists that the appeals court will find that the EPA and the Corps of Engineers were within their discretion in promulgating the WOTUS rule.

So NPPC continues to urge the agencies to withdraw the rule and to work with all affected stakeholders, including the agricultural community, to develop a rule that clarifies what waters are and are not jurisdictional in a manner consistent with the Supreme Court's rulings and that is workable and cost effective for the regulated community.

Conclusion

The U.S. pork industry is the lowest-cost producer and No. 1 exporter of pork in the world, and U.S. pork producers continue to produce the most abundant, safest, most nutritious pork in the world. They have proved very resilient, weathering financial crises and diseases as well as the vagaries of a supposedly free-market economy pushed and pulled in various directions by government intervention and regulation while investing in and adopting new technologies that have promoted animal health, protected the environment and added thousands of jobs and billions in national income to the American economy.

For America's pork producers to continue as leaders in the international and domestic economies, for them to take advantage of the opportunities and meet the challenges presented to them, Congress and the Administration must pursue Federal policies and regulations that support U.S. pork production rather than hinder

its ability to continue to produce safe, lean and nutritious pork and pork products for the global marketplace.

The CHAIRMAN. Thank you, Mr. Herring.

Mr. Brunner?

STATEMENT OF TRACY BRUNNER, PRESIDENT, NATIONAL CATTLEMEN'S BEEF ASSOCIATION; COW CAMP FEEDYARD INC., RAMONA, KS

Mr. BRUNNER. Thank you, Mr. Chairman, Members of the Committee. Good morning to everyone.

Always at the mercy of Mother Nature, our industry is rapidly recovering from extensive drought. Herd rebuilding and expansion are taking place at a rate where U.S. cattle numbers will soon be equal to 2012. Additionally, American beef producers continue to be more efficient in producing beef. Today, we can produce the same amount of beef that we produced in 1977, with only ⅓ of the land and cattle.

The beef value supply chain is always focused on the consumer. Cow/calf ranchers tell their seedstock suppliers what they need, and also ask their stocker and feeder calf buyers what they will pay the most for. Cattle feeders likewise look to packer processors for signals of greatest value, who in turn have an ear for retail and food service needs.

Cattle prices have been the topic of focus for NCBA and our members. In 2015, we saw record high cattle prices, but soon those started back down. One factor was the overall increase in overall protein supplies. In 2015, U.S. per capita red meat and poultry supplies increased by nearly 10 pounds per person. In addition, the strong U.S. dollar impacted our ability to ship beef to our international customers. All this additional supply puts downward pressure on the markets, but we are used to the ups and downs of the cattle cycle.

In order to manage this cycle, we need risk management tools that work. We currently rely on market forums like CME Group's cattle futures contracts, and adding transparency to our price discovery process. Changing technologies and a transition to automated trading and commodity futures have increased market volatility, making interpretation of those price signals different than what we are accustomed to in the past. The integrity of our market forums is very important, for without futures contract integrity, our industry will abandon their use.

We have recognized this volatility and are working directly with the CME Group to find ways to address it. We have a joint NCBA CME working group which is analyzing potential changes such as slowing down the market to help ensure a level playing field for producers who are using these tools to manage their price risks.

Today, we ask for no direct action from our government in our cattle marketing systems and forums. In fact, I am concerned at some of the action that we have seen from USDA and the Senate.

Secretary Vilsack has announced that he is going to dust off the proposed GIPSA marketing rule that resulted from language included in the 2008 Farm Bill. This is concerning to us because bipartisan efforts already resulted in appropriations language, which defunded any additional work or implementation of the ideas that

were included in that draft rule. The proposed GIPSA rule would have made USDA the ultimate arbiter of how cattle are marketed. We urge USDA to enforce the Packers and Stockyards Act. We do not need them dictating how we can or cannot market our cattle.

Our industry has worked for years in developing new and innovative ways to market cattle. Alternative marketing arrangements have been studied by USDA and independent groups, and the results show that these alternatives benefit producers and consumers alike. Any Congressional or Executive Branch action to interfere will only add to our price problems, not solve them.

Solving our price problems relies on addressing the true issues of consequence in our industry. We have capitalized on the growing demand for U.S. beef overseas, and Japan has become our leading export market. But Australia now has a ten percent tariff advantage over us, resulting in a $300 million loss to our industry. The tariff advantage for Australia will continue to grow until we pass TPP.

In closing, I would say you could also help our bottom like by easing the regulatory burden our industry is under, taking action to reform the Endangered Species Act, and helping us keep EPA at bay will go a long way in easing the pressures on our industry.

Again, thank you very much for this opportunity to be with you today, and I will be happy to answer any questions.

[The prepared statement of Mr. Brunner follows:]

PREPARED STATEMENT OF TRACY BRUNNER, PRESIDENT, NATIONAL CATTLEMEN'S BEEF ASSOCIATION; COW CAMP FEEDYARD INC., RAMONA, KS

Mr. Chairman, Ranking Member Costa, and Members of the Subcommittee, my name is Tracy Brunner and I am the President of the National Cattlemen's Beef Association. I am a fourth generation rancher and cattle feeder from the Flint Hills area of Kansas, and our nearest Post Office is at Ramona. Our family operation includes three brothers and three sons. We are involved in cattle genetics, seed stock, grazing, and finishing cattle. I surely appreciate the Committee's interest in cattle marketing issues, and it is an honor for me to be asked to share our viewpoints.

The National Cattlemen's Beef Association (NCBA) has for nearly 120 years represented America's beef cattle industry. We have over 30,000 direct and 170,000 affiliated members nationwide. America's cattle industry is extensive and constitutes the largest segment of American agriculture. Always at the mercy of Mother Nature, our industry is recovering rapidly from extensive drought. Herd rebuilding and expansion are taking place at a pace where U.S. cattle numbers will soon be equal to 2012. Additionally, American cattle producers continue to be more efficient in producing beef. We can produce the same amount of beef that we produced in 1977 with 30% fewer cattle, 18% less feed, 12% less water, and 33% less land. However, we need to continue our efforts to be more efficient as we strive to do our part in providing 70% more food to meet the expected population of nine billion people in 2050.

Our industry requires extensive tracts of land to run cattle allowing us to preserve the ability for family cattle farms and ranches to stay viable. The beef industry is diverse in structure, yet the drive to stay competitive with other proteins has shown us the need to coordinate among all the stakeholders from field to fork. Cow/calf ranchers tell their seed stock suppliers what they need, and also ask their stocker and feeder calf buyers what they will pay most for. Cattle feeders likewise look to packer-processors for signals of greatest value, who in turn have an ear for retail and foodservice needs. As a complete beef supply chain, we have learned that without ultimate consumer focus, we can soon blindly produce our way into irrelevancy.

Due to the diverse and broad-based nature of the cattle industry operating in an environment of increasing need for coordination and cooperation, we have market needs more unique than other animal proteins and commodities. We rely on clear and accurate price signals to be passed up and down the beef value chain. A cow/calf producer must have not only precipitation, but also market confidence that his

decision to mate a bull and heifer today will be rewarded beyond costs by the time it heads to market nearly 2 years later. Cattle grazers and feeders that purchase those calves need a clear view of future prices in order to determine if there is a return on their investment. In addition, packer-processors use price discovery and analysis in order to price beef in a way for consumers to be assured of a constant supply of the highest quality beef anywhere on Earth.

