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RURAL ECONOMIC OUTLOOK: SETTING THE STAGE FOR THE NEXT FARM BILL

HEARING

BEFORE THE

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HOUSE OF REPRESENTATIVES

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RURAL ECONOMIC OUTLOOK: SETTING THE STAGE FOR THE NEXT FARM BILL

WEDNESDAY, FEBRUARY 15, 2017

HOUSE OF REPRESENTATIVES,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Committee met, pursuant to call, at 10:00 a.m., in Room 1300 of the Longworth House Office Building, Hon. K. Michael Conaway [Chairman of the Committee] presiding.

Members present: Representatives Conaway, Thompson, Lucas, Rogers, Gibbs, Austin Scott of Georgia, Crawford, DesJarlais, Hartzler, Denham, Davis, Yoho, Allen, Bost, Rouzer, Abraham, Kelly, Comer, Marshall, Bacon, Faso, Dunn, Arrington, Peterson, Costa, Walz, McGovern, Vela, Lujan Grisham, Kuster, Nolan, Bustos, Maloney, Plaskett, Adams, Evans, Lawson, O'Halleran, Panetta, Soto, and Blunt Rochester.

Staff present: Callie McAdams, Jackie Barber, Matthew S. Schertz, Stephanie Addison, Anne Simmons, Mary Knigge, Mike Stranz, Troy Phillips, Nicole Scott, and Carly Reedholm.

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

The CHAIRMAN. Good morning. This hearing of the Committee on Agriculture entitled, *Rural Economic Outlook: Setting the Stage for the Next Farm Bill,* will come to order.

I would ask G.T. Thompson to open us with a prayer. G.T.?

Mr. THOMPSON. Thank you, Mr. Chairman.

Please join me in prayer. Heavenly Father, we gather here today for this hearing, we ask for your blessings over the information that is going to be provided that will serve to lead us in policy to serve rural America, and as a result of the strengthening rural America, serve all Americans. Lord, we just ask your presence be in this hearing. Lord, this morning we lift up and pray for those hardworking American families; the men, the women, the whole families that work so hard to provide us the food that we require, the materials for clothing, for building materials, and for energy. We just ask that you protect and be with them, and strengthen in all ways. And I pray this in the name of my savior, Jesus Christ. Amen.

The CHAIRMAN. Thank you, G.T.

By the looks of the crowd, there must be something happening this morning, so that is encouraging.

Ordinarily, we kick things off every year with the Secretary of Agriculture offering testimony as our one and only witness. How-

ever, our new Secretary has not yet been confirmed. I have had a couple of visits with Sonny Perdue on a number of items and I believe he is an excellent choice, and I hope that he can be confirmed in short order so that he may begin his important work as Secretary of Agriculture.

This is our first full Committee hearing of the 115th Congress. And Chairman Emeritus Frank D. Lucas will kick off a series of Subcommittee hearings on February 28th. This is also the first farm bill hearing as we begin to develop the next farm bill.

America's farmers and ranchers are facing very difficult times right now. This is something that the Federal Reserve, the Agricultural & Food and Policy Center, the Food and Agricultural Policy Research Institute, USDA, and even *The Wall Street Journal* agree upon.

Farmers and ranchers have endured a 45 percent drop in net farm income over the last 3 years, the largest 3 year drop since the Great Depression. The most recent ERS report now tells us that net farm income will be down again in 2017. Overall, ERS is forecasting a 50 percent drop in net farm income since 2013. It is hard for any of us to imagine our income being sliced in half.

We are told that one in ten farms are now highly or extremely leveraged. Nominal debt levels are at all-time highs, and real debt levels are approaching where they were prior to the 1980 farm financial crisis.

Yes, interest rates are lower and that certainly is a mitigating factor that differentiates our situation from the 1980s, but as the recent *Wall Street Journal* article stated, there is a real potential for a crisis in rural America. That is why I am so eager for Governor Perdue to be confirmed.

Even as we work to develop a new farm bill, the Secretary of Agriculture may well be called upon to help struggling farmers and ranchers. Let's all pray that a good crop and better prices this year will make that unnecessary.

As we begin consideration of the next farm bill, current conditions in farm and ranch country must be front and center. But there are other important considerations as well.

Chairman Lucas' strong admonition during the last farm bill debate that a safety net is supposed to be there to help farmers in bad times, not in good times, is one that Congress might better take to heart this go around.

Every hole in the current safety net that requires mending is the result of our not fully heeding that wisdom. Had we followed his counsel more wisely or closely, I doubt there would be anywhere near the current urgency in writing a new farm bill. That wisdom isn't just from a guy who has been around the block a few times in writing farm bills, it is from a guy who actually farms and ranches.

Another context we need to take into account when writing the next farm bill is this Committee's contribution to deficit reduction. I am hard-pressed to admit it but the critics of the farm bill were absolutely right. We did not save the taxpayers the $23 billion that was promised. We saved them $100 billion. We saved more than four times what was promised under the last farm bill, and we

achieved these savings despite a very severe and sharp downturn in the farm economy.

Because we were asked during the last farm bill, when times were good, to cut twice before measuring once, in the upcoming farm bill debate we will measure our requirements first and then determine what kind of a budget we will need to meet these needs.

I believe the majority of Americans recognize the need for a strong farm safety net. They see what Mother Nature can do and they strongly support crop insurance. They also see the effects of predatory trade practices of foreign countries that depress farm prices for our farmers and ranchers at the farmgate.

For example, in a single year on just three crops, Chinese subsidies are said to be $100 billion over their WTO limit. That is what the entire safety net for all America's farmers and ranchers costs over the life of the farm bill, plus more than ½ of another farm bill. And that is in 1 year.

The President of the United States has stated that our farmers and ranchers deserve a good farm bill and one that is passed on time. This will require resources, bipartisanship, and unity in farm country. But, it is also our duty to get this done and we aim to do it.

[The prepared statement of Mr. Conaway follows:]

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

Good morning. We ordinarily kick things off every year with the Secretary of Agriculture offering testimony as our one and only witness.

However, our new Secretary has not yet been confirmed. I have visited with Governor Perdue a number of times now, I believe he is an excellent choice, and I hope that he can be confirmed in short order so that he may begin the important work of the Secretary of Agriculture.

This is our first full Committee hearing of the 115th Congress. And, Chairman Emeritus Frank D. Lucas will kick off a series of Subcommittee hearings on February 28.

This is also the first farm bill hearing as we begin to develop the next farm bill. And it is timely.

America's farmers and ranchers are facing very difficult times right now. This is something that the Federal Reserve, the Agricultural & Food and Policy Center, the Food and Agricultural Policy Research Institute, USDA, and even *The Wall Street Journal* agree on.

Farmers and ranchers have endured a 45 percent drop in net farm income over the last 3 years, the largest 3 year drop since the start of the Great Depression. The most recent ERS report now tells us that net farm income will be down again in 2017. Overall, ERS is forecasting a 50 percent drop in net farm income since 2013. It's hard for any of us to imagine our income being sliced in half.

We are told that one in ten farms are now highly or extremely leveraged. Nominal debt levels are at all-time highs and real debt levels are approaching where they were prior to the 1980s farm financial crisis.

Yes, interest rates are lower and that certainly is a mitigating factor that differentiates our situation from the 1980s. But, as the recent *Wall Street Journal* article stated, and as I have experienced as a CPA in West Texas, there is real potential here for a crisis in rural America.

That is why I am so eager for Governor Perdue to be confirmed. Even as we work to develop a new farm bill, the Secretary of Agriculture may well be called upon to help struggling farmers and ranchers. Let's all pray that a good crop and better prices this year will make that unnecessary.

As we begin consideration of the next farm bill, current conditions in farm and ranch country must be front and center. But there are other important considerations as well.

Chairman Lucas' strong admonition during the last farm bill debate that a safety net is supposed to be there to help farmers in bad times—not in good times—is one that Congress might better take to heart this go around.

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Another context we need to take into account when writing the next farm bill is this Committee's contribution to deficit reduction. I am hard pressed to admit it but the critics of the farm bill were absolutely right. We didn't save taxpayers $23 billion. We saved them $100 billion. We saved more than four times what we promised under the last farm bill and we achieved these savings despite a very severe and sharp downturn in the farm economy.

Because we were asked during the last farm bill—when times were good—to cut twice before measuring once, in the upcoming farm bill debate we will measure our requirements first and then determine what kind of a budget we will need to meet these needs.

The vast majority of Americans recognize the need for a strong farm safety net. They see what Mother Nature can do and so they strongly support crop insurance. And, they also see the effects of the predatory trade practices of foreign countries that depress the prices our farmers and ranchers earn at the farmgate.

For example, in a single year on just three crops, Chinese subsidies are said to be $100 billion over their WTO limit. That's what the entire safety net for all America's farmers and ranchers costs over the life of a farm bill—plus more than ½ of another farm bill.

The President of the United States has stated that our farmers and ranchers deserve a good farm bill and one that is passed on time. This will require resources, bipartisanship, and unity in farm country. But, this is our duty and it's what we aim to do.

With that, I yield to my friend, the Ranking Member, for his opening statement.

The CHAIRMAN. With that, I yield to my friend, the Ranking Member, for any opening comments that he might have.

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

Mr. PETERSON. Thank you, Mr. Chairman, and thank you for calling today's hearing, and I thank the witnesses for being with us.

As you said, this hearing is going to get the ball rolling on the Committee's work to begin the next farm bill. I am going to keep my comments brief so we can get to our witnesses and the questions.

As you mentioned, we have had some good years, but the last several years have been trending in the wrong direction. We have seen significant reductions every year, year after year here the last 3 or 4 years in net farm income across the country, but that was coming off of some pretty high levels. I was expecting that we were going to be facing some really significant problems this spring or winter getting financing and so forth. I don't know about the whole country, but in my part of the world we had such tremendous yields and crops and harvest conditions that it offset the low prices. So we are not seeing the kind of pressure that I expected we would be seeing at this point, but if these crop prices stay where they are at, and we get an average crop or a below-average crop, we will have big problems. So we have to keep that in mind as we write this bill.

I agree with the Chairman that we should write this bill based on what is needed for agriculture, what is going to work for our

producers, and not be driven by some outside budget force that somebody has come up with.

We haven't received any direction from the Budget Committee yet. I hope that whatever we receive it will be something that will be good. And I will be working with the Chairman to do what I can to make sure that we have the adequate resources, and at the same time that areas that need some help, like dairy and cotton, can be addressed in this bill so that we have a safety net that works for all of agriculture.

I thank the chair for holding today's hearing, and look forward to hearing from our witnesses.

The CHAIRMAN. Thank you, sir.

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

I would now like to introduce our witnesses at the table. First, we have Dr. Robert Johansson, Chief Economist, U.S. Department of Agriculture, here in Washington, D.C. We have Dr. Nathan Kauffman, Assistant Vice President and Omaha Branch Executive, Omaha Branch, Federal Reserve Bank of Kansas City, Omaha, Nebraska. Dr. Joe Outlaw, Professor and Extension Economist, Co-Director of the Agriculture Food Policy Center, Texas A&M University, Department of Agricultural Economics, College Station, Texas.

I would now like to recognize Mrs. Hartzler to introduce our next two witnesses.

Mrs. HARTZLER. Well, thank you, Mr. Chairman. I am very honored and pleased to introduce two of our ag economists from Missouri from the university, and I am really proud of them. We have Dr. Scott Brown, an Assistant Extension Professor at the University of Missouri's Ag Economics Department, and the MU State Extension Agricultural Economist. Scott has worked with the U.S. Congress over the past 2 decades. You may have seen him before. He works with us on dairy and livestock policies, and like myself, Scott grew up on a diversified row crop and livestock farm in Missouri. And we have Dr. Pat Westhoff, he's the Director of FAPRI, the Food and Agricultural Policy Research Institute at the University of Missouri. He is a native of Manchester, Iowa, where he grew up on a family dairy farm. And from 1992 to 1996, he served as an economist for the Senate Agriculture, Nutrition, and Forestry Committee. He joined FAPRI in 1996 and has worked on a range of projects, not only in our country, but also in Europe, Africa, and Latin America.

So in Missouri, we are very proud of both of these experts, and I appreciate them coming today and sharing their expertise with us.

So thank you, Mr. Chairman, for allowing me to introduce them.

The CHAIRMAN. I thank the gentlewoman.

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 and Members of the Committee, thank you for inviting me here today to discuss the state of the ag-

riculture and the rural economy in the United States. I have submitted a detailed statement for the record so I will direct my comments towards the broader picture of the U.S. ag economy, focusing on two main things. I am sure our distinguished panelists here will be able to follow me and hopefully provide more details on those.

But first, I want to tell you what the current farm income situation look like right now, based on the data that we have been collecting at USDA. Second, what is the USDA's outlook for prices and production in 2017, and prospects for growth in the future?

First, farm income is expected to remain relatively flat in 2017. Credit availability continues to tighten, but continued resilience in the farm sector is also expected. Reversing the direction of the last 2 years, we do expect to see net cash income rise slightly from 2016, however, as you mentioned, net farm income, a broader measure, is forecast to fall slightly. I will just point out that both changes in those measures stand in the single digits, and are far less dramatic than the declines of the past 3 years.

And we know that much can happen during the year, as Congressman Peterson pointed out. Recall, last year at this time USDA had projected net farm income at $54.8 billion for 2016. Now, we are estimating incomes in 2016 higher by almost 25 percent, at $68.3 billion, as producers found additional ways to lower production expenses. And while the aggregate debt-to-asset ratio continues to rise, those levels and an aggregate measure still remain low by historical standards, supported by continued strength and farmland values. Of course, that story varies by type of farm and farmer.

Looking at farm business operations, which account for more than 90 percent of production and about 40 percent of farms, approximately 11 percent of crop farms and about ten percent of livestock operations have debt-to-asset ratios above 40 percent, putting them in the highly or very highly leveraged category.

Now, those levels have been trending upwards since 2012, but remain below the peak we saw as recently as 2002, which was a low point for farm income. Currently, we see that about one in five farms specializing in wheat, cotton, poultry, and hogs have debt-to-asset ratios above 40 percent.

We also know that young farmers and those that rent more of their land typically have higher debt-to-asset ratios. For example, operators 34 years old and younger had debt-to-asset ratios in 2015 of 28 percent, compared to 16 percent for those aged 45 to 54, and only 11.5 percent for those aged 55 to 64.

We have seen land value and cash rents decline last year, and evidence suggests that they will fall again in 2017, but the rate of decline remains relatively slow.

Recent data from the Federal Reserve Banks indicated year over year declines of between one and eight percent in agricultural land values across the 7th, 8th, and 10th Districts, with differences depending on type of land and state. Cash rents and share rents are showing more varied declines, but are also adjusting downwards. Still, we know many producers face difficulties with low commodity prices as operating costs have not fallen as far or as quickly as have prices. Some producers may be able to rely on capital reserves, but for many, particularly those new to farming, that option

is no longer an option. Credit availability at commercial banks has tightened, although we have seen delinquencies rise only slightly. I am sure Dr. Kauffman will talk about this. With interest rates still low and farmland values declining relatively slowly, farm debt presents a lower risk to the sector than it did in the 1980s. Currently, data suggests interest payments on current debt relative to net farm income is about 20 percent, whereas in 1985 it exceeded 60 percent.

Farm programs will continue to provide assistance to producers. For example, USDA's farm loan demand increased markedly last year, reaching record high obligations of $6.3 billion, including record assistance to beginning and historically under-served farmers and ranchers. Demand for USDA loans continues to match last year's pace.

Combined payments under the Agriculture Risk Coverage and Price Loss Coverage programs are projected to increase in calendar year 2017, before tapering off in 2018 and 2019. Participation in the crop insurance programs remains high with nearly 90 percent of major crops covered, and steady growth in specialty crop participation. Liabilities are likely to grow and remain above $100 billion.

In the near-term, global economic growth is projected to remain slow, and consequently, it is likely the dollar will remain strong. In addition, another year of record global crop production has added to large global stocks. While we expect global demand to grow, stocks relative to use are likely to remain high, compared to recent history, which will continue to put pressure commodity prices.

Export values though are expected to grow into 2017, and over the next 10 years. Currently, we project in 2017 a 3.3 increase in overall values in 2016, a total of $134 billion.

To sum up, our long-run expectations for global agriculture reflect an assumption of steady world economic growth and continued growth in global demand. These are factors that combine to support longer run increases in consumption, trade, and prices over the long-run. We still see land values remaining relatively high. Interest rates and energy prices remain relatively low. The severe drought in California, and more recently in the Southeast, appear to be significantly diminished, and our expectations of the new crop year, farm programs, and impacts in the farm economy discussed today, as I note, were developed in large part several months ago. We are updating our assumptions. We will be publishing our new estimates and our first balance sheets for the 2017/18 crop year at the forum in a week.