Cattle prices have been a topic of focus for NCBA and our members. [CY] 2015 saw a record high for cattle prices, but those soon started back down due to several reasons. One factor was the increase in overall protein supplies. In 2015, U.S. per capita red meat and poultry supplies increased by nearly 10 pounds per person. In addition, the strong U.S. dollar impacted our ability to ship beef to our international customers. All of this additional supply puts downward pressure on the markets. This has been compounded by the break in the drought throughout most of the cattle producing areas of this country which has resulted in more abundant and cheaper feed, and the resulting decision by many producers to increase the size of their herds. Larger supplies always lead to lower prices, but we are used to the ups and downs of the cattle cycle. In order to manage this cycle, we need risk management tools that work.

Price discovery is ultimately driven by supply and demand. The fundamentals of markets are universal. The cattle industry today relies on transparency of price discovery to send clear signals up and down the beef chain. Cattle and beef are a wonderful but perishable creation. We are not grain that can be stored for great lengths waiting on fundamentals to steady an uncertain market. We currently rely on market forums like CME Group's cattle futures contracts as solid information in our price discovery process. Changing technologies and a transition to automated trading in commodity futures trading have increased market volatility, making interpretation of those price signals different than what we were accustomed to in the past. The integrity of our market forums is very important, for without futures contract integrity our industry will abandon their use.

We have recognized the volatility and are working directly with the CME Group to find ways to address it. We have a joint NCBA/CME working group which is analyzing potential changes which could slow the market down and ensure a level playing field for producers who are using these tools to manage their price risks. Today we ask for no direct action from our government in our cattle marketing systems and forums. In fact, I am concerned at some of the action we have seen from USDA and the Senate.

Secretary Vilsack has announced that he is going to dust off the proposed GIPSA marketing rule that resulted from language included in the 2008 Farm Bill. This is concerning to us because bipartisan efforts resulted in appropriations language which defunded any additional work on, or implementation of, the ideas included in the draft rule. The provisions in the draft rule would have taken away our ability to market cattle the way we want to. The proposed GIPSA rule would have made USDA the ultimate arbiter of how cattle are marketed. We urge USDA to enforce the Packers and Stockyards Act as it exists now. We do not need them dictating how we can or can't market our cattle.

I am also aware of the introduction of Senator Grassley's bill to ban packer ownership of cattle. This is another solution in search of a problem which has been tried, and defeated, many times before. Over the past decade, USDA's Mandatory Price Reporting has shown that only five to six percent of cattle are packer owned. This is not the source for the downward market. We only wish that same tenacity was used to help us address the real problems we have with our Federal Government.

We have worked for years to find new and innovative ways to market cattle. Alternative marketing arrangements have been studied by USDA and independent groups, and the results show that these alternatives benefit producers and consumers alike. Any Congressional or Executive action to interfere will only add to our price problems, not solve them.

Solving our price problems relies on addressing the true issues of consequence to our industry. Beef trade is one of those issues. Globalization is not feared by the American beef industry, but embraced. In fact we continue to export an increasing volume and value of American beef to destinations worldwide. Last year we exported over 14% of all finished cattle value, that's worth over $300 extra for every calf in America. Many of you can likely attest that NCBA is always talking about more market access for the ability to sell more beef. Our beef does compete on the global market, however our industry is not easily replicated globally.

If Congress passes TPP this year, the U.S. beef industry will be one of the biggest winners in agriculture. At the same time, if Congress fails to pass TPP or delays action on TPP, the U.S. beef industry will be one of the biggest losers in agriculture, and here's why that is the case.

Roughly 80 to 85 percent of the beef we produce is for the American market. American consumers love the ribeyes, tenderloins, and briskets from our cattle, but not all cuts of the carcass can be sold domestically at a premium. The small percentage of beef that we export are cuts like tongues and short plates that are not desirable to the American consumer. Rather than send these cuts to a landfill or process them into pet food, we have found that Asia has proven to be a great destination for these cuts.

As a result, we have capitalized on the growing demand for U.S. beef overseas and Japan has become our leading export market. In 2015 the Japanese purchased $1.3 billion of U.S. beef and was one of the leading export markets for beef tongue. Even with a 38.5 percent tariff rate on our beef, we have seen a tremendous growth in export sales to Japan over the past 4 years and we have been able to gain significant market share because of the quality and price of our beef.

Our leading competitor in the Japanese beef market is Australia. In January 2015 the Japan-Australia Economic Partnership Agreement took effect and gave our leading competitors a ten percent tariff advantage over us in our leading export market. In other words, the Japanese tariff on U.S. beef is 38.5 percent and the Japanese tariff on Australian beef is less than 28 percent. This disadvantage for U.S. beef in Japan resulted in nearly $300 million in lost sales to Japan in 2015. The tariff rate advantage for Australia will continue to grow for the next decade unless something is done to level the playing field in Japan. The good news is TPP will level the playing field for U.S. beef in Japan by lowering the tariff rate on U.S. beef to match Australia's tariff rate upon implementation of TPP and will continue to decrease to nine percent over 16 years. This the greatest beef market access ever negotiated into Japan.

Japan market access is not the only highlight of TPP. TPP eliminates tariffs on U.S. beef exports to other countries including Vietnam and Malaysia, and also includes a strong set of rules that prevent governments from putting in place non-science based barriers and technical barriers to trade. TPP also gives us leverage over countries like Indonesia, Taiwan, the Philippines—all countries who want to join TPP and all are countries where U.S. beef has outstanding issues with market access.

The benefits of TPP are great, but so are the costs of inaction. If the United States fails to enact TPP, then we will send a strong message to our allies in the Pacific Rim that we are no longer willing to lead in the Pacific and the United States will simply resign our position of leadership to China regarding international trade and the geopolitical affairs of the Pacific Rim.

Unfortunately China already has leverage over the United States in terms of beef market access and has exerted that leverage since it banned U.S. beef in 2003 following the classical BSE case involving a Canadian-born cow in the state of Washington. In 2006, China unilaterally re-opened its market to de-boned beef from cattle under 30 months of age with the stipulation that U.S. beef imports meet 22 requirements that included traceability of the animal to place of birth and the exclusion of meat from cattle that were of Mexican-origin. A year later, in 2007, China expanded access for U.S. beef to include bone-in beef from cattle under 30 months of age, subject to the same 22 conditions they introduced in 2006. The U.S. beef industry did not agree to meet these non-science based and commercially restrictive terms and worked to educate the Chinese Government on how these unnecessary requirements did nothing to address food safety or animal health concerns. In 2012, the United States received negligible risk status for BSE from the World Organization for Animal Health (OIE); this is one of the highest levels of safety awarded by the OIE. Even with our negligible risk designation, China has not modified its BSE restrictions on U.S. beef and we are still prohibited from the Chinese market.