Mr. Chairman, to conclude, I want to take a moment to thank you again for agreeing to participate at the forum next week.

That concludes my opening statement, and I am happy to answer questions right now, or for the record.

[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 macroeconomic factors, such as economic growth both here and abroad and resulting currency adjustments. Those factors continue to be important in 2017, as global economic growth continues to be slow, and the dollar remains relatively strong. In addition, another year of record crop production has maintained large global stocks, but helped meet growing global demand as prices moderated. While we expect global demand to grow, stocks relative to use are likely to remain relatively high compared to recent history, keeping pressure on commodity prices. As a result, financial pressures on some producers will continue to grow this year as operating costs of production have not fallen as far or as quickly.

But there are some bright spots heading into 2017 as well. Some commodities, including cotton, dairy, and soybeans, are projected to see better returns in 2017. Interest rates and energy prices remain historically low. The severe drought in California and the Pacific Northwest appears to be significantly diminished, providing producers in California, Oregon, and Washington with much more predictable irrigation supplies and improved soil moisture. For U.S. agriculture as a whole, U.S. Department of Agriculture (USDA) forecasts that net cash income will rise slightly in 2017 and that median farm household income is likely to rise. Trade volume and value in 2017 are expected to rise—exports are projected up 3.3 percent in overall value and 6.5 percent in bulk volume, with volumes of bulk commodities more than offsetting declines in their unit prices.

However, many producers face difficulties with continued low commodity prices. Some producers may be able to rely on capital reserves, but for many, particularly those new to farming, that option may not be available. USDA Farm Service Agency (FSA) loan demand increased markedly last year, reaching record high obligations of $6.3 billion, including record assistance to beginning and historically underserved farmers and ranchers. Demand for USDA loans continues to match last year's pace. However, as credit becomes tighter and producers cut back on costs, the number of new operating loans originating from commercial banks has begun to level off and even decline, although debt continues to increase in the first quarter of 2017 due to a slower rate of repayment. Interest rates, while low, are beginning to increase and credit availability is beginning to tighten.

Farm programs continue to operate as designed. While the recent Economic Research Service (ERS) farm income forecast expects combined payments under Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) to increase in 2017, not all producers have experienced the same level of support. ERS projects total direct government payments to decline by four percent in 2017. With off-farm income expected to increase, however, median farm household income is forecast to rise by three percent for all farms, to $79,733.

Today, I will direct my comments toward the current farm income situation, the outlook for prices and production in 2017, and the competitive trading environment that faces U.S. producers.

Farm income remains flat, while credit tightens.

The USDA's ERS released its first farm income forecast for 2017 earlier this month. Reversing the direction of the last 2 years, we expect to see net cash income rising slightly from 2016. Net farm income, a broader measure that includes the value and costs of items like home consumption of farm goods, unsold inventory, depreciation, and rent and expenses related to a farmer's dwelling, is forecast to fall, but the change remains in the single digits and is far less than the 25 percent decline of 3 years ago. We also know that projections made in February are likely to change as the year progresses and production and prices adjust to changing conditions. A year ago, the USDA forecast for net farm income in 2016 would be $54.8 billion; last week's estimate put it just over $68.3 billion—higher by almost 25 percent due in large part to lower than expected production expenses.

The aggregate debt-to-asset ratio continues to rise, up from 12 percent in 2015 to 13 percent in 2016 and 14 percent in 2017 (see *Figure 1*), but those levels remain low by historical standards (well below the 1985 peak of 22 percent). The continuing strength of farmland values underlies that low debt-to-asset ratio. Assets buoyed by strong land values would have to drop by almost 50 percent to boost debt-to-asset ratios to levels seen in the 1980s. That said, we have seen land values and cash rents decline last year, and evidence suggests that it will fall again in 2017. Recent data from the Federal Reserve Bank of Kansas City, noted a six percent fourth quarter, year-over-year decline in 10th District agricultural land values. In addition, debt-to-asset ratios vary among farm businesses by commodity specialization with close to 20 percent or more of farm businesses specializing in wheat, cotton, poultry, and hogs showing debt-to-asset ratios above 40 percent (see *Figure 2*). It is those producers that will be most vulnerable to a further downturn.

As mentioned, the latest Federal Reserve report indicates that the value of new farm loans was down in the fourth quarter of 2016. Some of that decline is a result of tighter lending in the face of continuing low commodity prices and some the effect of lower demand from reduced expenditures on machinery and other expenses that can be delayed. But another reason appears to be input costs, as prices for seeds, fertilizer, feeder cattle, and cash rents all declined as producers continued to seek cost savings. Delinquencies rose only slightly last quarter (0.6 percent) and remain modest by historical standards and below levels seen in much of the last decade (see *Figure 3*).

Looking at USDA's loan portfolio, demand for Farm Service Agency farm loans in Fiscal Year (FY) 2017 has remained steady, with no sign yet of increasing over last year's record levels and no sign of deterioration in the performance of outstanding loans—delinquencies have risen less than one percent. With interest rates still low and farmland values declining relatively slowly, farm debt presents a lower risk to the sector than in the 1980s. Current data suggests interest payments on current debt relative to net farm income is about 20 percent; whereas in 1985 it exceeded 60 percent (see *Figure 4*).

Farm budgets remain tight, however, with commodity prices expected to remain flat going into 2017 and beyond. We expect farm bill programs to continue to help farmers facing relatively low farm income. ARC, the largest program, began making payments for crop year 2015 in October and to date those payments have totaled $5.9 billion, with the largest shares going to corn, soybeans, and wheat base. PLC payments for crop year 2015, which also began going out in October, have totaled $1.9 billion to date, with the largest shares going to rice, peanuts, and wheat base. Recent ERS and Congressional Budget Office (CBO) projections estimate payments for crop year 2016, which will be made beginning in October of this year, may be around $5 billion for ARC and $3.5 billion for PLC. CBO projects steady declines in ARC and PLC program payments for the final 2 years of the 2014 Farm Bill, since projected prices will remain close to present levels for many commodities, reducing ARC program guarantees.

Dairy producers enrolled production largely at the minimum catastrophic coverage level under the new Margin Protection Program for dairy (MPP-Dairy). While producers received $11 million in payments during 2016, premiums received from producers totaled over $20 million. Estimates for 2017 are for minimal or no MPP-Dairy payments given moderating feed costs and improving milk prices. Cotton producers have the option of purchasing supplemental crop insurance coverage through the Stacked Income Protection Plan (STAX), but producers have not made much use of the program. Only 29 percent of cotton acres insured in 2015 and 27 percent of cotton acres insured in 2017 carried STAX policies. To assist cotton producers to expand and maintain the domestic marketing of cotton, just under $330 million was paid in 2016 through the one-time only Cotton Ginning Cost Share program. This program provided cotton producers with cost-share payments for their cotton ginning based on their share of 2015 cotton plantings. In addition, producers with former cotton base acres, now generic acres, are eligible to receive ARC or PLC payments on that base if they plant covered commodities. ARC and PLC payments on generic base acres for crop year 2015, which began going out in October with other ARC and PLC payments, totaled $444 million to date. In addition, many producers have the ability to choose crop insurance to manage risk for their crop, to help offset any unforeseen losses. ERS estimates that producers receive $3.5 billion in net insurance indemnities in 2017. Overall, ERS forecasts government payments, which include conservation payments of about $3.3 billion, to fall only slightly in 2017, to $12.5 billion from $13 billion in 2016.

Due in part to low commodity prices, demand for enrolling acreage in the Conservation Reserve Program (CRP) exceeds the acres available. The 2014 Farm Bill capped CRP at 24 million acres for the remainder of the farm bill. At the end of December 2016, CRP enrollment stood at 23.5 million acres, with just 2.5 million acres set to expire at the end of this fiscal year.

Outlook for prices remain mostly flat, with mixed production response.

The backdrop to the 2017 outlook is similar to the last 2 years with general softening commodity prices, with narrowing producer margins, and a flat farm income picture. The context for that backdrop begins with rapid increases in agricultural commodity prices from 2008 to 2012 that boosted farm incomes. Producers in the United States and other countries responded to those price signals by increasing plantings and production. Roughly a decade later, stock levels for many commodities are up globally as a result of 4 years of record or near record production. World consumption has also grown, but increased production has outpaced it. Stocks meas-

ured by days of use have expanded for wheat in particular and remain high for corn, soybeans, and cotton.

Given favorable global harvests and ample stocks, we expect crop prices to remain mostly flat into 2017/18 (see *Figure 5*). Historically, changes in prices have provided a signal of where area is likely to head in the coming year. Last year's planting time price rally, combined with open planting weather that reduced prevent planted area, boosted the eight-crop area planted. Conversely, prevent planted area was above average in 2015, which contributed to the appearance of rising acreage in 2016. For 2017, expectations are for a return to a larger prevent planted area more in line with historical averages and planting weather. With a flat price signal, what do producers plant in the new crop year? Has responsiveness changed, with land improvements, reduced production costs, and other factors that keep land in production? With a decline in winter wheat seedings, will that land be allocated to other crops or go fallow? Or are we seeing a slower response to price signals?

We would expect to see some response to the tepid price signals. Based on our recent long run baseline, U.S. planted area for the eight major crops is expected to decline in 2017, falling to 248.9 million as narrowing crop production margins push some acres out of production and we return to a more normal prevented planting acreage. Even as total acres fall, prospects for better returns in some crops, notably cotton and soybeans, are expected to cause reallocation of acres to these crops and their area is expected to increase year-over-year.

For 2017/18, total corn supply in the United States is projected to be the second largest on record at 16.5 billion bushels. The largest corn beginning stocks since 1988/89 will dampen the production impact of a projected decline in corn planted area in 2017, as relative returns are expected to favor increased soybean plantings. The national corn yield is projected at a weather-adjusted trend of 170.8 bushels per acre, down from the record in 2016/17. Domestic use is forecast to decline with lower feed and residual use, largely reflecting a smaller crop, and is only partially offset by moderate growth in corn used to produce ethanol. Exports are projected to fall with strong competition from Argentina and Brazil. The season-average farm price received by producers is expected to decline 10¢ from 2016/17 to $3.30 per bushel. Stocks relative to use are expected to decline marginally in 2017/18, but are forecast to be well above the tight levels seen during 2010 to 2013 and will continue to moderate prices.

For wheat, four consecutive record world crops have pulled prices down from their highs of 2012. A record-smashing U.S. yield for the 2016/17 crop (up nearly 12 percent from the previous record) and ample global production has further dampened the season-average farm price, which is projected to be the lowest since 2005/06. In response to the low prices, farmers have cut acreage sharply for the past 2 years. The 2017 winter wheat planted area is projected to be the lowest in more than a century.

A sharp increase in rice production in 2016/17 has sent U.S. ending stocks to the highest levels since the 1980s, with prices falling 36 percent from 2013 to 2016. Global stocks are also up and projected to be the highest since 2001/02. The 2016/17 rice season average farm price is at the lowest level since 2006/07. In response to those low prices, U.S. farmers are projected to sharply reduce their rice planted area. In turn, we expect a modest recovery in season-average prices for 2017/18 to $10.70 per hundredweight.

Lower feed costs provide economic incentives for expansion in the livestock sector.

Turning to the livestock, dairy, and poultry sectors, we project that total meat and poultry production will be at a record high of 100.6 billion pounds in 2017, as production of beef, pork, broilers, and turkeys all increase. Milk production is also projected to be at a record 217.4 billion pounds in 2017. Those increases top the record production levels set just last year. Although prices for livestock, poultry, and milk declined in the last 2 years from record highs in 2014, lower feed costs and, in the case of beef and dairy, improved forage supplies, provided the impetus for continued expansion of flocks and herds. In the case of hogs and turkey, further support for growth reflects recovery from disease outbreaks, which affected hog production in 2014 and turkey production in 2015.

As a result of increased production in 2017, prices for cattle and hogs are expected to fall from 2016, but current strong demand has tempered those price declines (see *Figure 6*). Milk prices are projected to rise along with supplies, as use expands more rapidly. Fed steer prices are forecast to decline to $112.00 per hundredweight, down $8.86 from the prior year as increased cattle supplies move through feedlots, with price declines limited by strong demand. Hog prices are expected to fall to $43.50 per hundredweight, down $2.66 from 2016 but supported by solid demand while

supplies are expected to expand. Broiler prices are expected to average 84.8¢ per pound, up fractionally from 2016. With increased production but stronger exports, 2017 milk prices, as measured by the all milk price, are expected to gain $1.81 per hundredweight to $18.05, a strong rebound from the prior year.

The Global Trade Environment

The year 2016 showed some improvement in the global economy and trade environment, and this improvement is expected to continue in 2017. USDA's 10 year baseline used assumptions that showed world GDP growth rising slowly and to plateau at three percent. A key component of the global slowdown is slowing economic growth in China. Baseline projections also assumed China's GDP growth of 6.2 percent in 2017, 5.9 percent in 2018, and gradually edging down towards 5.5 percent. The latest IMF projections now show Chinese growth improving slightly with growth at 6.5 percent and 6.0 percent in 2017 and 2018, respectively.

While that growth is still relatively high, China's adjustment to a more consumer-oriented economy implies less rapid growth. Steady growth is expected in India, as well as the rest of South and Southeast Asia, despite medium-term concerns about debt levels, inflation, and slowing demand from China. The Latin American region remains in recession, largely due to conditions in Venezuela and Brazil. Recent reforms in Argentina have improved its outlook in 2017 and policy shifts there are supportive of increased agricultural production and trade.

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 2.3 percent in 2017, compared to 1.8 percent in 2016, and then gradually move to a longer term growth rate of 2.1 percent. Canada's economic growth rates are forecast to improve in 2017, while Mexico's near term outlook has become less certain. Over the longer run, the USDA baseline projections assume Mexico's GDP growth rate at 2.9 percent.

Driven by the relative strength and safety of the U.S. economy, the real value of the dollar continued to increase in 2016 relative to competitor and customer currencies, and that growth is expected to continue through 2017 constraining growth in U.S. agricultural exports somewhat in 2017 and into 2018. Since 2013, the real agricultural trade weighted exchange rate has risen 14.9 percent. In 2017, it is projected to rise by another 1.6 percent. A stronger dollar poses challenges, making it more difficult to sell products to countries with weaker currencies, such as Egypt and Nigeria (major wheat importers), while making 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.

Expanding export opportunities for U.S. farm products is critical for the agricultural economy. U.S. agricultural exports account for about 20 percent of the value of U.S. agricultural production, nearly doubling since 1990. For some commodities, exports account for a significant share of production—around 50 percent for soybeans, wheat, and rice; 75 percent for cotton, and nearly 90 percent for almonds. Trade is not only important to U.S. farm incomes, but to the broader U.S. economy. USDA estimates that each dollar of U.S. farm exports produces an additional $1.27 in economic activity, and every billion dollars in agricultural sales overseas supports about 8,000 American jobs.

The United States is projected to remain competitive in global agricultural markets and to grow export values over the next 10 years. U.S. agricultural exports were most recently forecast at $134 billion for FY 2017. That is up 3.3 percent from last year, pushed up by larger volumes even as unit value declines for many bulk commodities. The top three customers of U.S. agricultural products remain China, Canada, and Mexico, which account for 46% of U.S. agricultural exports (see *Figure 7*).

The FY 2017 forecast for grain and feed exports is flat at $29.6 billion from FY 2016, with greater volumes, on larger supplies, offsetting a decline in unit values in aggregate. Oilseed and product exports are forecast at $31.0 billion, up from $29.5 billion the prior year as soybean export volumes continue to set records, with soybean unit values fractionally higher than last year. Cotton exports are forecast at $4.4 billion up a sizable $950 million on a boost in U.S. export volumes.

Rice exports are forecast at $1.7 billion, $200 million below last year even as volumes rise as global rice prices soften. Livestock products are up $60 million from last year, to $16.5 billion, with lower prices largely offsetting an increase in volumes, while dairy products increase $720 million due to increasing global prices and expanding U.S. exports. Sales of horticultural products, driven by tree nut exports, are up by $1.0 billion.

We expect exports of corn and corn substitutes to China will be limited in the near future as China's domestic agricultural policies attempt to reduce currently high stock levels. Conversely, for Brazil, we expect its producers to continue to ex-

pand production through a combination of yield increases and area expansion, including double cropping, over the next 10 years. That will translate into increased Brazilian exports and greater competition for the United States (see *Figure 8*).