Regaining market access to the large and growing Chinese beef market is essential to the future health of the U.S. beef industry. For several years the U.S. Government has been meeting with Chinese officials to discuss re-opening the Chinese market to U.S. beef. Unfortunately whatever progress has been made in these meetings has simply led to further questions and delays. Despite the frustrating process, NCBA remains strongly committed to working with the U.S. Government to address China's concerns. With the guidance and direction of our volunteer leaders we will continue to provide the necessary advice that our government needs to arrive at an agreement that will address China's concerns and help us regain access for beef. One of the points of concern for China is the U.S. capacity to identify at the slaughter plant the birth premise of every animal from which beef is certified for export to China. The U.S. beef industry and the U.S. Government have worked extensively to find a solution that does not place mandatory production requirements on producers regarding traceability. We believe there are existing voluntary marketing programs that address China's concerns and look forward to our negotiators being

able to find a common-sense solution and restore access to China. Even if there is a consensus position to address China's concerns, China may bring up other potential roadblocks that will have to be addressed at that time. A healthy dose of caution is needed in working with China.

Other actions can also be taken to help our industry recover from downward prices. We continue to be hit with over burdensome regulations which hamper our ability to be as efficient as possible. One such over burdensome regulation is the Endangered Species Act. Despite being essential to protecting habitat for wildlife everywhere, cattle producers throughout the country continue to suffer the brunt of regulatory and economic uncertainty as a result of the U.S. Fish & Wildlife's implementation of the Endangered Species Act.

Simply put, the ESA is broken. Years of abusive litigation by radical environmental groups have taken a toll, and the result is a system badly in need of reform. Today more than two thousand species are listed as either Threatened or Endangered, with new petitions stacking up by the hundreds due to groups that have set up "petition assembly lines" to churn out new filings by the dozen. When the Fish and Wildlife Service fails to respond to this avalanche of procedural paperwork, the groups sue, tying up the court system and sapping the agency of money that should be used for species recovery and de-listing efforts.

If we want to fix the Endangered Species Act we are going to have to get serious about ending this taxpayer-funded litigation abuse. The Equal Access to Justice Act and the ESA Judgement Fund were not created to serve as bank accounts for activist groups, yet that's how they are being used. Every time the FWS settles a lawsuit or enters a settlement agreement like the infamous 2011 "mega-settlement" with the Center for Biological Diversity and WildEarth Guardians, these "factory litigants" receive a windfall profit, which only reinforces their action and encourages more abuse.

The result of this cycle of abuse is a dismal 1.4% recovery rate for listed species—a failure by any standard. Since all available resources are devoted to listing petitions and litigation, virtually nothing remains for recovery and de-listing efforts. Some species have been listed for 15 years or more without a valid recovery plan or recovery benchmarks in place. For cattle producers operating in the range of a listed species, that means playing a game we can't win using rules we're not allow to see.

After 40 years, Congress must step in to reform this broken law. We need to restore balance to the ESA by making recovery plans and de-listing benchmarks a requirement to list a new species. Certainly if the Service has enough information to determine that a species is threatened, it should also have enough information to determine what "recovered" looks like. Congress must also ensure that effective conservation tools like Candidate Conservation Agreements with Assurances (CCAAs) aren't marginalized through the rulemaking process. The assurances provided to producers through such instruments are critical to effective preemptive conservation efforts on the ground. With clear guidance, realistic recovery goals, and a focus on truly threatened species, cattle producers stand ready to continue their work on the front lines of species conservation. It is my hope that Congress will act to provide the Fish and Wildlife Service that badly needed guidance.

When we talk of over burdensome regulations, we always need to talk about the Environmental Protection Agency (EPA). Cattle producers rely on clean water, clean air, and clean land to run successful businesses. We pride ourselves on being good stewards of our country's natural resources. Since our livelihood is made on the land, through the utilization of our natural resources, being good stewards of the land not only makes good environmental sense; it is fundamental for our industry to remain strong. We maintain open spaces, healthy rangelands, provide wildlife habitat, and feed the world, but to provide all these important functions, we must be able to operate without excessive Federal burdens. Unfortunately, the livestock industry is threatened daily by urban encroachment and natural disasters, and the last thing we need is additional regulatory burden and government overreach.

The *Waters of the U.S.* (or "WOTUS") rule continues to be a top concern for cattle producers, despite the temporary court-ordered stay. I am extremely concerned about the devastating impact this rule could have on me and other ranchers and farmers. As a livestock producer, I can tell you that the rule has the potential to impact every aspect of my operation and others like it by regulating every tributary, stream, pond, and dry streambed on my land. What's worse is the ambiguity in the rule that makes it difficult to determine just how much of my operation will be affected.

WOTUS is just the tip of the iceberg for incoming environmental rules that impact beef producers. Another pending regulation is the Spill Prevention, Control, and Countermeasure (or "SPCC") rule for farms, which requires farmers to develop

and certify a control plan and install secondary containment structures for oil storage. There's also the new ozone standard which can impact a rancher's ability to conduct a prescribed burn, which is an environmentally beneficial practice for burn-dependent ecosystems. I'll also mention the Resource, Conservation & Recovery Act—a law designed by Congress to regulate landfills—which for the first time ever was determined by a Federal court judge to apply to agricultural operations. Ironically, these regulatory and enforcement regimes ultimately disenfranchise agricultural producers instead of incentivizing conservation efforts.

As I explained earlier, our industry is quite diverse and independent by nature, but by necessity we come together to solve our challenges. I sincerely appreciate your invitation and attention for these few minutes today. We want to work with you to ensure that legislation passed and regulations promulgated are ones which help producers, not hinder us.

The CHAIRMAN. Thank you, Mr. Brunner. The chair would like to remind Members that they will be recognized for questioning in order of seniority for Members who were here at the start of the hearing. After that, Members will be recognized in order of arrival. I appreciate the Members' understanding.

Understanding that Ranking Member Collin Peterson has another commitment he has got to get to, I would be happy to yield at this time.

Mr. Peterson?

Mr. PETERSON. Well thank you, Mr. Chairman. I appreciate that.

Mr. Zimmerman, you mentioned in your testimony that USDA proposed rules on organic poultry gives you concern. Could you talk a bit more about the risks associated with this rule, your concerns, and do you feel this rule will work counter to USDA's efforts to prevent another high-path outbreak?

Mr. ZIMMERMAN. Our primary concerns do have to deal with another high-path outbreak. Here we are working with APHIS trying to limit our exposure to water fowl, rodents, other possibilities of bringing HPAI into our farms, and then AMS comes up with these new proposals that want us to increase the outside space required for organic production. It just doesn't make any sense that one part of USDA is telling us to keep our birds as safe as possible, inside our barns and the other group is saying well one segment of the industry needs this much greater space outside. So that is the greatest concern.

And they are also admitting that this will increase mortality, some of these organic rules, and that is counterintuitive to what we are tying to do.

Mr. PETERSON. Are they listening?

Mr. ZIMMERMAN. We hope so. I guess that is part of the reason we are here today.

Mr. PETERSON. All right.

Dr. Brown, you have done a lot of analysis on milk and MPP. What would you say to some of the producers that think that they were better off under MILC, first. And second, in your analysis there has been talk about this feed cost adjuster issue. It just looks to me like there is a bigger discrepancy between whether somebody grows their feed and buys their feed *versus* what region of the country they are in.

So would you agree with those two issues?