For FY 2017, agricultural imports are forecast to fall $0.6 billion to $112.5 billion with horticultural products, including fresh and processed fruits and vegetables representing $53.3 billion of that total and sugar and tropical products representing another $22.8 billion. That implies the agricultural trade surplus will grow to $21.5 billion in 2017 up 30 percent from 2016.

A large portion of international trade in basic agricultural commodities is driven by increasing meat consumption and feed demand resulting from the production of livestock. Global meat consumption is expected to continue to grow over the next 10 years. Meat consumption is projected to grow through 2026/27 at an annual rate of 2.6 percent for Sub-Saharan Africa, 2.3 percent for North Africa, 2.2 percent for Southeast Asia, and 2.1 percent for the Middle East. By 2026/27, those four regions combined are expected to boost meat consumption by 8 million tons, which is 20.3 percent of the global growth in meat demand. Meat imports by these four regions increase by 2.7 million tons, accounting for about 34.0 percent of their increased meat consumption. The rest comes from increased domestic production. These four regions account for almost 52.0 percent of increased global meat imports through 2026/27.

Poultry trade expands the most among livestock products. Poultry exports by the major poultry exporting countries increase by almost 24 percent, reaching more than 14.0 million metric tons by 2026/27 and adding nearly 3.0 million metric tons over the projection period. Beef exports by the major beef-exporting countries expand by 18 percent, reaching almost 11.0 million metric tons and adding 1.7 million metric tons to trade by 2026. Major pork exporters expand trade by 11 percent, reaching more than 9 million metric tons by 2026.

Corn is one of the key agricultural commodities used to feed livestock. Some countries are not well suited to grow corn or are unable to expand corn production to meet increasing domestic demand for feed. The regions with the fastest growth in corn imports include Sub-Saharan Africa, North Africa, and the Middle East, with annual growth rates of 4.3 percent, 3.0 percent, and 2.5 percent, respectively in the near term. Over the next 10 years, corn imports for those three regions are forecast to account for nearly half of the world's increase in corn imports. Southeast Asia's corn imports are increasing due to its fast growing meat sectors, mostly poultry and pork. Over the next 10 years, Southeast Asia's annual corn demand increases by 3.8 million tons, accounting for 15 percent of increased world trade. South America is also expanding meat production, leading to increased corn imports of 2.9 million tons by 2026/27. Together the four regions discussed—Africa, Middle East, South East Asia, and South America—account for almost ¾ of the world's increase in corn imports over the next 10 years.

Global soybean trade is projected to increase by 25 percent during the projection period, adding 36 million metric tons and reaching almost 180 million metric tons by 2026/27. China's soybean imports account for 85 percent of this projected increase. While production is expected to increase in both South America, specifically Argentina and Brazil, and also in the United States, U.S. production growth will not result in large growth in trade but will be needed to satisfy domestic grown in meal demand. As a consequence, much of the assumed growth in global trade, and to China in particular, will be met by growth in area and yields in South America, pushing the U.S. share of trade down over the coming decade.

Summary

Our long-run expectations for global agriculture reflect an assumption of steady world economic growth and continued global demand for biofuel feedstocks, factors that combine to support longer run increases in consumption, trade, and prices of agricultural products. However, over the next several years, the agricultural sector will continue to adjust to lower prices for most farm commodities both in the U.S. and abroad. Although reduced energy prices have decreased energy-related agricultural production costs, lower crop prices are expected to result in declines in planted acreage. We have seen that in the U.S. most recently in the decline in winter wheat area of 3.8 million acres, the lowest since 1908.

In addition, many of the cost-saving farm strategies we have observed over the past few years will likely continue, such as reduced purchases of machinery and more aggressive restructuring of debt and rental agreements. We would still expect to see demand for operating loans to rise accompanied by tightening availability, which should start to put upward pressure on interest rates. Currently, interest rates on loans remain very low, so that new debt is still not expected to result in a significant increase in operating costs for most producers. We would expect land

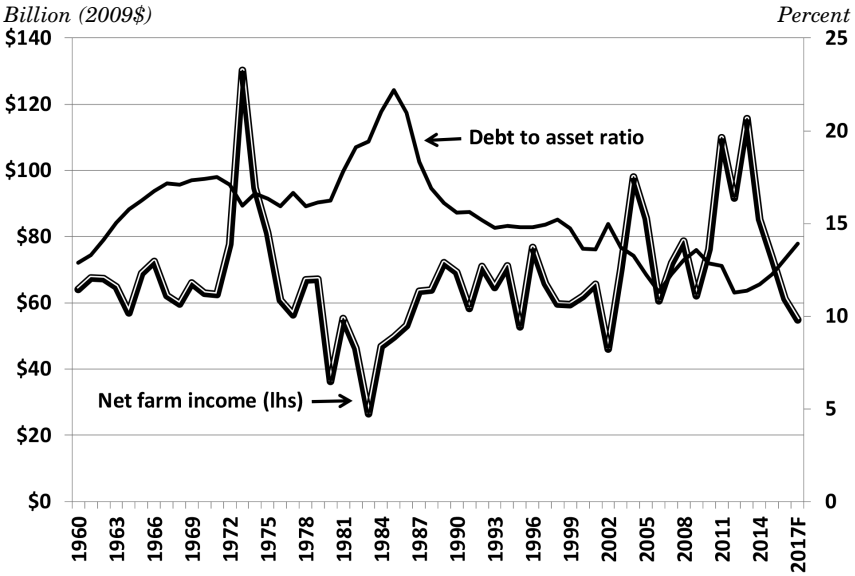
value and cash rent levels to realign to the lower price environment. Payments under the ARC program are expected to decrease in FY 2018 and FY 2019 (for crop years 2016 and 2017) after peaking in FY 2017 (for crop year 2015), since projected prices will remain close to present levels for many commodities, reducing ARC guarantees. The MPP-Dairy program is not expected to provide significant outlays in 2017 due to rising milk prices and continuing low feed costs. In addition, demand to enroll acreage in the CRP is expected to remain strong in 2017 and far exceed the available acres. Crop insurance net indemnities were negative in 2016, but would be expected to increase in 2017 with more normal weather patterns.

USDA's expectations of the new crop year, farm programs, and impacts on the farm economy this year and through the 10 year baseline period were developed in December of 2016. We are updating many of our assumptions, and will be publishing our first balance sheets and updating our trade outlook for the 2017/18 crop year prior to the USDA Agricultural Outlook Forum in just over a week.

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

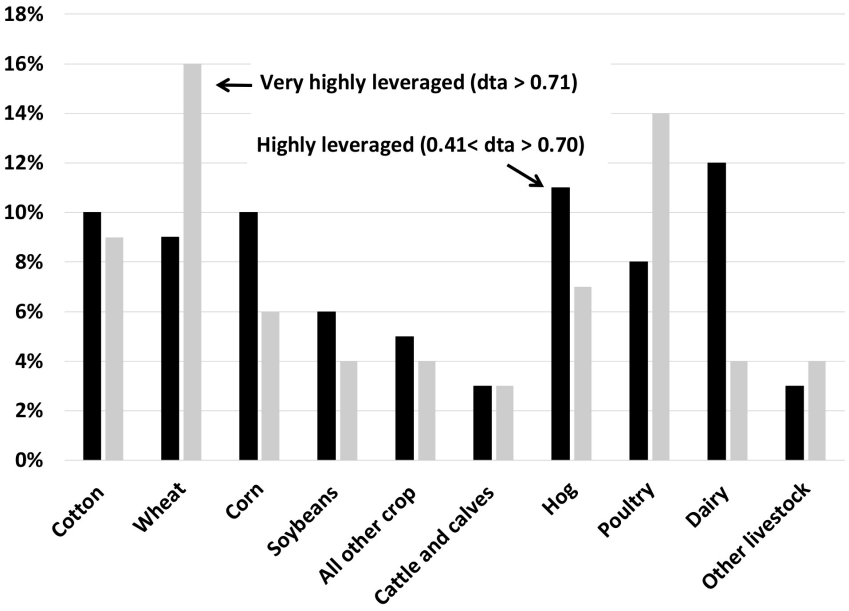
FIGURES

Figure 1. **Debt-to-Asset Ratio Rising As Net Farm Income Falls, But Remains Historically Low**



Data: USDA–ERS.

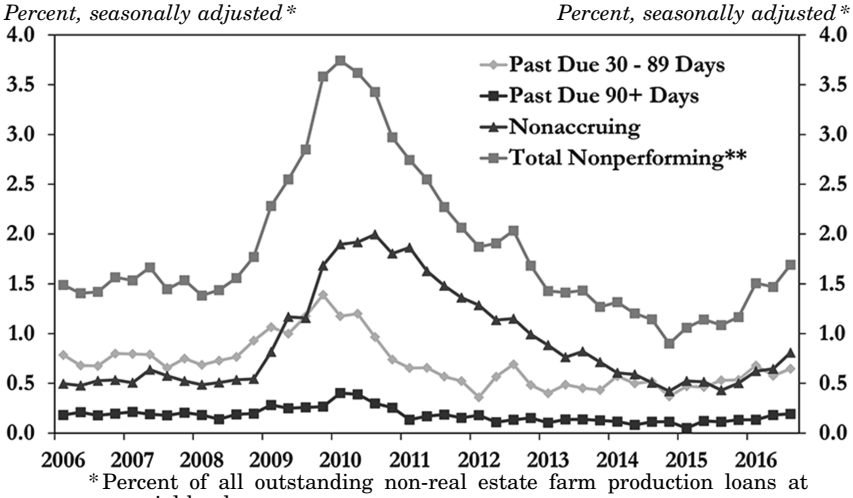
Figure 2. **Financial Stress Varies By Commodity Specialization**



Data: USDA–ERS (November 2016).

Figure 3. **Delinquency Rates on Farm Loans Up Slightly**

Chart 9: *Past Due and Nonaccruing Farm Loans*



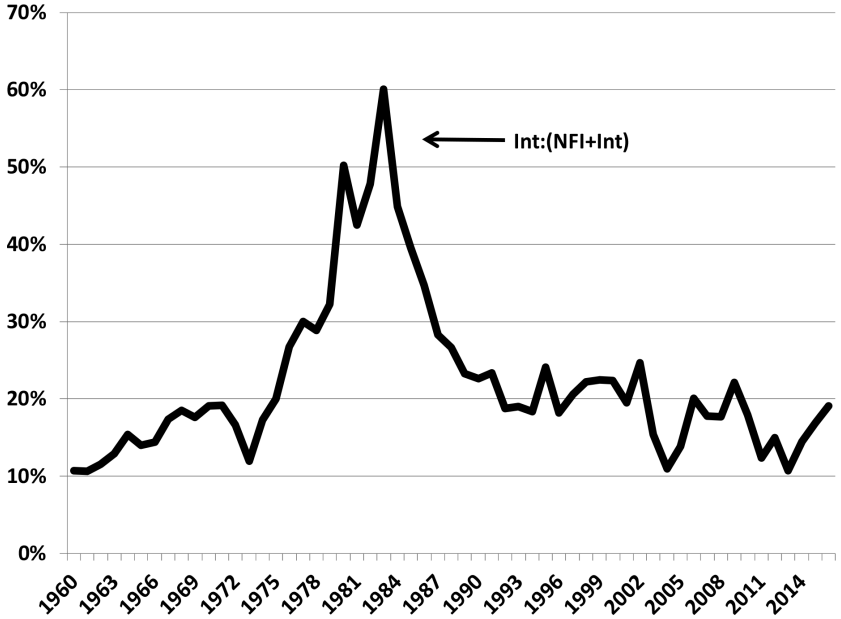
*Percent of all outstanding non-real estate farm production loans at commercial banks.

**Total non-performing loans includes the share of all past due, nonaccruing and net charge-off loans.

Source: *Agricultural Finance Book,* Table B.2.

Source: Kauffman, N. and M. Clark (2016) "Volume of New Ag Loans Drops," *Federal Reserve Bank of Kansas City Quarterly Report* (January 20; available online at: *https://www.kansascityfed.org/research/indicators data/agfinancedatabook/articles/2017/01-20-2017/ag-finance-dbk-01-20-2017*).

Figure 4. **Interest Payments Remain Modest Relative to Income**



Data: USDA–ERS.

Figure 5. **Corn, Cotton, and Soybean Prices Soften, But Wheat and Rice To Turn Up**

Item	2012	2013	2014	2015	2016F	2017 *	%?
Wheat ($/ bu)	7.77	6.87	5.99	4.89	3.85	4.00	3.9
Corn ($/bu)	6.89	4.46	3.70	3.61	3.40	3.30	−2.9
Soybeans ($/bu)	14.40	13.00	10.10	8.95	9.50	9.35	−1.6
Cotton (¢/lb)	72.50	77.90	61.30	61.20	69.00	64.00	−7.2
All Rice ($/cwt)	15.10	16.30	13.40	12.10	10.50	10.70	1.9

Source: USDA–OCE *World Agricultural Supply and Demand Estimates,* February 9, 2017.
* USDA–OCE, USDA Agricultural Projections to 2026.
Highlight denotes record high.

Figure 6. **Cattle and Hog Prices To Come Down, Broiler Prices Up Slightly in 2017**

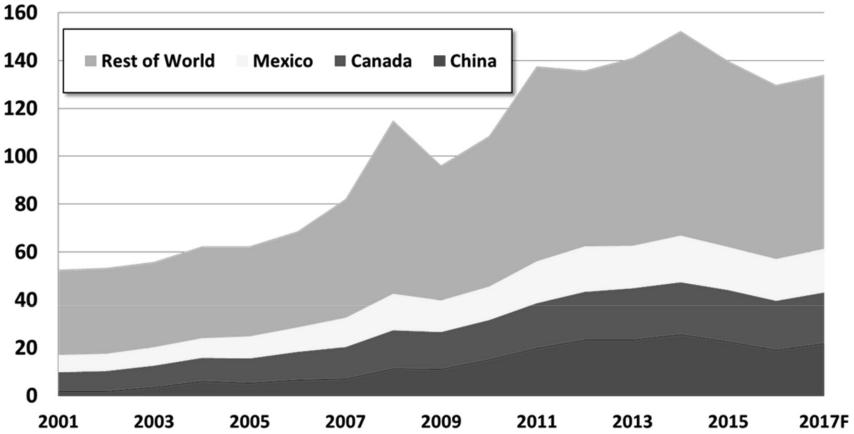
(Dollars per cwt)

Item	2012	2013	2014	2015	2016	2017F	%Δ
Steers	122.9	125.9	154.6	148.1	120.9	112.0	−7.4
Hogs	60.9	64.1	76.0	50.2	46.2	43.5	−5.8
Broilers	86.6	99.7	104.9	90.5	84.3	84.8	0.6
Milk	18.5	20.1	24.0	17.1	16.2	18.5	14.2

Source: USDA–OCE *World Agricultural Supply and Demand Estimates,* February 9, 2017.
* USDA–OCE, USDA Agricultural Projections to 2026.
Highlight denotes record high.

Figure 7. **U.S. Agricultural Exports Dominated By China, Canada, and Mexico**

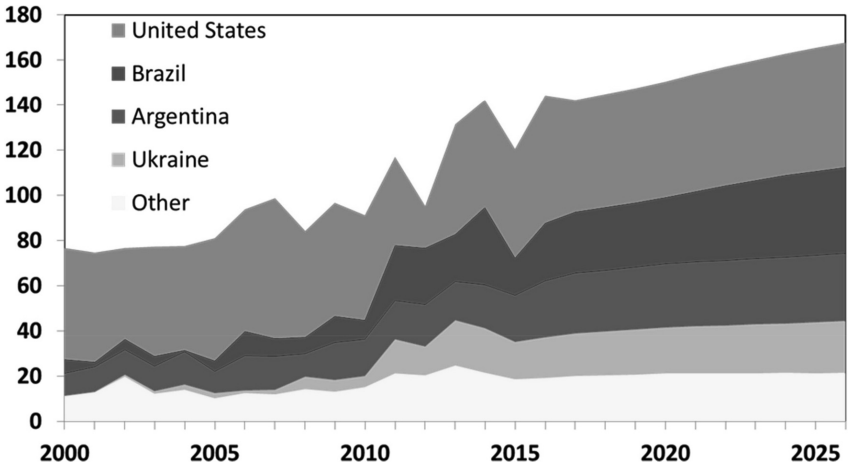
$Billion



Source: USDA. Data are fiscal year.

Figure 8. **Brazil Expected To Capture Much of the Increase in Global Corn Exports**

Million Metric Tons



Source: USDA.

The CHAIRMAN. Thank you.

Dr. Kauffman, 5 minutes.