Dr. BROWN. Yes, first, when you look at the old MILC program *versus* MPP, I have said all along that for those producers that would have signed up at the $600 or $650 range for MPP, I believe

the return to them is larger than what they would have experienced under MILC. Getting them to sign up for that level has been somewhat the challenge that we face. I looked, and in 2016, almost 130 billion pounds of our milk signed up at $4. That is a safety net about as firm as this table top. It doesn't provide much help. So we have done a poor job of educating on this idea of insurance *versus* program maximization, and it is an area we need to work on. But I also hear from producers who have felt like MILC was a better tool. Sometimes I will say it might have paid sooner, but it only offset 45 percent of the price decline. I don't know of any producer that would like to receive only a 45 percent offset once we get to the trigger.

When you look at MPP, and there has been a lot of discussion about feed costs, and we all know from the debate on the farm bill we had feed costs discussion all the way back in the 2014 Farm Bill debate. It does seem like we have a lot of differences in terms of feed cost by operation. Those that are growing a lot of their own feed, frankly, did better in a high feed price environment because they were able to use their own harvested feed stuffs. However, those that were buying a lot of their feed saw more of the full impact of the record corn prices that we saw during the very dry weather of 2012 and 2013. So perhaps there is some ability to think about ways to modify the formula, depending on whether you grow a lot of feed or you don't grow a lot of feed. I am not so certain that it is a regional issue as much as it is how that farm actually looks, in terms of the amount of feed it has grown *versus* what it buys from the marketplace.

Mr. PETERSON. Thank you.

Mr. Mooney, why are bankers not requiring dairy farmers to buy up insurance? Crop farmers would never get by with that. Is that going to change now that we are going to a tighter margin situation, or do you know anything about that?

Mr. MOONEY. Well, I think it will change, and I haven't spoken to a banker directly, but coming off of 2014 when margins were really good, you went into 2015 with strong balance sheets, and then disaster hit in 2015 and the results of 2014 on our bottom line masked some of the problems we had in 2015. And if you go back and you look at the results of the Margin Protection Program, there were 263 farms that were paid out, and if the feed cost adjuster had been the way National Milk had presented it, there would have been 8,500 producers receiving a payment. And farmers look at those things when they look at whether to get involved next year. They see very few farmers received money in 2015, so they take that into consideration when they are looking.

And I do think to your specific question, once it is more of a proven program and we go through some of these low down cycles like we are going through now, I think that will be required by banks.

Mr. PETERSON. Thank you. Thank you, Mr. Chairman. I appreciate your accommodating me.

The CHAIRMAN. Thank you, Mr. Peterson. I will now yield myself 5 minutes.

Mr. Brunner, my line of questioning is going to focus on this proposed GIPSA rule that we have on the table. The cattle industry has put into place the alternative marketing arrangements, or

what is known as AMAs. Would the proposed GIPSA rules make AMAs obsolete? I would love to get your thoughts on that.

Mr. BRUNNER. Well thank you, Mr. Chairman. The proposed GIPSA rule would extremely complicate and outlaw many of the alternative marketing arrangements. Our industry believes that these value-based marketing arrangements that we have, have done much to improve the overall quality and demand for beef over the years.

I can relate personally from our family's operation that we rely on a value-based marketing arrangement with our packer processor that has helped us over time achieve premiums to the cash market of $30 to $50 a head consistently. We believe that is responding to consumer demand and we rely very much on this marketing arrangement. So the alternative marketing arrangements are very beneficial to our industry. The GIPSA marketing rule would threaten those.

The CHAIRMAN. Mr. Herring, in your written testimony you mention the industry has plans to add four pork packing plants in the United States in the next couple years. Obviously, these are huge job creators and economic stimulators, and although we don't know exactly what the final GIPSA rule is going to look like, would the possible decrease in marketing agreements have an impact on whether or not the industry goes forth with building these plants?

Mr. HERRING. Congressman, there is no doubt that these proposed new GIPSA rules could delay or even stop some of these potential plants. There are three plants under construction today. There is one plant that is trying to get located. Maybe there are four under construction today.

But, the better question is we need to ask why are new plants getting built? New plants are getting built because U.S. pork producers produce the safest, highest quality product in the world. We are the best at what we do in the world. We produce pork four times cheaper than Japan, 2½ times cheaper than China. It is a very innovative industry.

These GIPSA rules are very concerning because they are so vague. It is almost a trial lawyer's playground.

I work for a family business, Congressman, that designs and builds swine production facilities all over the world. Countries like Russia, China, Mexico, Poland, Chile, all these countries are striving to be like our industry, and through our current rules and regulations, our industry has been able to grow. So I don't see why we need to change anything we are doing today.

Thank you, Mr. Chairman.

The CHAIRMAN. I yield back my time.

Let's see, Ms. Plaskett?

Ms. PLASKETT. Thank you, Mr. Chairman. Good morning, gentlemen.

I have a general question that I am hoping that anyone in the group can answer, give us their thoughts on, and this is related to EPA regulations. As livestock producers, can you explain the regulatory challenges that you face within each part of the operations that you have? And with that, I am really trying to understand what EPA could be doing better to recognize the challenges that you have in your industry and in the operations, and under-

standing those practices in their own regulatory framework and how they put regulations forward that may make it more difficult and more challenging for you in your own industry.

Mr. BRUNNER. Well, I will take the first try at that.

Ms. PLASKETT. Okay.

Mr. BRUNNER. The *Waters of the U.S.* rules is foremost in mind as an initiative from EPA that would be very damaging to the cattle and beef industry. America's farmers and ranchers pride themselves as stewards of not only the land, but all of the resources on that land. We believe that the best way to manage and preserve that land is best managed at the ranch and the local level. The *Waters of the U.S.* rule would be a massive Federal overreach, and would be very damaging to our industry.

Ms. PLASKETT. My understanding is that it goes as far as to reaching into dry creek beds and others, and that that is really going to be detrimental to the work of some of the livestock owners.

Mr. BRUNNER. Absolutely. It would go far beyond navigable waters of the U.S., and jurisdictionally include intermittent streams and even dry——

Ms. PLASKETT. Well how can EPA strike that balance? Are you meeting regularly with them? Are people from different associations having discussions with them? Do you feel that they are understanding and hearing what your concerns are in a market that is already very, very tight for you all?

Mr. BRUNNER. We believe our organization is taking initiatives and outreach to work with EPA. To date, we don't believe they have been as receptive to our arguments and our information as we necessarily would like them to be.

Ms. PLASKETT. Mr. Mooney, did you have something to add on that?

Mr. MOONEY. Yes. We have sat down with EPA and we have what you call in the dairy industry innovation center where you bring together farmer organizations and processor organizations, and we have sat down with EPA to talk to them about things like *Waters of the U.S.* and what effect it would have on us. We have actually come up with a plan to reduce greenhouse gases by 25 percent by 2020. So we are trying to get ahead of some of this stuff and going in and having a conversation with EPA to see if what we are doing fits what they would—rather than work at it from a regulatory standpoint, work with them when they tell us what is coming down the road, how we can fit what we are doing into what they are going to recommend.

We also have started a group, Nutrient is the name of the company, to where several co-ops have financed this new company to come together to try to find innovative ways to use animal waste and animal manure in ways that we haven't ever thought about before. So it is going to cost quite a bit of money to do it, but cooperatives and farmers are putting resources into this so we can find ways to get ahead of some of the EPA rules.