STATEMENT OF NATHAN S. KAUFFMAN, PH.D., ASSISTANT VICE PRESIDENT, ECONOMIST, AND OMAHA BRANCH EXECUTIVE, OMAHA BRANCH, FEDERAL RESERVE BANK OF KANSAS CITY, OMAHA, NE

Dr. KAUFFMAN. Thank you, Mr. Chairman, Members of the Committee. It is an honor to be here this morning, I very much appreciate the invitation.

My name is Nathan Kauffman. I am an Economist and Omaha Branch Executive with the Federal Reserve Bank of Kansas City, a regional reserve bank that has long devoted significant attention to U.S. agriculture. In my role, I lead several efforts to track the agricultural and rural economy, including a regional agricultural credit survey, and the Federal Reserve System's *Agricultural Finance Databook,* which is a national survey of agricultural lending activity at commercial banks.

Our bank remains committed to including perspectives from rural America and discussions on the national economy, and I am here to share with you this morning recent developments in the U.S. farm sector. My comments will largely focus on the current environment and agricultural credit markets and farm finances. Before I begin, let me emphasize that my statement represents my view only, and is not necessarily that of the Federal Reserve System or any of its representatives.

The outlook for the U.S. farm economy remains subdued, and financial stress has increased modestly for many producers over the past year. Following several years of historically high farm income prior to 2014, which was primarily driven by strong demand for agricultural products and high commodity prices, farm income has dropped significantly and is expected to remain low in the near future.

The low price of major agricultural commodities has remained a primary driver of the weakness in U.S. farm income, despite some reduction in farm production expenses. Put simply, the downturn in the agricultural economy appears to be continuing into a fourth consecutive year. According to our bank's quarterly survey, farm income has declined from previous year levels in every quarter since mid-2013. Surveys conducted by other regional Federal Reserve Banks have shown a similar trend of declining farm income, reduced cash flow, and weakening agricultural credit conditions.

The prolonged downturn in the U.S. agricultural economy has led to gradual but steady increases and financial stress among agricultural borrowers. Our data show that working capital has decreased modestly each of the past 3 years, and the rate at which farm loans are repaid has declined in every quarter since mid-2013.

Alongside reduced cash flow and depletion of working capital, demand for farm loans has increased, particularly for short-term operating loans. The Federal Reserve's *Agricultural Finance Databook,* included with my written testimony, shows that nearly 60 percent of new farm loans originated at commercial banks are used to finance operating expenses. Moreover, data from commercial banks and the Farm Credit System both show steady increases in outstanding farm debt in each of the past 4 years, which, to reiterate, has been a period of declining farm income.

Recent data from commercial banks suggests the pace of debt accumulation may be slowing, however, the debt-to-asset ratio in the farm sector, which is a key measure of the financial health of farm borrowers, has increased modestly in each of the past 4 years, according to USDA, and is projected to increase further in 2017.

A steady decline in farmland values has also contributed to a gradual increase in financial stress, and a higher debt-to-asset ratio. Regional Federal Reserve surveys show that the average

value of high-quality cropland has declined by 10 to 20 percent since 2013 in states with a high concentration of crop production.

Although the downturn in the farm economy has persisted, some indicators are more positive. Strong crop yields in 2016 led to stronger cash flow last year than what was initially anticipated, and cash income is projected to remain steady in 2017. Moreover, the debt-to-asset ratio of the farm sector, while rising, is still historically low, and the persistent decline in farmland values has, in fact, been quite modest thus far.

The relative strength in farmland values has likely shielded the farm economy from potentially more severe financial stress, since farmland accounts for more than 80 percent of the value of farm sector assets, and is an important source of collateral for other farm loans. The strength in land values has given agricultural lenders some opportunities to work with borrowers by restructuring loans and requesting additional collateral in response to heightened risk in their loan portfolios.

To briefly summarize, agricultural credit conditions have weakened somewhat over the past year, and financial stress in the U.S. farm sector appears to have increased modestly as commodity prices and farm income have remained low. However, a farm crisis on the scale of the 1980s still does not appear imminent, as farm loan delinquency rates remain low, and credit availability has generally remained strong. But if farm income remains persistently low, if farmland values continue to decline, and if debt continues to rise, all of which have been trends in recent years, it is possible that key indicators of financial stress, such as debt-to-asset ratios, could rise to levels similar to the 1980s over a longer time horizon.

This concludes my formal remarks, and I would be happy to take questions at the appropriate time. Thank you.

[The prepared statement of Dr. Kauffman follows:]

PREPARED STATEMENT OF NATHAN S. KAUFFMAN, PH.D., ASSISTANT VICE PRESIDENT, ECONOMIST, AND OMAHA BRANCH EXECUTIVE, OMAHA BRANCH, FEDERAL RESERVE BANK OF KANSAS CITY, OMAHA, NE

Thank you, Mr. Chairman and Members of the Committee. My name is Nathan Kauffman, and I am an Economist and Omaha Branch Executive with the Federal Reserve Bank of Kansas City, a regional Reserve Bank that has long devoted significant attention to U.S. agriculture. In my role, I lead several efforts to track the agricultural and rural economy, including a regional agricultural credit survey and the Federal Reserve System's *Agricultural Finance Databook,* a national survey of agricultural lending activity at commercial banks. Our Bank remains committed to including perspectives from rural America in discussions on the national economy, and I am here to share with you this morning recent developments in the U.S. farm sector. My comments will largely focus on the current environment in agricultural credit markets and farm finances. Before I begin, let me emphasize that my statement represents my view only and is not necessarily that of the Federal Reserve System or any of its representatives.

The outlook for the U.S. farm economy remains subdued and financial stress has increased modestly for many producers over the past year. Following several years of historically high farm income prior to 2014, which was primarily driven by strong demand for agricultural products and high commodity prices, farm income has dropped significantly and is expected to remain low in the near future. The low price of major agricultural commodities has remained a primary driver of the weakness in U.S. farm income despite some reduction in farm production expenses.

Put simply, the downturn in the agricultural economy appears to be continuing into a fourth consecutive year. According to our Bank's quarterly survey, farm income has declined from previous year levels in every quarter since mid-2013. Surveys conducted by other regional Federal Reserve Banks have shown a similar trend

of declining farm income, reduced cash flow, and weakening agricultural credit conditions.

The prolonged downturn in the U.S. agricultural economy has led to gradual but steady increases in financial stress among agricultural borrowers. Our data show that working capital has decreased modestly each of the past 3 years, and the rate at which farm loans are repaid has declined in every quarter since mid-2013.

Alongside reduced cash flow and depletion of working capital, demand for farm loans has increased, particularly for short-term operating loans. The Federal Reserve's *Agricultural Finance Databook,* included with my written testimony, shows that nearly 60 percent of new farm loans originated at commercial banks are used to finance operating expenses. Moreover, data from commercial banks and the Farm Credit System both show steady increases in outstanding farm debt in each of the past 4 years, which, to reiterate, has been a period of declining farm income. Recent data from commercial banks suggests the pace of debt accumulation may be slowing. However, the debt-to-asset ratio in the farm sector, which is a key measure of the financial health of farm borrowers, has increased modestly in each of the past 4 years according to USDA and is projected to increase further in 2017.

A steady decline in farmland values has also contributed to a gradual increase in financial stress and a higher debt-to-asset ratio. Regional Federal Reserve surveys show that the average value of high quality cropland has declined by 10 to 20 percent since 2013 in states with a high concentration of crop production.

Although the downturn in the farm economy has persisted, some indicators are more positive. Strong crop yields in 2016 led to stronger cash flow last year than what was initially anticipated, and cash income is projected to remain steady in 2017. Moreover, the debt-to-asset ratio of the farm sector, while rising, is still historically low and the persistent decline in farmland values has, in fact, been quite modest thus far.

The relative strength in farmland values has likely shielded the farm economy from potentially more severe financial stress, since farmland accounts for more than 80 percent of the value of farm sector assets and is an important source of collateral for other farm loans. The strength in land values has given agricultural lenders some opportunities to work with borrowers by restructuring loans and requesting additional collateral in response to heightened risk in their loan portfolios.

To briefly summarize, agricultural credit conditions have weakened somewhat over the past year and financial stress in the U.S. farm sector appears to have increased modestly as commodity prices and farm income have remained low. However, a farm crisis on the scale of the 1980s still does not appear imminent, as farm loan delinquency rates remain low, and credit availability has generally remained strong. But, if farm income remains persistently low, if farmland values continue to decline, and if debt continues to rise, it is possible that key indicators of financial stress, such as debt-to-asset ratios, could rise to levels similar to the 1980s over a longer time horizon.

ATTACHMENT

Federal Reserve Bank of Kansas City: Agricultural Finance Databook (January 2017)

"Volume of New Ag Loans Drops"

By Nathan Kauffman, Assistant Vice President and Omaha Branch Executive and Matt Clark, Assistant Economist.

Summary

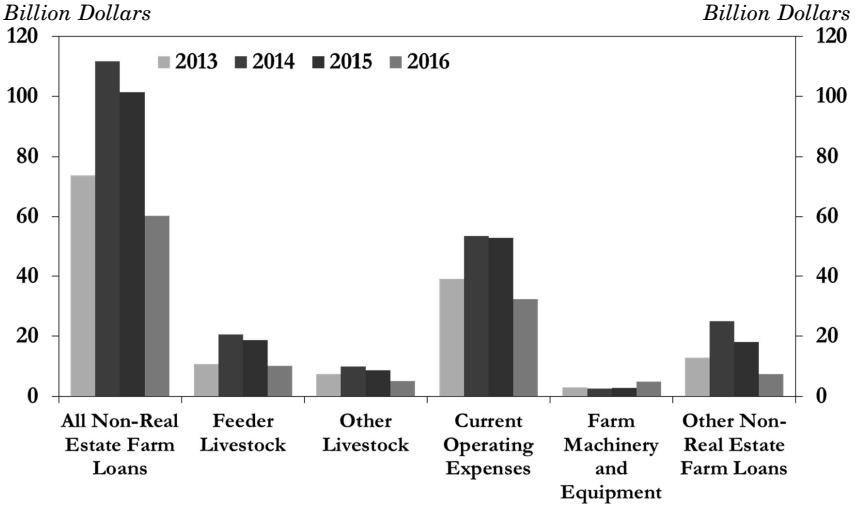
Farm lending activity at commercial banks slowed significantly in the fourth quarter as lenders and borrowers assessed economic prospects for 2017. Despite persistent increases in the level of outstanding farm debt and ongoing demand for loan renewals, new loan originations dropped sharply. Some of the reduced loan volume likely stemmed from lower costs of farm inputs. However, as the outlook for farm income generally has remained weak and farmland values have continued to decline, both lenders and borrowers may have been more apprehensive about adding new debt heading into 2017.

Section A—Fourth Quarter Survey of Terms of Bank Lending to Farmers

The volume of new farm loans dropped sharply in the fourth quarter of 2016, according to respondents to the Survey of Terms of Bank Lending to Farmers. The survey, which asks bankers about new loans to farmers, indicated the volume of non-real estate loans in the farm sector dropped 40 percent from a year ago. The 40 percent drop was the largest year-over-year decline in nearly 20 years (*Chart 1*).

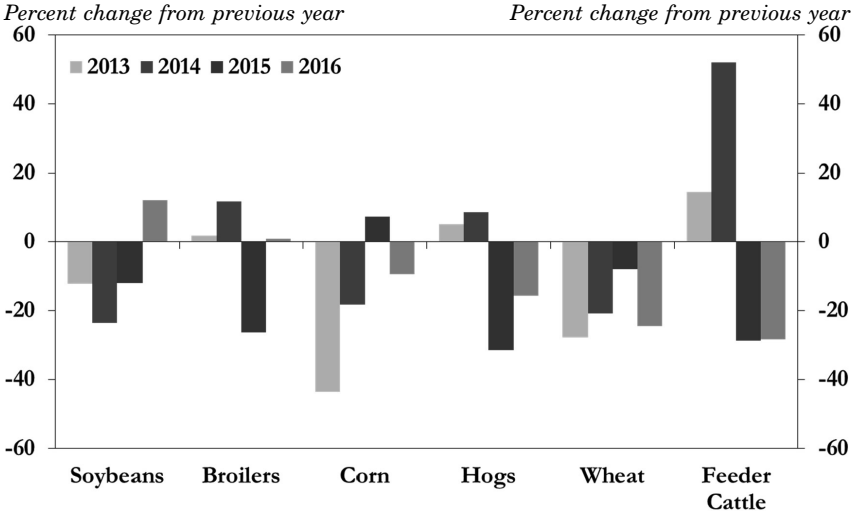
The sharp reduction in the volume of new farm loans at commercial banks occurred during a prolonged decline in farm revenue. In 2016, prices for most agricultural commodities continued to fall, building on the declines of previous years, with soybeans being a notable exception (*Chart 2*). A 30 percent year-over-year drop in the price of feeder cattle helped reduce the cost of purchasing the animals and likely contributed to the sharp reduction in loan volumes in the livestock sector. More generally, lower prices appeared to temper demand for new agricultural financing as producers tried to curtail expenditures. Some banks, recognizing greater risk in the farm sector, may have been more selective in financing new loan requests, and some financing decisions may have been delayed in the environment of heightened risk.

Chart 1: **Non-Real Estate Farm Loan Volumes by Purpose, Fourth Quarter**



Source: *Agricultural Finance Databook,* Table A.3.

Chart 2: **Agricultural Commodity Prices, Fourth Quarter**

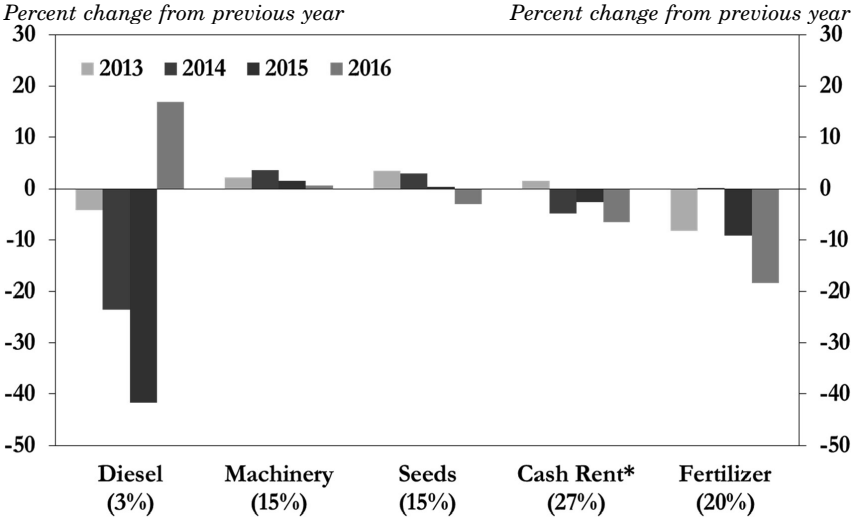


Source: Haver Analytics, *The Wall Street Journal.*

In addition to lower commodity prices, lower prices for agricultural inputs may have contributed to the drop in loan volume for items other than real estate. The cost of seeds, fertilizer and cash rents all were down from a year ago (*Chart 3*). The

decline in input costs likely was a significant factor in reducing the volume of loans used, specifically, to finance operating expenses. For example, the U.S. Department of Agriculture (USDA) estimates that the cost of cash rent, fertilizer and seed accounted for more than 60 percent of the total cost of corn production in 2016.[i] Because loans used for operating expenses comprise about 60 percent of non-real estate loan volume, the decline in input expenses likely curbed the volume of new farm loans originated in the fourth quarter as farmers prepared for the 2017 planting season (*Chart 4*).

Chart 3: **Farm Production Costs, Fourth Quarter**



*Author's estimate using data collected from Federal Reserve Banks' Agricultural Credit Survey

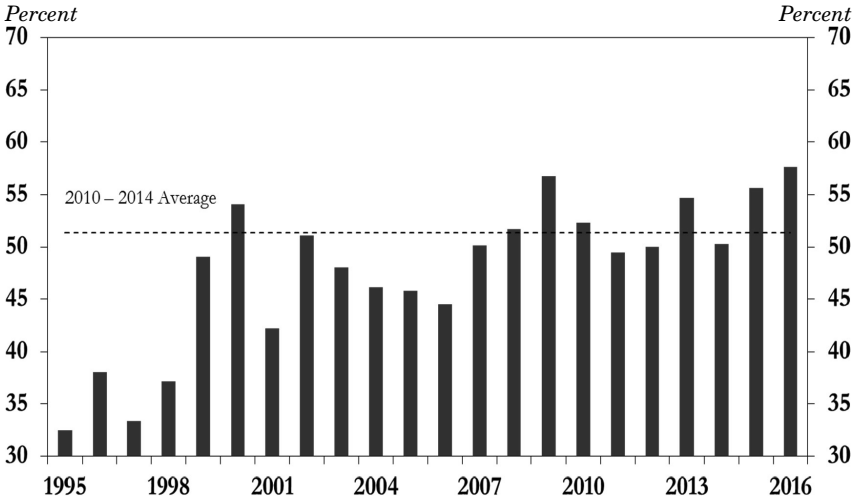
Note: The percentages below the horizontal axis represent each input's share of production costs.