Ms. PLASKETT. Thank you. I have noticed, and I am very aware of the drought for the farmers and particularly livestock owners in the Virgin Islands where we have the—as well as our pork, there have been a huge, huge issues that they have had related to drought. And I know that when we talk about the TPP, that that

as well is something that some of you all are really concerned about and if Congress doesn't act to pass it, will that be ceding marketshare that some of you may have in a market already dealing with disease and drought and some of the other areas.

Do any of you have any thoughts about, particularly Mr. Herring, Mr. Mooney, about how passage of TPP or not passing that would affect your industry?

Mr. HERRING. Thank you. Currently today, there is about $48 per head of value added to every hog marketed in the United States because of exports. If we are not able to pass the TPP, other countries are working with Asian countries, and our industry will start to decline and we will not be able to increase the value of the animals that we are producing today.

The 20 countries we have free trade agreements today, we sell them more pork than we sell the rest of the world. So anywhere the U.S. pork industry has a free trade agreement, we have been super successful, and they have created a tremendous demand for our product.

Ms. PLASKETT. Okay, thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Mrs. Hartzler.

Mrs. HARTZLER. Thank you. I really enjoyed the testimony today. It seems like we have had a recurring theme of the TPP and GIPSA, and some of the regulations, GMO labeling. I have been a lifelong cattle producer, but I didn't know that we were producing ⅓ more cattle or beef product than we are with ⅓ less land and ⅓ cattle, since 1977, so that was impressive there. I am concerned to hear that you project lower cattle prices, Dr. Brown. That doesn't look good for our cows at home.

But my question today is about the Veterinary Feed Directive, and this final rule scheduled to take effect in December of this year. Producers in my district are concerned with how these new regulations will be effecting their operations and I have had several conversations with several cattlemen, specifically at home.

So specifically, I have heard the regulatory burdens in the VFD will force farm supply stores to stop selling products like medicated milk replacer, which is used on calves during certain times to protect the baby animals against illnesses like pneumonia. So as I understand the VFD, a 1,000 cow dairy and little Johnny with one show steer will be regulated under the same rules, and the VFD will make it extremely costly and difficult for small farmers and young kids with FFA and 4–H projects to access critical feed products like medicated milk replacer. Randy, I would like to hear your thoughts on this rule first, and I would like to learn more about how the Veterinary Feed Directive will be applied to products like medicated milk replacer. And then I would like to open this up to the whole panel to talk about other concerns you may or may not have with the VFD, and any specific provisions or concern in the directive that can be tweaked to improve the implementation. Randy?

Mr. MOONEY. Well as you might expect, any extra regulations are very concerning for dairy producers, and probably all livestock producers. And this probably affects dairy less than it does maybe other livestock groups, because as you are well aware of, our feed that goes into the dairy cow doesn't have antibiotics in it anyway.

We test our milk daily for antibiotics so there are no antibiotics in dairy feed. It will affect the milk replacer that we feed our calves if it has antibiotics in it, and what you will have to do then is work with a veterinarian to get a veterinarian prescription to use that.

Now one of the things the dairy industry has done is we came up with what we call the FARM Program, Farmers are Sharing Responsible Management, and that is our new animal care program that has been in existence about the last 3 or 4 years. And in that program, you have to have a veterinary client/patient relationship, so that relationship through this program will actually be easier for dairy producers to deal with because we have that relationship ongoing, and it is something that we have to have resigned every year. But it is just another layer of regulations that we are going to have to deal with, but I don't see in the dairy industry it being as big a deal maybe as in the livestock or poultry industry.

Mrs. HARTZLER. Let me ask Mr. Brunner this. How often would a beef producer, or even Mr. Herring, pork producer, have to get that prescription from the veterinarian? Can you get a blanket one for 1 year, or is this every time you want to give the medicated feed you have to go back to your local veterinarian?

Mr. HERRING. The short answer to that would be I believe 6 months is what is commonly being said today would be the length of a prescription.

Our organization on behalf of our industry has been working with FDA and the development of the Veterinary Feed Directive. We want to be part of the solution. We understand the discussion on antimicrobial resistance that is taking place. We also understand the very great need that all livestock industry has in the availability of all the technologies in the tool chest, if you will, to ensure the safety and the availability of the global food supply. And all that said, there are specific technologies that come under scrutiny of the Veterinary Feed Directive that are ionophores. These are classified as antibiotics. They have no use in human medicine, but they are very important technologies in the efficiency of production of beef, and we are currently working with FDA to try and identify some ways to continue the use of them and availability of those technologies.

Mrs. HARTZLER. Ten seconds, Mr. Herring. Do you want to add anything?

Mr. HERRING. The pork industry is in concert with the guidance 209 and the guidance 213 rules that are coming in January. I am sure there will be some hiccups, just because there are employees, there are people working. Somebody will miss something. But first and foremost, we are trying to raise safe, healthy pork, and the antibiotics are a tool that we definitely need to be able to ensure that happens.

Mrs. HARTZLER. Okay, thank you very much. Thank you, Mr. Chairman.

The CHAIRMAN. Mr. Costa?

Mr. COSTA. thank you very much, Mr. Chairman. I have a couple questions.

First to Mr. Mooney and Dr. Scott Brown. When we worked together on the farm bill on the MPP program, the economic analysis reflected an assumption that the so-called sweet spot as it has been

discussed before where about $6 to $6.50 range, and the premiums were therefore optimized at that level. Of course, my friend and colleague Congressman Peterson said, ". . . it is not a good idea to write farm programs when prices are high," but I would like to ask, in your view, is that still the case? Because our California situation, and it was noted about differences in regional production and the size of dairies. I looked it up and we have had 38 dairies out of almost 1,500 dairies in California that have purchased the additional protection. So 38 out of almost 1,500 dairies is a small number, I would argue. Mr. Mooney, Dr. Brown, would you care to comment?

Mr. MOONEY. Well, I will let Scott clean me up.

The cost of a sweet spot, and I agree that I even said that up in front of talking with some groups, that was the sweet spot, but when I was talking about that, that was in relation to probably what National Milk at the time was talking about as the feed cost that was prior to the ten percent reduction in feed costs.

Mr. COSTA. Which has changed.

Mr. MOONEY. Yes, that is right. So, it probably should have changed the rates when you changed the feed costs, because the two are correlated. And I think when you——

Mr. COSTA. But some argue that that may not do much.

Mr. MOONEY. Yes, but when you get under $6.50 and you look at ten percent in feed costs, you look at $10 feed costs, it is $1 hundredweight. So if you are down at that level, it makes a big difference.

Mr. COSTA. Because of my time, Dr. Brown?

Dr. BROWN. Also, when we debated the farm bill we certainly didn't expect feed costs to go as low as they have today. So first, I think that probably has some effect relative to where we were in terms of the so-called sweet spot. I do think we have to be extremely careful about what level of protection we want to provide. Too high of protection creates a lot of excess supplies for us to deal with, and we have had programs like that in the past and we weren't very happy with those either. So finding that in between has been very difficult. The knowledge that we have today of how feed markets have moved might suggest slightly higher protection is needed than where we were when we debated this farm bill.

Mr. COSTA. And maybe take another look at it then

Dr. BROWN. Absolutely.

Mr. COSTA. Yes. I want to switch here, Mr. Zimmerman, to some of our issues dealing with the poultry industry. You mentioned in your testimony the result of last year's high-path avian influenza that created havoc in different parts of the country that several countries, South Korea, South Africa have placed new restrictions on poultry imported from this country that is not born, raised, and slaughtered in the United States. What is the impact of these adverse regulations?

Mr. ZIMMERMAN. Well, the South African one is the most—forgive my bluntness—silly. We receive a lot of poults or baby turkeys that are hatched in Canada and transported across the border at a day of age, and then we raise them and grow them out and process them in the United States. Those birds cannot be sold to South Africa, whereas the same poult or baby turkey hatched in Canada

and stays in Canada can be sold to South Africa. These poults that come across the border from Canada are a lot of times mixed in the processing plants and they can't be kept separate, so anything that has this tint of Canadian-ness in it can no longer be marketed to South Africa. So it is just a silly trade barrier that affects the whole industry because——

Mr. COSTA. This is a non-tariff trade barrier that and in effect is made for economic reasons as it relates to a particular country?

Mr. ZIMMERMAN. Correct. And it was thrown in at the last minute, and if NTF had been consulted heavier with the people negotiating the trade deal, we could have nipped this in the bud before it happened.

Mr. COSTA. So what remedy are you offering or suggesting that the Subcommittee look at to try address this issue?

Mr. ZIMMERMAN. Make sure NTF is involved and understanding the difference the turkey industry faces compared to the chicken and other livestock industries, and work with us to hopefully change that rule.

Mr. COSTA. All right. I want to thank you, Mr. Chairman. I have to go back to my other Subcommittee, and I will yield back the balance of my time.

The CHAIRMAN. Mr. Newhouse.

Mr. NEWHOUSE. Thank you, Mr. Chairman. Gentlemen, I appreciate very much all your testimony this morning. It has been very informative and very important issues that impact agriculture and its ability to be successful, so thank you very much.

I am really looking forward to this opportunity today, because I have a burning question that has been raised by some of my cattle producers, so I was hoping that a couple of you could address this issue, maybe Mr. Brunner and Dr. Anderson, or whoever would like to, maybe Dr. Brown.

After the repeal of COOL, which as you know in the cattle industry, there are some people for and some against that. Some folks have brought the concern to me that now Canadian and Mexican cattle can come into the United States for a certain period of time, be slaughtered, and be sold as U.S. beef, and that any benefit from TPP would then be a more direct benefit to Canada and Mexico, not U.S. producers. And they have already seen a price decrease, they think, because of this situation. In your estimation, is this the right conclusion to come to? Was the cause and effect correct, when you get rid of COOL, then that automatically is not a benefit to U.S. producers? Does that make sense?

Mr. BRUNNER. What I think you are asking is has the importation of cattle increased since Country-of-Origin Labeling is no longer the law of the land, and the North American beef industry is highly integrated. On the U.S. side of the border, we utilize feeder cattle from Mexico, it averages about one million head a year that come in from Mexico, and are part of our industry, that help with the feeder supply. From Canada, depending on seasonally and also, the situation of moisture, live cattle, feeder cattle, and also slaughter cattle can come down from Canada. The North American industry is highly integrated, and so we have not seen any increase since the dismissal of COOL, and I am not sure exactly how that would tie into TPP. TPP, although Canada and Mexico are signato-

ries to that agreement, would be a far greater benefit for our industry in helping us level the playing field of the tariff rate duty that we are paying into Japan. Currently we are paying 38 percent. Australia, only 27 percent, and that disparity will continue to escalate until we sign TPP.

Mr. NEWHOUSE. Yes. Anybody else care to comment?

Dr. ANDERSON. I will probably just make one comment too along with that. We have been importing fewer cattle, and it relates to drought, weather conditions, grazing conditions up there, and also changes in their own infrastructure within their own industries. As they build more packing plants in Mexico, we think that is going to continue to keep more cattle down there and reduce that supply that could come here of the live cattle.

Mr. NEWHOUSE. Well that helps. I appreciate that. There are a lot of moving pieces, a lot of things that can impact cattle prices, and certainly, it is an integrated industry in all of North America.

Just real quickly, Mr. Mooney, you talked a little bit about the MPP. We talked a lot about the feed provisions in that, but you also had some other suggestions for improvement, and in the short time allotted, you mentioned farmer paid premiums as one thing. Are there any other ideas that you might have to improve the MPP?

Mr. MOONEY. Well I think those are the two major ones is making sure the feed cost adjustments, there is discussion out there on regional feed cost adjusters. I don't think that is the right way to go, personally, because you get into all kinds of regional differences. If you do go with a regional feed cost adjuster, you would almost have to go with regional milk prices, because milk prices are different all over the country.

But, probably the other one is looking at the different size of producers. If you are talking about getting more people involved and Congressman Peterson said this, some of the smaller producers aren't involved in this. The rates have actually gone up on the smaller producers because there was a deduction the first year, and if there was a way of having lower rates for smaller producers to get them more incentivized to be part of it, that might help there.

Mr. NEWHOUSE. Thank you very much. Again, I appreciate all your testimony. It has been great, and thank you very much, Mr. Chairman.

The CHAIRMAN. Mr. Yoho?

Mr. YOHO. Thank you, Mr. Chairman. I appreciate everybody being here, and I have so many questions and so little time.

TPP: I know we all need trade and we all want fair and balanced trade. We want good trade, and it is so important that we have that. Mr. Brunner, congratulations on your new post with the NCBA.

Mr. BRUNNER. Thank you.

Mr. YOHO. Is anybody in the cattle industry, or Mr. Herring, in the pork industry, or Mr. Zimmerman, in the turkey, and Mr. Mooney, in the dairy industry, while we are waiting for TPP to come across and get approved, as you brought up, Australia was ahead of the curve. They went ahead and negotiated with Japan. Is anybody in our industries doing that today while we are waiting on TPP, because I felt like we sat and just kind of watched the

world go by, and Australia jumped the gun and they did good for their country. Is anybody doing that?

Mr. BRUNNER. Well the Canadians are working to get a unilateral or bilateral agreement with Japan in our absence.

Mr. YOHO. What about us with our trade negotiators?

Mr. BRUNNER. Our trade negotiators negotiated the best trade access we have ever been able to achieve with TPP.

Mr. YOHO. Right.

Mr. BRUNNER. Our current tariff rate of 38 percent would level with Australia and all the other member nations, and it would decline to nine percent in the 16 years of phase in over that. So that is by far the——

Mr. YOHO. But, instead of waiting for that to pass, was anybody being proactive and trying to get the trade agreement, just a bilateral one so that we could be—I don't want to say like Australia—benefitting our producers in this country instead of waiting on this big multi-national trade agreement?

Mr. BRUNNER. We had a bilateral that was signed with Japan, I believe, back in the 1990s in the early part of my career. It was hard to get the Japanese market open, and when it did open, we had to pay that high tariff rate and have been paying it ever since.

Mr. YOHO. Right. Okay. I just feel like we could have, our negotiators could have been a little bit more proactive, kind of like Australia did or like you are saying Canada is doing it now.