Sources: USDA, Haver Analytics, EIA, Federal Reserve Bank of Kansas City, Minneapolis and St. Louis.

[[i] Data calculated from the United States Department of Agriculture - Economic Research Service, Commodity Costs and Returns division, "Cost-of-Production Forecasts" available at *https://www.ers.usda.gov/data-products/commodity-costs-and-returns/commodity-costs-and-returns/#Cost-of-Production Forecasts*.]

Editor's note: the above footnote was not included in the submitted testimony supplied by Dr. Kauffman. The reference was retrieved from the webpage version on the Federal Reserve Bank of Kansas City at: *https://www.kansascityfed.org/research/indicatorsdata/agfinancedatabook/articles/2017/01-20-2017/ag-finance-dbk-01-20-2017*

Chart 4: **Operating Expenses as a Share of Total Non-Real Estate Loan Volume**

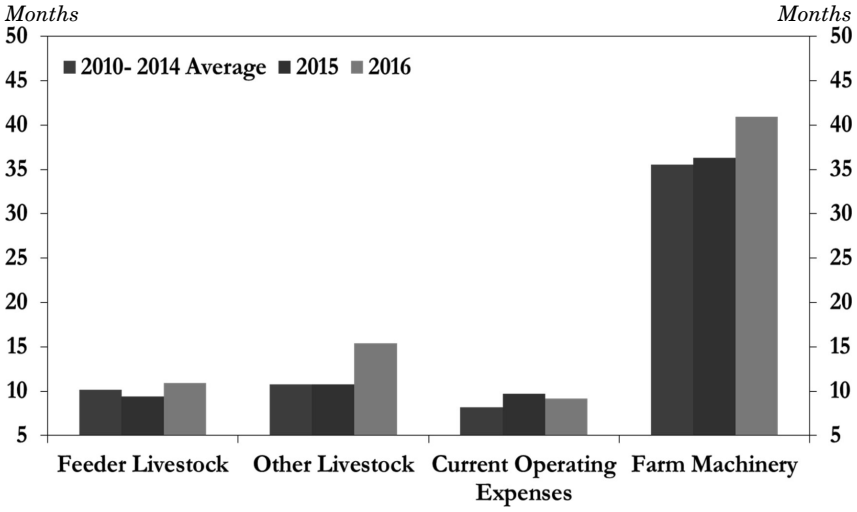


Source: *Agricultural Finance Databook,* Table A.3.

Although expenses declined, profit margins remained tight and bankers responded with further adjustments to loan terms. Bankers extended the maturities for feeder livestock, other livestock and farm machinery loans by 16, 42 and 13 percent, respectively (*Chart 5*). Longer maturities on intermediate assets may help some producers facing short-term cash flow shortages and also may help banks avoid past-due payments.

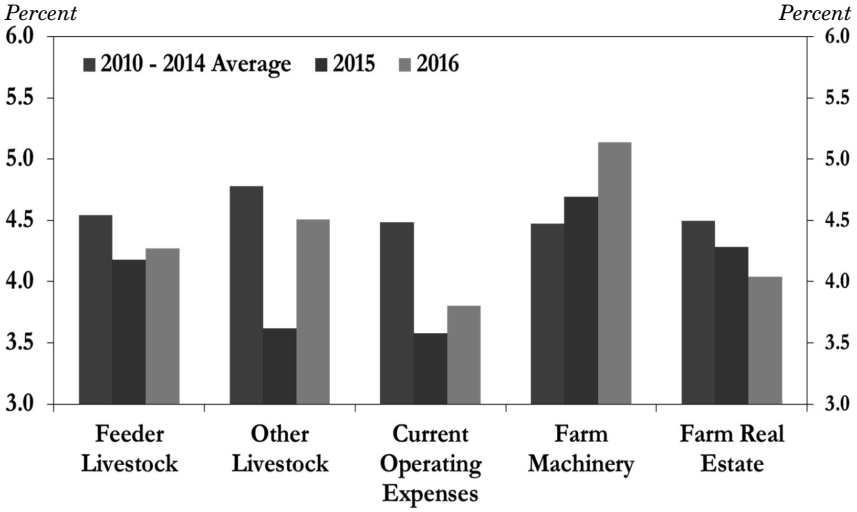
Bankers also raised interest rates in the fourth quarter on all types of non-real estate farm loans. Most notably, interest rates for other livestock and farm machinery increased 0.89 and 0.45 percentage point, respectively (*Chart 6*). Farm machinery and other livestock carry longer maturity periods and a rate increase may represent a risk-compensation measure when profit margins are tight. Because more than 85 percent of non-real estate loans carried a floating interest rate in the fourth quarter, slight increases in market interest rates may have led to slightly higher interest rates for short-term operating loans in the farm sector. Conversely, interest rates for farm real estate loans edged lower to 4.0 percent in the fourth quarter.

Chart 5: **Maturities on Non-Real Estate Farm Loans, Fourth Quarter**



Source: *Agricultural Finance Databook,* Table A.4.

Chart 6: **Interest Rates on Farm Loans, Fourth Quarter**

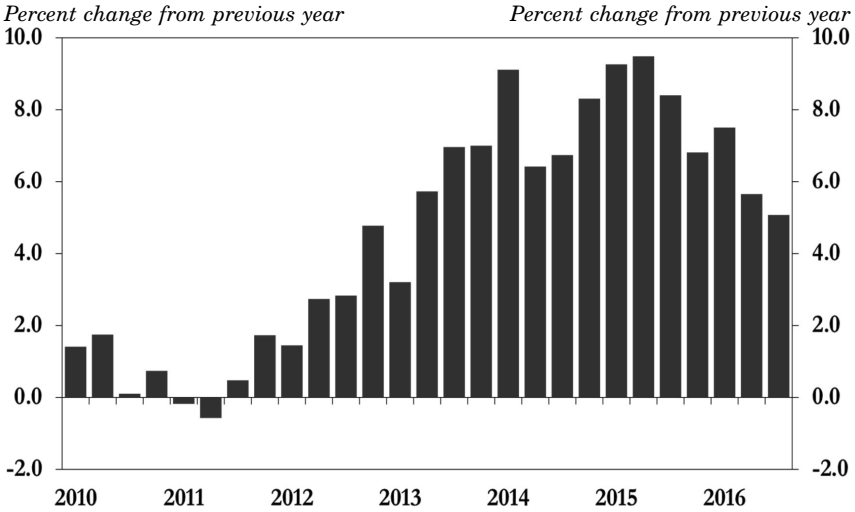


Note: Interest rates are weighted by loan volume.
Source: *Agricultural Finance Databook,* Table A.8.

Section B—Third Quarter Call Report

Despite the sharp reduction in new loan originations, outstanding farm-sector debt at commercial banks continued to rise, but at a slower pace. Call Report data indicated outstanding debt increased five percent from a year ago (*Chart 7*). Although the volume of new loans has dropped recently, a slower rate of loan repayments likely has contributed to further increases in the amount of total farm debt outstanding at commercial banks. Nevertheless, the five-percent increase in outstanding debt was the smallest in more than 3 years.

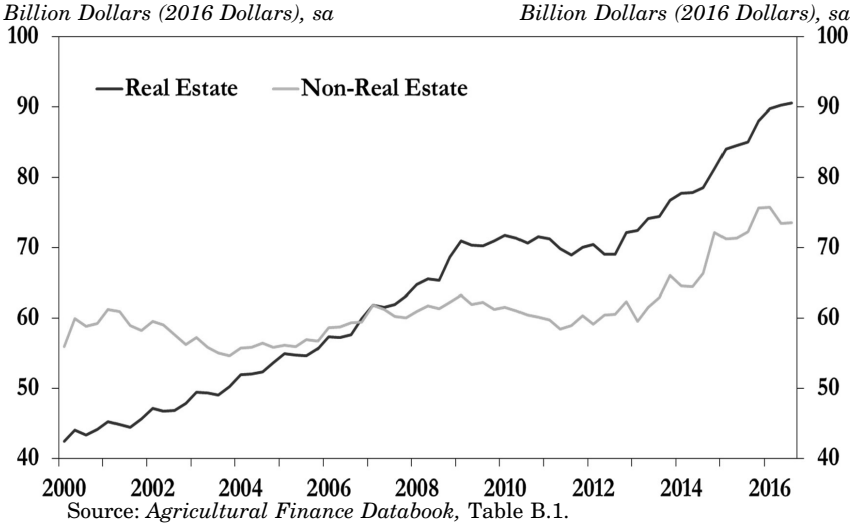
Chart 7: **Farm Debt Outstanding at Commercial Banks**



Source: *Agricultural Finance Databook,* Table B.1.

Slower growth in the level of non-real estate farm debt has reduced the overall pace of debt accumulation in the sector. For example, from the third quarter of 2012 to the third quarter of 2015, outstanding debt used to finance non-real estate farm loans grew at an average annual rate of six percent following 12 years of growth that averaged less than 0.5 percent (*Chart 8*). In the third quarter of 2016, however, non-real estate debt grew less than two percent from the previous year. Growth in farm real estate debt also slowed slightly in 2016, but has remained relatively steady since 2000.

Chart 8: **Farm Debt Outstanding at Commercial Banks**

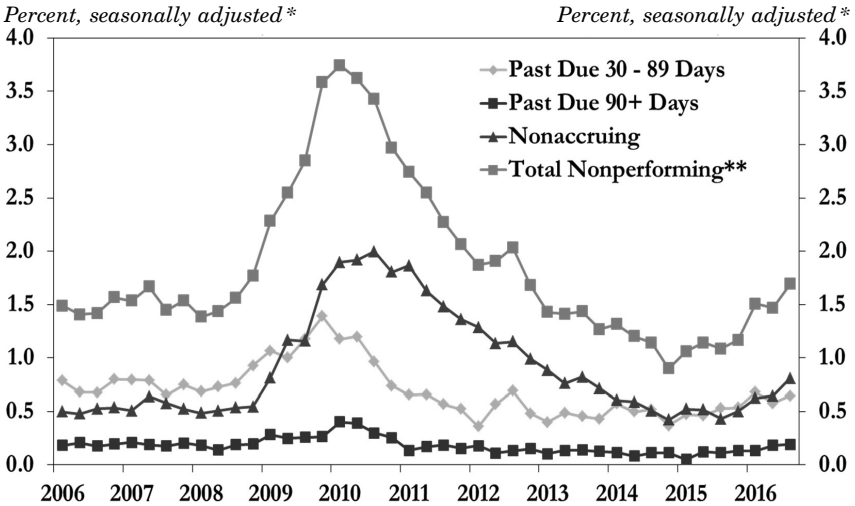


Source: *Agricultural Finance Databook,* Table B.1.

An increase in non-performing loans may also explain a portion of the slowdown in debt accumulation. In the third quarter, the share of non-performing loans increased to 1.7 percent from 1.1 percent a year earlier. Although still modest historically, the share of total non-performing loans in the third quarter was the highest since 2012, and may have caused some lenders and borrowers to moderate their use of debt to prevent further financial stress (*Chart 9*).

Despite slight increases in non-performing loans, performance of agricultural banks remained strong. Returns on assets, a typical measure of bank performance, increased to 0.91 percent, the highest third quarter rate of return since 1998 (*Chart 10*). The loan-to-deposit ratio at agricultural banks also increased to 0.81 percent, the highest since the third quarter of 2009.

Chart 9: **Past Due and Non-Accruing Farm Loans**

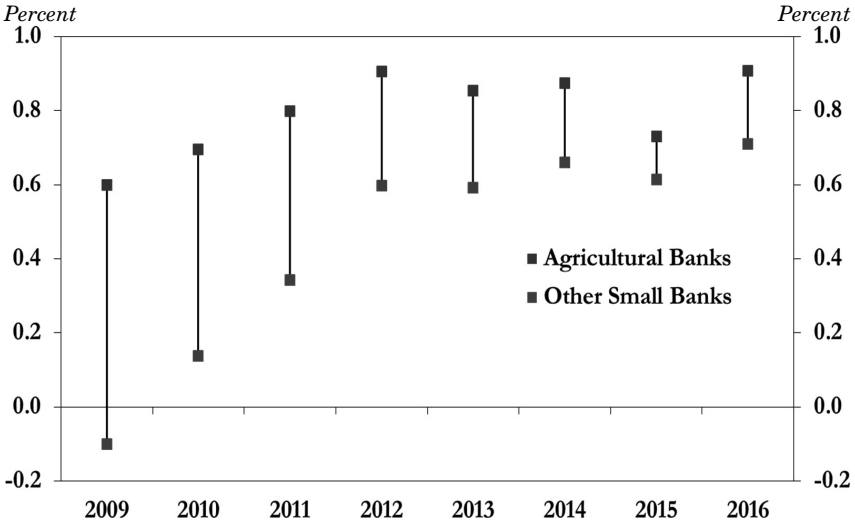


*Percent of all outstanding non-real estate farm production loans at commercial banks.

**Total non-performing loans includes the share of all past due, non-accruing and net charge-off loans.

Source: *Agricultural Finance Databook,* Table B.2.

Chart 10: **Rate of Return on Assets, Third Quarter**



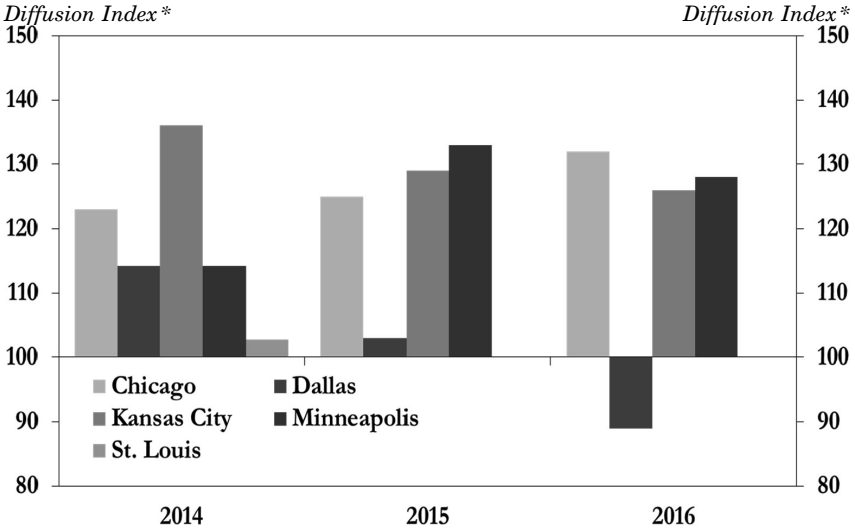
Source: *Agricultural Finance Databook,* Table B.7.

Section C—Third Quarter Regional Agricultural Data

Regional Federal Reserve surveys also showed that demand for non-real estate financing in the farm sector increased, but not as strongly as in recent years. According to the surveys, demand for non-real estate loans increased in the Chicago, Kan-

sas City and Minneapolis districts in the third quarter. However, growth was slower in Kansas City and Minneapolis than in 2015 (*Chart 11*). Additionally, demand for non-real estate financing in the third quarter declined in the Dallas district for the first time since 2013 and was unchanged in the St. Louis district for the second consecutive year.

Chart 11: **Demand for Non-Real Estate Farm Loans, Third Quarter**

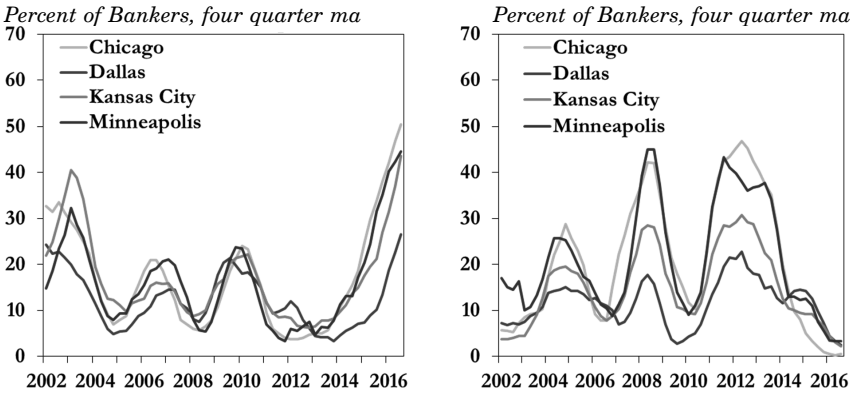


*Diffusion Index is calculated by subtracting the percentage of respondents who indicated "lower" from the percentage of respondents who indicated "higher" and adding 100.

Source: *Agricultural Finance Databook,* Table C.1.

In addition to loan demand, demand for loan renewals and extensions also has continued to rise. The share of bankers that reported an increase in loan renewals and extensions was the highest in survey history for the Chicago, Kansas City, Minneapolis and St. Louis districts and the highest since 2001 in the Dallas district (*Chart 12*). Conversely, the share of bankers that reported higher repayment rates was at, or near, historical lows for the Chicago, Dallas, Minneapolis and St. Louis districts and the lowest since 1999 in the Kansas City District. Elevated demand for loan renewals and extensions and weaker repayment rates underscored a growing sense of financial stress in the farm sector.

Chart 12: **Selected Agricultural Credit Conditions**



Source: *Agricultural Finance Databook,* Table C.1.

Prolonged financial stress in the farm sector also has continued to curb farm real estate values. In fact, farmland values in all states in the Chicago, Kansas City and Minneapolis districts have declined from their recent peaks (*Table*). Most notably, nonirrigated cropland values have dropped by 20 percent, on average, in Kansas and 19 percent in Iowa since 2013. Although, this represents an annualized rate of only 5–8 percent, persistent and gradual declines could lead to further financial stress in the farm sector in the coming years.

***Table:* Change in the Value of Nonirrigated Cropland (Peak to 2016:Q3)**

State	Peak Quarter	Percent Change from Peak
Kansas	2013:Q4	−20
Iowa	2013:Q2	−19
Minnesotta	2013:Q1	−16
South Dakota	2014:Q3	−16
Mountain States *	2016:Q2	−14
Nebraska	2013:Q3	−11
Northern Illinois	2014:Q2	−11
North Dakota	2015:Q3	−9
Northern Indiana	2013:Q4	−9
Oklahoma	2015:Q4	−4
Missouri	2013:Q3	−2
Southern Wisconsin	2015:Q1	−1
Texas	2016:Q3	(**)

* Mountain States include Colorado, northern New Mexico and Wyoming.
** No decline.
Sources: Federal Reserve Banks of Chicago, Dallas, Kansas City, Minneapolis, and St. Louis.

Conclusion

A gradual increase in the level of financial stress in the farm sector has caused agricultural lenders and borrowers to become increasingly cautious. Although declines in the cost of some key inputs have provided modest relief, profit margins have remained low and new farm loan originations dropped sharply in the fourth quarter. If profit margins remain low through 2017, the pace of new debt will be a key indicator to monitor in assessing the severity of financial stress through the year.

The CHAIRMAN. Thank you, Dr. Kauffman.

Dr. Outlaw, 5 minutes.

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

Dr. OUTLAW. Chairman Conaway, Ranking Member Peterson, and Members of the Committee, thank you for the opportunity to testify on behalf of the Agriculture and Food Policy Center at Texas A&M University.

As many of you know, our primary focus has been on analyzing the likely consequence 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. For over 30 years, we have worked with Agriculture Committees, 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. I was specifically asked to provide my perspective today about the conditions for crop agriculture.

In 1983, we began collecting information from panels of four to six farmers and ranchers that make up what we call representative farms, located in the primary production regions of the United

States, for the major agricultural commodities. The results I am going to discuss today focus on the financial condition at the end of 2016 crop year for the 64 representative crop farms located in 20 states.

Figure 1, included in my testimony, indicates each farm's location, type of farm, and the total number of acres on the farm. 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: first, their ability to cash flow; and second, their ability to maintain equity. If a farm has less than a 25 percent chance of not cash flowing or losing equity then it is coded green. Yellow farms have between a 25 and 50 percent chance, while red farms have a greater than 50 percent chance of not cash flowing and losing equity.

Figures 2 through *5,* provided in the testimony, provide maps of all the farms, along with our rating of their financial condition at the end of the 2016 crop year.

To be blunt, these results are bad, with very little hope of recovery on the horizon, given current price forecasts by FAPRI and USDA. Forty-nine of 64 farms are in moderate or poor financial condition. Specifically, 17 of 23 feedgrain farms, 9 of 11 wheat farms, 11 of 15 cotton farms, and 12 of 15 rice farms end the period in moderate or poor financial condition. The overwhelming majority of the farms end 2016 with the high likelihood of serious cash flow shortfalls. On the other hand, the probability of large equity losses are much lower across all farms.

We contact our individual representative farm members when we need their feedback on important issues. For this hearing, we specifically asked them about their financial situation now, relative to last year at this time. How has their equity position changed since 2013, which was the height of the market, and why their overall observations of the current financial environment. Below are a few generalizations I can make after reviewing all of the responses. There was only one farmer that reported making a profit on the 2016 crop. Corn farmers from North Dakota and Iowa, as well as cotton farmers from west Texas indicated the only reason they broke even in 2016 were record yields. Generally, all the rest indicated that 2016 was a loss year where they had to roll operating notes forward or draw from reserves to pay off operating loans. Most indicated their equity positions were down at least 20 percent from 2013. Land values have declined some; however, many cited a substantial decline in equipment values as a major cause of lower equity, in addition to having to borrow more. Their overall observations about the current financial environment were very discouraging, to say the least. They all indicated there is nothing else left to cut. They worry about the future of farming for younger farmers who are likely carrying more debt as they try to build their operations.

In summary, I want to offer a few points for your consideration. First, the producer safety net contained in the 2014 Farm Bill has worked as intended for all crop farms except cotton. The combination of Federal crop insurance and title I commodity programs has helped the overwhelming majority of U.S. producers stay in business through some very difficult times. While the farmers we met with all expressed concern for the future, many indicated there

wouldn't be a future without crop insurance to protect against weather problems, and the PLC and ARC programs to protect against low prices and incomes. The lone exception is cotton as their STAX program has not provided the protection producers were hoping for. Not having title I programs to protect from the sustained drop in cotton prices has caused severe financial difficulties only overcome by occasional record yields. Second, according to USDA, in the 3 years since the 2014 Farm Bill was passed, crop cash receipts have fallen $23.7 billion. During that time, title I payments to crop farmers have totaled $13.2 billion, or a little more than ½ of the estimated loss in crop receipts. In no way are commodity payments making producers whole.

And finally, it seems like nearly every month there is another report issued from interest groups who want to dismantle the producer safety net, often saying programs are too lucrative. Not only are the programs not too lucrative, but there is a growing need to provide additional funding as adverse economic conditions are expected to continue.

Mr. Chairman, that completes my statement.

[The prepared statement of Dr. Outlaw follows:]

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

Chairman Conaway, Ranking Member Peterson, and Members of the Committee, 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 has 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 Agricultur[e] 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 about the conditions for crop agriculture.

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 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 focus on the financial condition at the end of the 2016 crop year for 64 representative crop farms located in 20 states. *Figure*

1 indicates each farm's location, type of farm and the total number acres on the farm. The analysis utilizes FAPRI's December 2016 baseline commodity price projections for 2016 since the actual prices will not be known until the end of the marketing year. These prices are further adjusted to reflect local conditions for each farm.

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 or equity. If a farm has less than 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 maps 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 the 2016 crop year. **To be blunt these results are bad with very little hope of recovery on the horizon given current price forecasts by FAPRI and USDA.** Specifically,

- 17 of the 23 feedgrain and oilseed farms are projected to be in moderate or poor financial condition.
- 9 of the 11 wheat farms are projected to be in moderate or poor financial condition.
- 11 of the 15 cotton farms are projected to be in moderate or poor financial condition.
- 12 of the 15 rice farms are expected to end the period in moderate or poor financial condition.

These results already include any projected ARC and PLC support that would be triggered by low prices or low incomes. **The overwhelming majority of the farms end 2016 with a high likelihood of serious cash flow short-falls. On the other hand, the probability of large equity losses is much lower across all farm types.** Although there are a few farms that exhibit strong signs of falling into a cycle of persistent cash flow shortages leading to debt accumulation that spirals out of control.

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 their financial situation now relative to last year at this time, how has their equity positions changed since 2013 and why, and overall observations of the current financial environment.** We have received comments from about ¼ 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. There was only one farmer that reported making a profit on the 2016 crop. Corn farmers from North Dakota and Iowa, as well as, cotton farmers from west Texas indicated the only reason they broke even in 2016 was record yields. Generally, all the rest indicated that 2016 was a loss year where they had to roll operating notes forward or draw from reserves to pay-off operating loans.
2. Most indicated their equity positions were down at least 20% from 2013. Land values have declined some, however, many cited a substantial decline in equipment values as a major cause of lower equity in addition to having to borrow more. Many of the farmers from the South mentioned a growing number of farm equipment sales by farmers who either retired on their own or were persuaded to retire by their lenders.
3. Their overall observations about the current financial environment were very discouraging to say the least. They all indicated there is nothing else left to cut. They have all cut back on expenses and delayed replacing equipment that needs to be replaced to the point that maintenance costs are getting tougher to deal with. Several of the panel members we have met with since the 1980s indicate that they are only still in business because they have been frugal during the good times and paid off debt. They worry about the future of farming for younger farmers who are likely carrying more debt as they try to build their operations.

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

First, the producer safety net contained in the 2014 Farm Bill has worked as intended for all crops except for cotton. The combination of Federal crop insurance and title I commodity programs has helped the overwhelming majority of U.S. producers stay in business through some very difficult times. While the farmers we meet with all expressed concern for the future, many indicated there wouldn't be

a future without crop insurance to protect against weather problems and the PLC and ARC programs protecting against low prices and incomes. The lone exception is cotton as their STAX program has not provided the protection producers were hoping for. Not having title I programs to protect from the sustained drop in cotton prices has caused severe financial difficulties only overcome by the occasional record yields. Living without price protection can best be summed up by the response from a Texas cotton farmer, "It's like dancing around a land mine without a cotton safety net! When we hit it we will be ruined!"

Second, according to USDA, in the 3 years since the 2014 Farm Bill was passed, crop cash receipts have fallen from $211.4 billion in 2014 down to $187.7 billion in 2016—a decline of $23.7 billion. During that time, title I payments to crop farmers have totaled $13.2 billion or a little more than ½ of the estimated loss in crop receipts. In no way are commodity payments making producers whole.

And finally, it seems like nearly every month there is another report issued from interest groups who want to dismantle the producer safety net often saying programs are too lucrative. Not only are the programs not too lucrative, but there is a growing need to provide additional funding as adverse economic conditions are expected to continue.

Mr. Chairman, that completes my statement.

FIGURES

Figure 1. AFPC's Representative Crops Farms

Figure 2. Color Coded Results for Representative Feed Grain Farms at the End of 2016

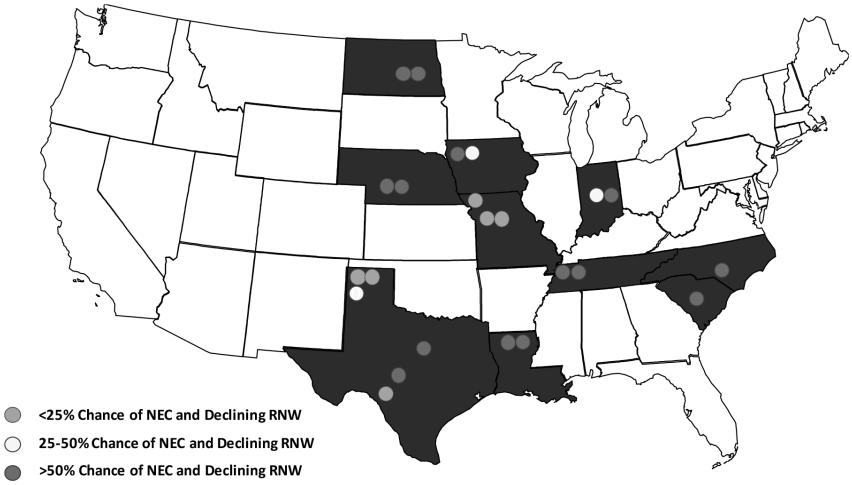


Figure 3. Color Coded Results for Representative Wheat Farms at the End of 2016

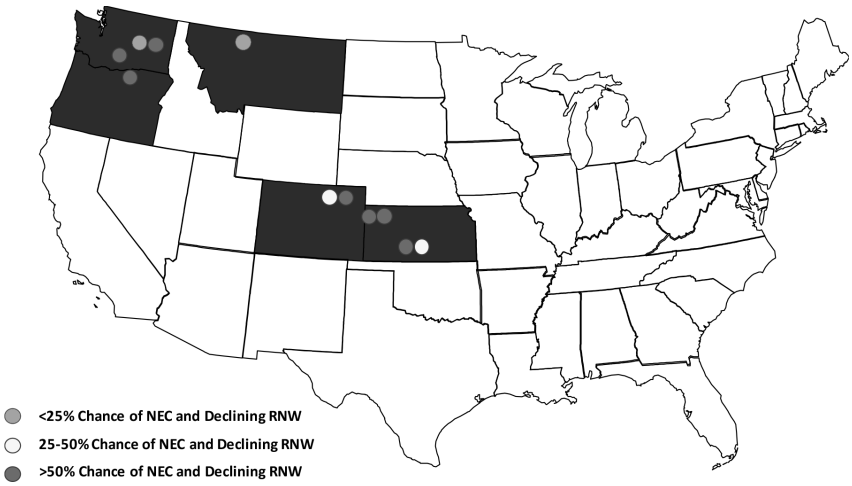


Figure 4. Color Coded Results for Representative Cotton Farms at the End of 2016

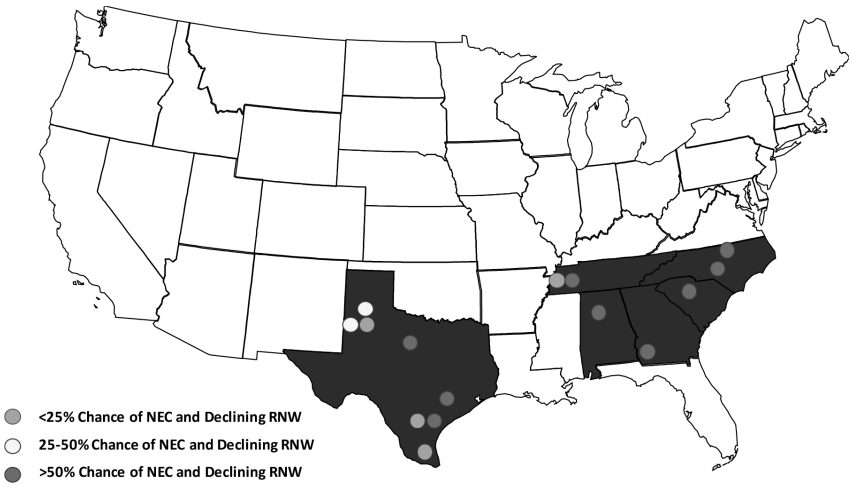
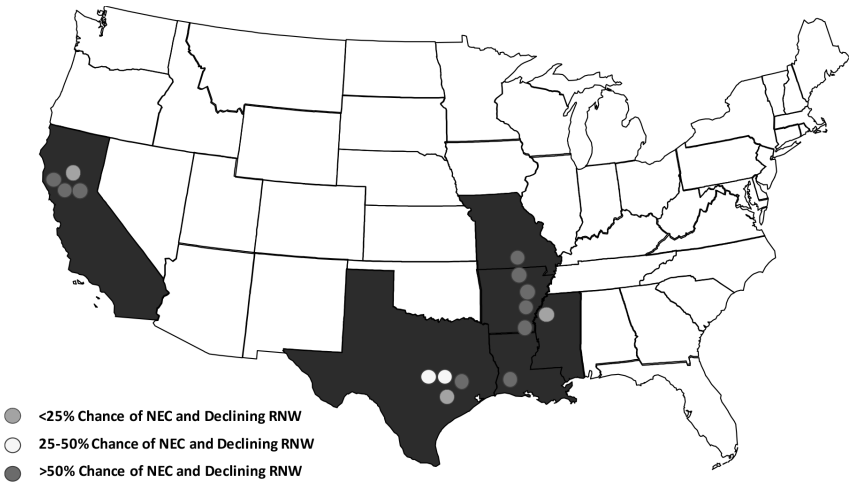


Figure 5. Color Coded Results for Representative Rice Farms at the End of 2016



The CHAIRMAN. Thank you.