In lieu of that, thinking about that, we heard about foot-and-mouth disease as you guys brought up, and we know the threat of that. Is there any need to import beef from any country that might have FMD, because we know if that got into this country, it would shut down our export industry 100 percent. Right now, tomorrow, it would shut it down. Is there any need to import it, and if you could, give me an economic impact on this country's ag sector when you look at pork, beef, sheep, goats, all the livestock sectors that would be impacted. Any idea, Mr. Brunner?

Mr. BRUNNER. Well the Brazil/Argentina rule that is proposed by USDA raises great concerns within our industry. We don't believe an adequate risk assessment has been made of the ability of those countries to certify their product coming into this country as fresh or fresh frozen product. We believe that that risk assessment needs to be made. And in direct answer to your question of an economic analysis of the damage that that would create, we have not seen that study from USDA and are not sure that it has ever been made.

Mr. YOHO. The reports I have read is between $100 and $150 billion economic impact to this country.

Mr. Herring, do you have any thoughts on that?

Mr. HERRING. Well, the ability or the devastation of a farm animal disease in this country is, without a doubt, the 800 pound gorilla in the room, and it is the one thing that when I meet with the bankers every year I think I just need to get out of this business. It scares me to death. So we really need to keep pushing and get prepared.

Mr. YOHO. All right, and bringing that up but going back to TPP, if we know that were to come into this country and we're strug-

gling to get that trade negotiation, we need to stop any country that maybe has that in their country to come here.

And we talked about GIPSA, the Food Modernization Safety Act, EPA, all the regulations that come from these different agencies and the FDA, and recently, the USDA noticed a grant to help address a shortage of large animal veterinarians in rural areas, and this continues to be a common problem from report after report evaluating the veterinary profession. With additional regulations like I mentioned from the FDA on the VFD coming into effect early next year, the shortage for rural areas could become more problematic. From your perspective as the President of the NCBA, do you hear this concern from your membership being concerned about current or future access to veterinarians in their rural areas?

Mr. BRUNNER. Well our industry certainly relies on the services of veterinarians, and beyond that I can say that they are an integral part of the support service to our industry. We want to make sure that there is adequate numbers of educated and trained large animal veterinarians to support our industry.

Mr. YOHO. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. Thank you, Mr. Yoho.

I would like to thank all the members of the panel for your testimony today. This has been very, very helpful, great input for the record. I might add, to sum all this up, the Federal Government just needs to get out of your way and help open up your markets. Thank you again.

Under the rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from the witnesses to any question posed by a Member. This hearing of the Subcommittee on Livestock and Foreign Agriculture is adjourned.

[Whereupon, at 11:31 a.m., the Subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUBMITTED STATEMENT BY LIVESTOCK MARKETING ASSOCIATION

Subcommittee Chairman Rouzer and Members of the House Committee on Agriculture Subcommittee on Livestock and Foreign Agriculture:

These comments are provided on behalf of the Livestock Marketing Association (LMA), which is the leading national trade organization for more than 800 livestock marketing businesses located throughout the United States. LMA represents more than 75 percent of the regularly selling local livestock auction markets in the U.S. Livestock auction markets serve two important purposes: (1) they sell livestock for producers in a competitive bidding environment and (2) they stimulate the economies in local communities.

According to U.S. Department of Agriculture Grain Inspection, Packers and Stockyards Administration (GIPSA) annual reports, livestock auction markets each year sell more than 33,000,000 cattle, 8,000,000 hogs, and 2,800,000 sheep. This amounts to $30 billion in gross sales of livestock sold in auction markets each year. In talking about the opportunities and challenges for the livestock sector, we'll focus on auction market businesses but also touch on some important topics for the industry as a whole.

Key points:

- **The future holds both opportunities and challenges for animal agriculture.**
- **The Packers and Stockyards Act needs to be changed.**
  - ***The structure of the livestock marketing industry has changed; but the P&S Act has not. Some needed changes can be made on a consensus basis in the short term. Other changes will require more in depth analysis.***
- **Market volatility is a serious issue that needs to be studied.**

Opportunities and Challenges Exist for Animal Agriculture

First, the good news is we see great opportunity for animal agriculture. The United States is the premier producer of livestock and livestock products, particularly grain-fed beef. We are excited about the opportunities to expand as an industry, especially as the middle class populations in many key countries grow. Factors such as lower feed costs and much needed moisture in many parts of the country have contributed positively to the livestock sector. This positive response is especially evident in the cattle sector by the decision of many cattle producers to take part in a rebuilding of numbers in the U.S. beef herd.

From a marketing sector perspective, livestock auction markets see opportunities to continue our proud tradition of serving our customers. Markets help producers receive the highest price possible for their animals through competitive bidding, sorting, and offering livestock in volume. In addition, markets are often where producers receive the help and information they need to ensure they are complying with state and national requirements particularly those relating to animal health, such as health certificates or disease testing requirements.

We also see growth opportunities that come with technology. Many markets have expanded their services to include online or video sales. Additionally, our members continue to look for innovative ways to help producers realize additional premiums for their livestock, such as desirable animal health programs.

However, we have some challenges to overcome as well. One of the greatest challenges for the livestock marketing sector is figuring out how to operate under an outdated and cumbersome regulatory structure. Last summer, LMA hosted a nine stop listening tour to hear from market owners, managers, and professional livestock buyers. From Valdosta, Georgia to Modesto, California, and everywhere in between, the message we heard was consistent. First, the laws and regulations governing the livestock marketing industry have not kept up with the times. Second, the greatest concern for livestock markets is making sure they receive payment for livestock they sell.

The Livestock Marketing Industry Has Changed, But the P&S Act Has Not

Our industry has changed greatly over the last 100 years. When the Packers and Stockyards (P&S) Act was passed in 1921, livestock were being transported by rail cars to a handful of large terminal stockyards in places such as Chicago, St. Louis, Kansas City, and Omaha where they were sold by commission firms housed at the stockyards. The stockyards often had close ties (or were controlled by) the packers that bought the livestock and the railroads on whose lines the livestock had to be shipped.

Today, approximately 1,000 regularly selling local livestock auctions are spread out across the United States, and their connections to the railroad and packing industries are completely different from what existed 100 years ago. These auctions have greater transparency than the terminal stockyards of years gone by, due to both the nature of the auction environment and immediate information sharing. Today, in a community of buyers and sellers connected by computers and cell phones used by the markets and our customers, the flow of information is almost instantaneous. It is common today for livestock markets to broadcast their sales online. Finally, many livestock marketers have also added an Internet or video sale component to their businesses.

While the marketing industry has adapted to structural changes in the industry, to changes in the banking industry, and to changes in the communications industry, the statutory authority of the Packers and Stockyards Act has remained stagnant. It has been decades since a wholesale review led to significant statutory or regulatory reform. For livestock market owners, this results in GIPSA interpreting and applying laws and regulations designed for the terminal stockyards to the business structure that we have today. The combination of antiquated statutory and regulatory authority coupled with a field staff spread out across the U.S. has lead to differing interpretations between regions and even individuals within a region. We heard on our listening tour that this leaves many market owners and operators feeling like GIPSA compliance is a moving target.

We will readily admit that there has been, and continues to be, significant controversy surrounding proposed GIPSA regulations in recent years. We share the concerns of many in the livestock industry surrounding recent news that GIPSA is again considering regulatory changes similar to those proposed in their 2010 proposed competition rule. Any changes along these lines must be thoroughly vetted with industry input to ensure that changes intended to increase competition do not unintentionally reduce competition instead. This requires significant debate and analysis.