Dr. Westhoff.

STATEMENT OF PATRICK WESTHOFF, PH.D., PROFESSOR AND DIRECTOR, FOOD AND AGRICULTURAL POLICY RESEARCH INSTITUTE, UNIVERSITY OF MISSOURI, COLUMBIA, MO

Dr. WESTHOFF. Mr. Chairman and Members of the Committee, thank you very much for the opportunity to discuss with you today the state of the farm economy. I serve as Director of the Food and Agricultural Policy Research Institute at the University of Missouri.

For more than 30 years, FAPRI has provided analysis to Congress and the public to help people make more informed decisions. We do our best to provide objective analysis, and do not make policy recommendations. My comments today are my own, and do not necessarily represent the views of the University of Missouri or of the agencies that fund our research.

For a wide range of agricultural commodities, prices now are far lower than they were a few years ago. Many factors have contributed to this downturn, but it makes sense to begin on the supply side of the picture. Since 2002, rural production of corn, wheat, rice, and soybeans has increased by a remarkable 49 percent. Most of that increase in production was needed to keep up with population growth, expanding livestock production in China, and biofuel production in the United States and other countries. However, in the 4 years since the drought of 2012, global grain and oilseed yields have exceeded the long-term trend, and production has outpaced consumption. Result has been a sharp increase in carryover stocks for those major commodities, and downward pressure on commodity prices.

Of course, the current situation is not just a supply story. Slower expansion of biofuel production, a strong dollar, and policies in other countries are just some of the demand-side factors that have contributed to the lower farm commodity prices.

Our institute is in the process of preparing its new 10 year baseline projections for the farm economy. We use USDA historical data, economic models, and expert analysis to project how commodity markets might evolve if current policies remain in place. The remainder of my comments are based on point estimates from this new baseline, what the world might look like under average weather and market conditions.

Net farm income averaged $101 billion per year between 2010 and 2014, as shown in *Table 1.* Relative to the previous 5 years, higher prices resulted in dramatic increases in both crop and livestock receipts that outpaced a sharp increase in production expenses. Commodity prices are now far below their peak, and both crop receipts and net farm income have declined. For the 2015 to 2019 period, we project that net farm income will average $74 billion per year, down by more than ¼ from the previous 5 years. Correcting for inflation, in fact, real net farm income is now less than it was between 2005 and 2009.

Looking ahead, we project a modest increase in crop prices and cash receipts that contributes to a small increase in nominal net farm income in 2018 and beyond. However, projected real net farm income correcting for inflation remains below the 2015 level through 2025.

Higher land values caused the value of farm assets to nearly double between 2004 and 2014. In 2016, however, USDA reported a slight reduction in farm real estate values and total farm assets.

Looking ahead, we project further reductions in real estate values. Crop and rental rates are falling in some parts of the country in response to weaker crop returns, and the prospect of higher interest rates could also put pressure on farmland values.

Farm debt increased sharply as some farmers borrowed to buy more expensive farmland and machinery, and to cover rising oper-

ating costs. Lower returns are making it harder for farmers to service debt, which continues to rise in the face of lower farm income and asset values. The result is an increase in farm debt-to-asset ratios, which increased from about 12 percent between 2010 and 2014, to about 14 percent in 2017, and to projected levels that are a couple of points higher by the time we get a few years in the future.

The projected debt-to-asset ratio remains far below the 1985 peak of 22 percent during the farm financial crisis, and interest rates are also far lower than they were at that time. Nevertheless, the trend of a rising debt-to-asset ratio is a serious concern, and many highly leveraged borrowers may find it increasingly difficult to service debt.

In my written statement, there is a discussion of the outlook for particular crops. In brief, returns for most crops are far below the peak levels, and are expected to remain near those levels over the next decade.

My final comments: The figures presented here are just one way the future might unfold. In reality, the weather is rarely average. Policies change, and other surprises will happen. A drought could push prices higher, a trade dispute could reduce exports, or a change in interest rate policy could make it harder for farmers to service debt. Baseline projections are not a crystal ball of what will happen, but a rather useful benchmark that can be used to evaluate what-if scenarios.

My colleagues and I stand ready to examine policy alternatives and other options that may be useful to you. I would be happy to take any questions.

[The prepared statement of Dr. Westhoff follows:]

PREPARED STATEMENT OF PATRICK WESTHOFF, PH.D., PROFESSOR AND DIRECTOR, FOOD AND AGRICULTURAL POLICY RESEARCH INSTITUTE, UNIVERSITY OF MISSOURI, COLUMBIA, MO

The State of the Farm Economy: Some Big-Picture Considerations

Mr. Chairman and Members of the Committee. Thank you for the opportunity to discuss with you today the state of the farm economy.

I serve as Director of the Food and Agricultural Policy Research Institute at the University of Missouri (FAPRI–MU). For more than 30 years, FAPRI has provided analysis to Congress and the public to help people make more informed decisions. We do our best to provide objective analysis and do not make policy recommendations. My comments today are my own, and do not necessarily represent the views of the University of Missouri or the agencies that fund our research.

How did we get here?

For a wide range of agricultural commodities, prices now are far lower than they were a few years ago. Many factors have contributed to this downturn, but it makes sense to begin on the supply side of the picture. Since 2002, world production of corn, wheat, rice and soybeans has increased by 857 million metric tons, or 49 percent (*Figure 1*).

Some of that remarkable increase in production was needed to keep up with population growth, expanding livestock production in China and biofuel production in the United States and other countries. However, in the 4 years since the drought of 2012, global grain and oilseed yields per acre have exceeded the long term trend, and production has slightly outpaced consumption. The result has been a sharp increase in carryover stocks (*Figure 2*) and downward pressure on commodity prices.

The supply side is also very important in explaining low livestock sector prices. After meat and milk prices hit record highs in 2014, production increased in 2015 and 2016, pushing prices lower.

Of course, the current situation is not just a supply story. Slower expansion of biofuel production, a strong dollar, and policies in other countries are just some of the demand-side factors that have contributed to lower farm commodity prices.

Looking Ahead: the FAPRI–MU Outlook

Our institute is in the process of preparing its new 10 year baseline projections for the farm economy. We use USDA historical data, economic models and expert analysis to project how commodity markets might evolve if current policies remain in place. The remainder of my comments are based on point estimates from this new baseline—what the world might look like under average weather and market conditions. Before we release our full set of baseline projections next month, we will conduct what we call "stochastic" analysis that considers a broader range of weather and other conditions and allows us to talk about some of the inherent volatility and uncertainty in commodity markets.Farm income and balance sheet

Net farm income averaged $101 billion per year between 2010 and 2014 (*Table 1*). Relative to the previous 5 years, higher prices resulted in dramatic increases in both crop and livestock receipts that outpaced a sharp increase in production expenses. Commodity prices are now far below their peak and both crop receipts and net farm income have declined. For the 2015 to 2019 period, we project that net farm income will average $74 billion per year, down by more than a quarter from the previous 5 years. Correcting for inflation, in fact, real net farm income is less now than the 2005 to 2009 average.

Looking ahead, we project a modest increase in crop prices and cash receipts that contributes to a small increase in nominal net farm income in 2018 and beyond (*Figure 3*). However, projected real net farm income remains below the 2015 level through 2025.

Higher land values caused the value of farm assets to nearly double between 2004 and 2014. In 2016, however, USDA reported a slight reduction in farm real estate values and total farm assets. Looking ahead, we project further reductions in real estate values. Cropland rental rates are falling in some parts of the country in response to weaker crop returns, and the prospect of higher interest rates could also put pressure on farmland values.

Farm debt increased sharply as some farmers borrowed to buy more expensive farmland and machinery and to cover rising operating costs. Lower returns are making it harder for farmers to service debt, which continues to rise in the face of lower farm income and asset values. The result is an increase in farm debt-to-asset ratios, which increased from about 12 percent between 2010 and 2014 to about 14 percent in 2017 and to even higher levels in the years ahead.

The projected debt-to-asset ratio remains far below the 1985 peak of 22 percent during the farm financial crisis, and interest rates are also far lower than they were at that time. Nevertheless, the trend of a rising debt-to-asset ratio is a serious concern, and many more highly-leveraged borrowers may find it increasingly difficult to service debt.

Outlook for Particular Crops

For six major crops, higher prices drove per-acre crop values to record levels during the 2009–2013 period (*Table 2*). Production expenses also increased sharply from the previous 5 years, but the increase in market sales outpaced the increase in variable production expenses, resulting in higher net returns. The increase in returns contributed to higher rental rates and encouraged farmers to invest more in farm real estate and machinery. These higher fixed costs absorbed much of the increase in net returns over variable expenses.

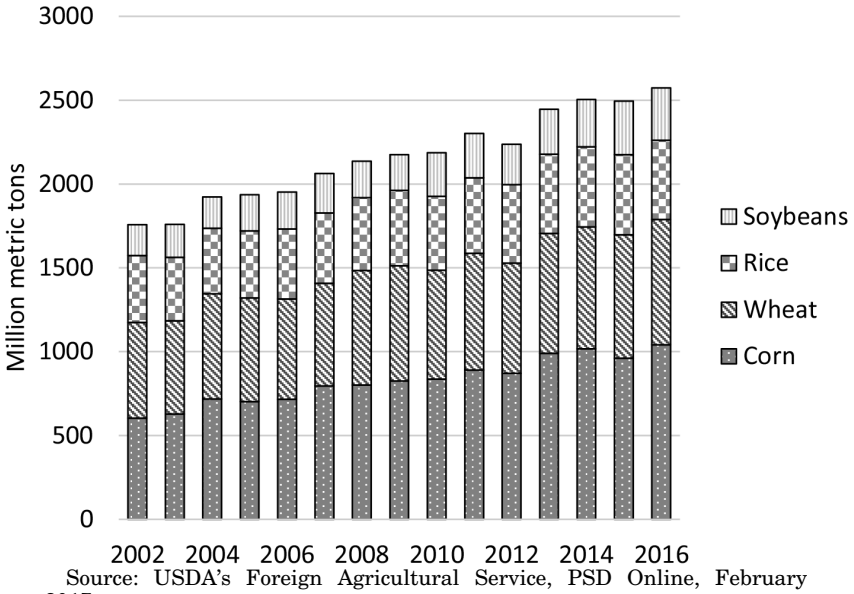
Since 2014, lower crop prices have reduced the per-acre value of crop sales. Although variable expense increases have slowed or even reversed for several commodities, net returns are far below 2009–2013 levels, and in some cases are about the same as they were between 2004 and 2008, when land and other fixed expenses were much lower. Looking farther ahead, the outlook shows fairly steady net returns over variable expenses during the 2019 to 2023 period that would be covered by the next farm bill.

Final Comments

The figures presented here are just one way the future might unfold. In reality, the weather is rarely "average," policies change, and other surprises will happen. A drought could push prices higher, a trade dispute could reduce exports, or a change in interest rate policy could make it harder for farmers to service debt. Baseline projections are not a crystal ball forecast of what will happen, but rather a useful benchmark that can be used to evaluate what-if scenarios. My FAPRI–MU colleagues and I stand ready to examine policy alternatives and other options that may be useful to you. I'd be happy to take any questions.

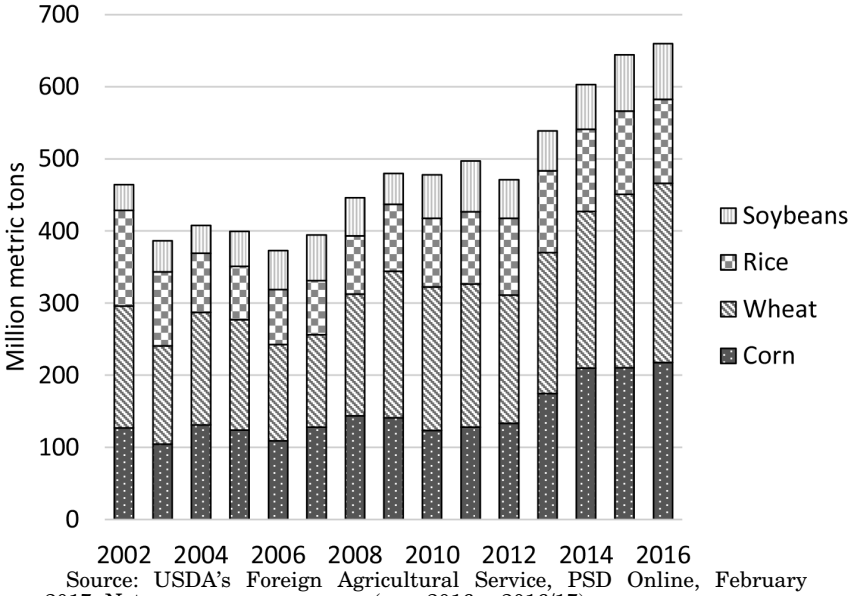
FIGURES

Figure 1. World Production of Four Major Crops



Source: USDA's Foreign Agricultural Service, PSD Online, February 2017.

Figure 2. World Ending Stocks of Four Major Crops



Source: USDA's Foreign Agricultural Service, PSD Online, February 2017. Note: years are crop years (*e.g.,* 2016 = 2016/17).

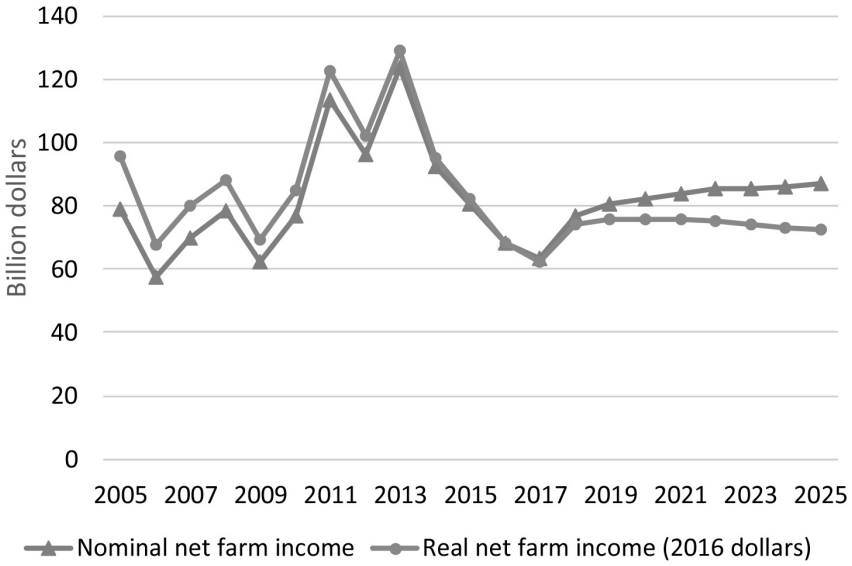
Table 1. U.S. Farm Income and Balance Sheet
(billion dollars)

Variable	2005–09 avg.	2010–14 avg.	2015–19 avg.	2020–24 avg.
Crop cash receipts	147	209	191	203
Livestock cash receipts	128	174	174	188
Government payments *	15	11	11	7
Production expenses	257	338	354	375
Net farm income *	69	101	74	85
(in 2016 dollars)	80	107	73	75
Farm assets	1,910	2,571	2,794	2,591
Farm debt	239	306	383	408
Debt/asset ratio	12.5%	11.9%	13.7%	15.8%

Sources: Historical data from USDA's Economic Research Service. Projections for 2017–2024 are unpublished point estimates by FAPRI–MU.

* These figures will differ from the FAPRI–MU 2017 baseline to be released in March. That baseline will report stochastic analysis of 500 future market outcomes, and is likely to show slightly greater average future payments and farm income than these point estimates, which assume average weather and market conditions.

Figure 3. Net Farm Income



Source: FAPRI–MU projections, February 2017.

Table 2. U.S. Crop Market Returns
(dollars per acre)

Variable	2004/05 to 2008/09 avg.	2009/10 to 2013/14 avg.	2014/15 to 2018/19 avg.	2019/20 to 2023/24 avg.
Corn:				
Market sales	467	768	614	649
Variable expenses	221	327	325	327
Market net returns	246	441	289	323
Soybeans:				
Market sales	316	517	462	465
Variable expenses	102	153	174	183
Market net returns	214	364	288	283
Wheat:				
Market sales	204	295	220	243
Variable expenses	93	120	115	121

Table 2. U.S. Crop Market Returns—Continued

(dollars per acre)

Variable	2004/05 to 2008/09 avg.	2009/10 to 2013/14 avg.	2014/15 to 2018/19 avg.	2019/20 to 2023/24 avg.
Market net returns	111	175	106	122
Upland cotton:				
Market sales	488	742	630	667
Variable expenses	395	487	511	546
Market net returns	93	255	119	121
Sorghum:				
Market sales	189	295	237	228
Variable expenses	125	145	134	142
Market net returns	63	150	102	86
Rice:				
Market sales	756	1,056	889	947
Variable expenses	413	533	576	622
Market net returns	343	523	313	325

Sources: Historical data based on USDA National Agricultural Statistics Service reported yields and prices and Economic Research Service reported production costs.