However, at the same time, common sense, consensus-based changes should be made to begin the process of bringing the law into the 21st century. The regulated community needs action now in areas completely unrelated to the controversial topics.

Short-Term, Targeted Changes to the P&S Act Are Needed

Language has been drafted and shared with legislative offices and industry stakeholders that would make two targeted changes.

First, Section 301 should be revised to make it clear that online and video auctions fall under the Act. More and more livestock are being sold through online and video sales. As the Act is written, it is not entirely clear whether, or to what extent, those online and video sales are covered and must comply with the Act. Although LMA members who conduct business online already follow the law's requirements when doing so, the lack of clear authority of GIPSA to regulate these sales is concerning. Clarifying Section 301 would ensure that people selling through online and video markets receive the same protections as those who sell at fixed-facility livestock markets, including a custodial account, prompt payment, and bonding. Section 301 should be narrowly revised so that it only applies to those online and video businesses that are charging a commission or other fee and handling, or providing a means to handle, funds due to sellers.

Second, Section 409 should be revised to make it clear that modern electronic payment methods are permissible under the Act. Currently, Section 409 refers to only two forms of payment to meet the prompt payment requirement of payment within the next business day of the sale: checks in the mail and wire transfers. Modern banking practices use many different forms of payment, such as Automated Clearing House (ACH) and credit and debit cards. Revising Section 409 to make it clear that modern electronic forms of payment are permissible will allow for quicker payment, which will reduce the risk of defaults. This is especially important because it is taking longer and longer to receive checks through the mail. Changing the P&S Act in this way would not exclude any current payment options; it would simply allow buyers and sellers flexibility by adding modern options.

These changes should be addressed this year, both to make needed updates to the law and also to prove that, working together, Congress and industry can address problems in a consensus-based manner.

More Long-Term, In-Depth Changes to the P&S Act Should Be Considered

A more in-depth review of the P&S Act is needed on two levels. First, Congress needs to determine if the Act is fulfilling its purpose. Second, there are specific changes that could provide much needed financial protection to sellers of livestock.

Another issue often raised during LMA's listening sessions was the amount of devastating risk sellers of livestock and markets under the P&S Act are exposed to when a buyer fails to pay.

In 2010, Eastern Livestock, the largest livestock dealer in the U.S., defaulted on payment to hundreds of livestock producers, markets, and other dealers. The Eastern Livestock default is not a one-time, isolated occurrence in the industry. Since 2010, there have been several instances of dealer defaults. As recent as this past Fall, a major dealer failed to pay two livestock markets (owing $980,000 to a market in Kansas and $2.9 million to a market in Nebraska), as well as several producers who sold to the dealer directly.

Producers who sell through a livestock auction market are protected by both the market's surety bond and by the market's custodial account (trust account). Producers who sell directly to packers are protected by both the packer's surety bond and by the Packer Statutory Trust under 7 U.S.C. 196. Producers who sell directly to dealers are provided little protection. Under the current law, dealers do not have a custodial account or a trust.

Markets are placed in a highly vulnerable position when it comes to payment. Pursuant to 7 U.S.C. 228b, markets are required to pay sellers of livestock by no later than the close of the next business day after the sale, even if the markets are not paid by the buyer of those livestock. When livestock markets are not paid, they are usually left with no feasible way to collect. If the dealer has resold the livestock to a good faith purchaser, that second purchaser has clear title to the livestock, even if the dealer has not paid for them. In addition, a dealer's bank usually will have a blanket security interest on all of the dealer's livestock inventory, which, under current law, will give the bank a perfected security interest in the livestock even though the dealer never paid for them and the bank never loaned the dealer any money for those specific livestock. A producer selling directly to a dealer is in a similar poor position when the dealer fails to pay.

When a dealer mails a check, as the law allows, it may be several days before the seller (whether livestock market or producer) even gets the check or discovers that a check is not coming. In many parts of the country, mail has slowed down significantly, further stretching this critical time period. In some cases, a buyer may buy multiple times before a payment problem is discovered.

Although the P&S law attempts to provide financial protection for sellers of livestock by requiring dealers to maintain surety bonds, bond claims rarely make up for any significant loss. P&S dealer bond claims return, on average, about 15¢ for every dollar claimed (1999–2013 data). This does not include Eastern Livestock claims where payout was 4.37¢ on the dollar.

Additional protection is needed for markets and producers selling to dealers. Financial protection already exists for those dealing with packers (Packer Statutory Trust) and markets (custodial account) and in other agriculture sectors (statutory trust under the Perishable Agricultural Commodities Act). Simply raising bond amounts is not an acceptable alternative because it would push legitimate buyers out of the marketplace due to the significant assets needed to obtain this type of bond, particularly young and beginning market participants. Instead, the Packers and Stockyards Act should be amended to establish a dealer statutory trust to provide livestock producers and markets financial protection in the event of a dealer default. This would give unpaid sellers of livestock first priority to receive livestock and accounts receivable.

A dealer statutory trust could be modeled after the existing Packer Statutory Trust that Congress added in 1976 to address packer defaults. The trust requires packers to hold all livestock purchased from cash sellers, and all inventories of, or receivables or proceeds from meat, meat food products or livestock products derived from such livestock, in a trust fund for the benefit of unpaid sellers. No separate account would be needed. Instead this simply would give unpaid sellers priority in livestock and accounts receivable for livestock. The need for this protection is more important than ever with slowing mail service delivering checks, increased value of livestock at times, and volatility within the market.

Market Volatility Is a Serious Issue that Needs Attention

The final concern we will raise is that of volatility within the futures and, subsequently, live cattle markets. Futures contracts offered by the Chicago Mercantile Exchange (CME) can be an important risk management tool for livestock producers to hedge against changes in the market. In fact, many lenders require farmers and ranchers they work with to hedge their livestock. However, in recent months, the amount of volatility in the CME has turned it from a risk management tool to a liability in some situations.

We understand that due to seasonal supply and demand there will be ups and downs in the market; but what is difficult to understand is the amount of volatility within the futures market that does not correspond to the fundamentals of the cattle industry that traditionally drive market change. Numerous times in recent months news that should logically and historically move the market in one direction was met with a move by the futures in the opposite direction. This has raised some serious questions about high frequency trading of futures and other trading practices.

For a market operator, it is devastating to watch our customers experience a significant drop in prices received for quality calves simply because the board is down the limit for the day or multiple days in a row, with no fundamental reason driving the drop, and cash market participants are reacting. It is important to remember that a trip to town to market their calves is a producer's main paycheck for the year and, with a perishable commodity like cattle, waiting a week to sell is not always a good alternative.

While there is no specific Congressional ask on the topic of market volatility at this time, we appreciate the shared concern on this topic. LMA supports Congressional oversight as a support to industry discussions on this issue in the hope it is one that may be appropriately addressed in the near future.

Conclusion

In closing, we appreciate this opportunity to provide written testimony and thank the Committee for its ongoing interest in helping the livestock industry succeed, whether this be through working together to address challenges such as nonpayment and market volatility or allowing businesses to thrive without unnecessary government intervention by modernizing antiquated requirements, such as those that exist under the Packers and Stockyards Act today.