Projections for 2016/17–2023/24 are unpublished point estimates by FAPRI–MU.

Definitions and notes:

Market sales are defined as the national average yield per harvested acre times the national marketing year average price. For cotton, includes lint and cottonseed.

Variable expenses include operating costs and hired labor expenses, as defined by ERS. They do not include the costs of land, machinery or other fixed expenses.

Market net returns are defined as market sales minus variable expenses. From this amount and any farm program benefits, producers would have to cover land costs machinery and other fixed expenses.

POWERPOINT PRESENTATION

Food & Agricultural Policy Research Institute
University of Missouri

The state of the farm economy: Some big picture considerations

Patrick Westhoff
Director, Food and Agricultural Policy Research Institute
at the University of Missouri

Testimony before the U.S. House Committee on Agriculture
February 15, 2017

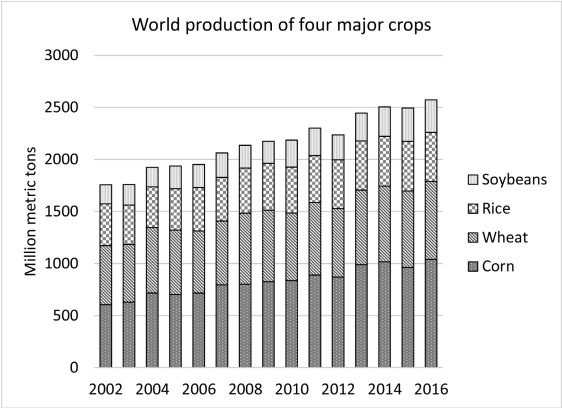


Figure 1 from written testimony.

Source: USDA's Foreign Agricultural Service, PSD Online, February 2017

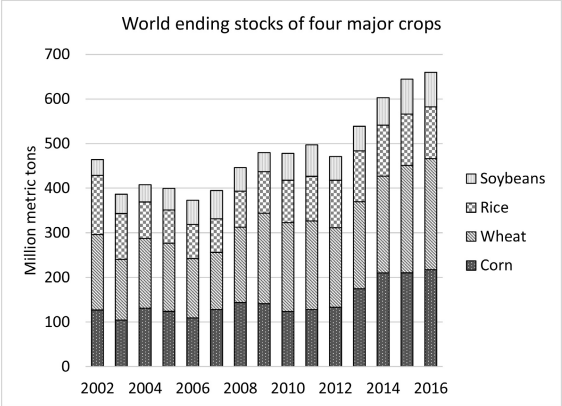


Figure 2 from written testimony.

Source: USDA's Foreign Agricultural Service, PSD Online, February 2017

Table 1. U.S. farm income and balance sheet, billion dollars

Variable	2005-09 avg.	2010-14 avg.	2015-19 avg.	2020-24 avg.
Crop cash receipts	147	209	191	203
Livestock cash receipts	128	174	174	188
Government payments*	15	11	11	7
Production expenses	257	338	354	375
Net farm income*	69	101	74	85
(in 2016 dollars)	80	107	73	75
Farm assets	1,910	2,571	2,794	2,591
Farm debt	239	306	383	408
Debt/asset ratio	12.5%	11.9%	13.7%	15.8%

Sources: Historical data from USDA's Economic Research Service. Projections for 2017-2024 are unpublished point estimates by FAPRI-MU.

*These figures will differ from the FAPRI-MU 2017 baseline to be released in March. That baseline will report stochastic analysis of 500 future market outcomes, and is likely to show slightly greater average future payments and farm income than these point estimates, which assume average weather and market conditions.

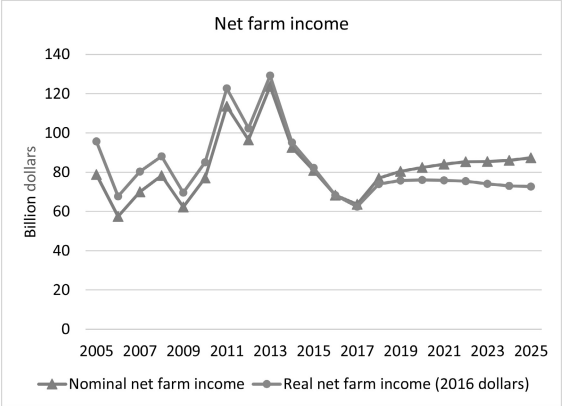


Figure 3 from written testimony.

Source: Data for 2005-2016 are from USDA's Economic Research Service. Projections are FAPRI-MU point estimates, February 2017.

Thanks!

- FAPRI-MU website: www.fapri.missouri.edu
- Follow us on Twitter: @FAPRI_MU
- To contact Pat Westhoff:
  - 573-882-4647
  - westhoffp@missouri.edu
- FAPRI-MU team:
  - Julian Binfield
  - Sera Chiuchiarelli
  - Deepayan Debnath
  - Scott Gerlt
  - Hoa Hoang
  - Lauren Jackson
  - Willi Meyers
  - Kateryna Schroeder
  - Wyatt Thompson
  - Jarrett Whistance
  - Peter Zimmel

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Any opinion, findings, conclusions, or recommendations expressed are those of the author and do not necessarily reflect the view of the U.S. Department of Agriculture nor the University of Missouri.

Additional slides: Crop returns (Table 2 in written testimony)

Definitions and notes:

Market sales are defined as the national average yield per harvested acre times the national marketing year average price. For cotton, includes lint and cottonseed.

Variable expenses include operating costs and hired labor expenses, as defined by ERS. They do not include the costs of land, machinery or other fixed expenses.

Market net returns are defined as market sales minus variable expenses. From this amount and any farm program benefits, producers would have to cover land costs machinery and other fixed expenses.

Table 2a. U.S. crop market returns, dollars per acre

Variable	2004/05 to 2008/09 avg.	2009/10 to 2013/14 avg.	2014/15 to 2018/19 avg.	2019/20 to 2023/24 avg.
Corn				
Market sales	467	768	614	649
Variable expenses	221	327	325	327
Market net returns	246	441	289	323
Soybeans				
Market sales	316	517	462	465
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Wheat				
Market sales	204	295	220	243
Variable expenses	93	120	115	121
Market net returns	111	175	106	122

Sources: Historical data based on USDA National Agricultural Statistics Service reported yields and prices and Economic Research Service reported production costs. Projections for 2016/17-2023/24 are unpublished point estimates by FAPRI-MU.

Table 2b. U.S. crop market returns, dollars per acre

Variable	2004/05 to 2008/09 avg.	2009/10 to 2013/14 avg.	2014/15 to 2018/19 avg.	2019/20 to 2023/24 avg.
Upland cotton				
Market sales	488	742	630	667
Variable expenses	395	487	511	546
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Sorghum				
Market sales	189	295	237	228
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Sources: Historical data based on USDA National Agricultural Statistics Service reported yields and prices and Economic Research Service reported production costs. Projections for 2016/17-2023/24 are unpublished point estimates by FAPRI-MU.

The CHAIRMAN. Thank you, Dr. Westhoff.

Dr. Brown, 5 minutes.

STATEMENT OF D. SCOTT BROWN, PH.D., STATE AGRICULTURAL EXTENSION ECONOMIST AND ASSISTANT PROFESSOR, UNIVERSITY OF MISSOURI, COLUMBIA, MO

Dr. BROWN. Chairman Conaway, Ranking Member Peterson, and Members of the Committee, thank you for the opportunity to discuss the rural economic outlook.

I am the University of Missouri State Agricultural Extension Economist, and I have worked extensively on Federal dairy policy.

The Missouri rural economy has changed quickly, but the change has not spread evenly as ARMS data shows that the debt-to-asset ratio of all Missouri farms increased by just 1.8 percent from 2012 to 2015. Yet, in the 35 to 44 age category it nearly doubled. Lower 2016 cattle, milk, and hog prices resulted in livestock industries

facing financial headwinds, which continue. Only dairy is anticipating higher prices this year.

A bright spot is that feed costs are lower. ERS reports 2014 purchase feed expenses reached $63.7 billion, but are projected to fall to $57.9 this year. After reaching a 2014 record level of $24 per hundredweight, the milk price declined to $16 last year. Two factors drove this decline. First, the value of U.S. dairy exports declined from a 2014 record of $9.5 billion to $7.1 billion in 2016. Second, milk production expanded for the seventh consecutive year, and dairy cow inventory increased by 48,000 head. It has become increasingly difficult to reduce milk supplies even when financially stressed.

Since 2000, annual milk production has declined twice, while it fell five times over the 1986 to 1999 period. Given the 2016 economic dairy industry downturn, there was growing concern that the Margin Production Program is not providing a strong enough safety net. It is extremely difficult to construct a stronger safety net program for dairy, while reducing Federal spending. Dairy cash receipts have remained volatile from $24.3 billion in 2009, to $49.3 in 2014. They retreated to $34.2 billion last year, but that is still $10 billion above the 2009 level.

CBO currently estimates annual average dairy outlays at $79 million over the Fiscal Year 2017 to Fiscal Year 2027 period. Identifying a dairy safety net that can moderate the large change in cash receipts, and yet show an average cost of $79 million, is a large challenge. There is a high correlation between government expenditures and the effectiveness of the safety net. Changes to MPP or other alternatives will likely result in a more effective safety net, only if these estimated costs rise.

We are ending our third full year of MPP, and participation in higher margin coverage levels have fallen. In 2016, 140 billion pounds of production history was enrolled in the $4 coverage level. No region of the country has shown an appetite for buy-up beyond $4. The 2017 MPP data will show even more production history has shifted to $4. The $4 catastrophic coverage does show state-level differences. California and Idaho have more than 80 percent of their 2016 milk production levels covered at the $4 level, while Minnesota and Wisconsin have about 60 percent of 2016 milk production covered.

MPP participation is much lower than originally estimated in 2014. During MPP debate, many assumed that 70 percent of milk production would sign up for $6.50 coverage. The 2016 MPP data shows that only two percent of 2016 milk production was signed up. The MPP experience has been very different, especially the level of government spending. In May/June 2016, the largest payment period since enactment, MPP spent less than $12 million. CBO estimated MPP spending at $912 million over the Fiscal Year 2014 to 2023 period, with 2014 Farm Bill passage. Other estimates even larger topped $2.5 billion. My analysis suggested that at a $6.50 margin level, nearly 80 percent of the outcomes had no MPP payments, yet the remaining 20 percent of the time when payments occurred, they were large enough to offset the times without a payment. Historical data would suggest similar findings.

Projected feed costs are much lower than when MPP became law. The 2013 CBO baseline corn prices averaged $4.59 over the 2013–2023 marketing years, while CBO's current baseline has the average corn price over the 2017–2027 marketing years at $3.79. Declining feed costs reduce MPP program costs. The decline in corn prices and the different CBO baselines provide nearly an offset that would return MPP feed coefficients to the original proposed levels.

The 2016 MPP experience left many dairy farmers disenchanted. The reduction in feed costs resulted in the MPP margin falling less than milk prices declined. Given the inelastic nature of dairy supply and demand, the cost of the dairy program can go from zero to billions of dollars quickly. Finding ways to spread risk against Federal policy and market risk tools may be the balance that provides a better safety net. Margin risk management is different and requires a change in perspective from program return maximization to risk management.

Mr. Chairman, thank you for the opportunity to discuss the issues facing livestock and dairy industries, and I look forward to working with the Committee to find a better safety net for dairy producers in the 2018 Farm Bill.

[The prepared statement of Dr. Brown follows:]

PREPARED STATEMENT OF D. SCOTT BROWN, PH.D., STATE AGRICULTURAL EXTENSION ECONOMIST AND ASSISTANT PROFESSOR, UNIVERSITY OF MISSOURI, COLUMBIA, MO

Chairman Conaway, Ranking Member Peterson, and Members of the Committee, thank you for the opportunity to testify regarding the rural economic outlook for dairy and livestock producers in this country. I am the state agricultural extension economist at the University of Missouri and for the last 3 decades have worked extensively on Federal policy issues with a detailed focus on dairy policy issues.

The rural economy in Missouri has been changing quickly although the change has not been spread evenly across all parts of rural Missouri. The Agricultural Resource Management Survey (ARMS) conducted by USDA shows that the debt/asset ratio of all Missouri farms increased by only 1.8 percent from 2012 to 2015. However, Missouri producers in the 35 to 44 year old age group saw a debt/asset ratio that nearly doubled from 14.5 percent to 28.8 over the same period.

Lower cattle, milk and hog prices resulted in livestock industries facing increased financial headwinds in 2016 which will likely continue into 2017. In late 2016, feeder cattle prices were less than 50 percent of their value relative to early 2015. They will likely continue to move lower in 2017. At this point, the only livestock industry anticipating higher prices is the dairy industry as tighter global markets suggest milk prices can move higher from recent lows. A bright spot for the livestock industries is that feed costs are lower than experienced just a few years ago, as the Economic Research Service of the United States Department of Agriculture (USDA–ERS) shows purchased feed expenses reached $63.7 billion in 2014 but are projected to decline to $57.9 billion in 2017.

The dairy industry faced much lower milk prices in 2016. After reaching a record level of over $24 per hundredweight in 2014, the milk price declined to almost $16 per hundredweight in 2016. Two factors drove this decline in milk prices.

First, the value of U.S. dairy product exports declined from a 2014 record of $9.5 billion to $7.1 billion in 2016. A stronger U.S. dollar and growing international milk supplies hindered U.S. dairy exports. U.S. dairy product exports have been slow to recover although reduced global milk supplies should help strengthen U.S. exports. Burdensome intervention stocks in the European Union remains one cautionary issue to stronger international dairy product prices in 2017.

Second, despite a tough economic environment for dairy producers in 2016, milk production expanded for the 7th consecutive year. U.S. dairy cow inventory increased by 48 thousand head during 2016 despite the financial headwinds experienced by the industry. The growth in dairy cow inventories and milk supplies highlights that the lower milk prices seen in 2016 had differing effects within the indus-

try as California dairy cow numbers declined by 9,000 head while Texas expanded by 35,000 head.

It has become increasingly difficult to reduce U.S. milk supplies, even when milk returns suggest contraction is needed. During the 1980s and 1990s, there were more dairy farmers with relatively higher production costs that would exit the industry during tough economic times. By the 2000s, the remaining operations tend to have larger fixed costs, which makes them less responsive to current financial conditions.

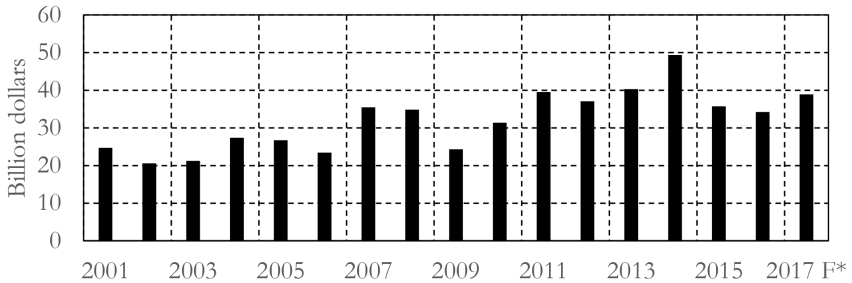
Historical data on U.S. milk production highlights past difficulties in reducing milk supplies when producer returns are low. Since 2000, annual milk production has only declined in 2001 and 2009. Milk production even expanded during the drought-induced record feed prices of 2012–2013. In comparison, annual milk production fell five times over the 1986 to 1999 period.

The 2016 economic downturn that the dairy industry faced has resulted in many looking for alternatives to the dairy safety net program contained in the 2014 Farm Bill. There is growing concern that the Margin Protection Program (MPP) did not provide a strong enough safety net for U.S. dairy producers in 2016.

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.

Dairy cash receipts have remained volatile over the past several years. In the economic disaster of 2009, they totaled only $24.3 billion. By 2014 they had swelled to $49.3 billion. Dairy cash receipts retreated to $34.2 billion in 2016. It is instructive to note that 2016 cash receipts remained $10 billion above the 2009 level.

U.S. Dairy Products, Cash Receipts



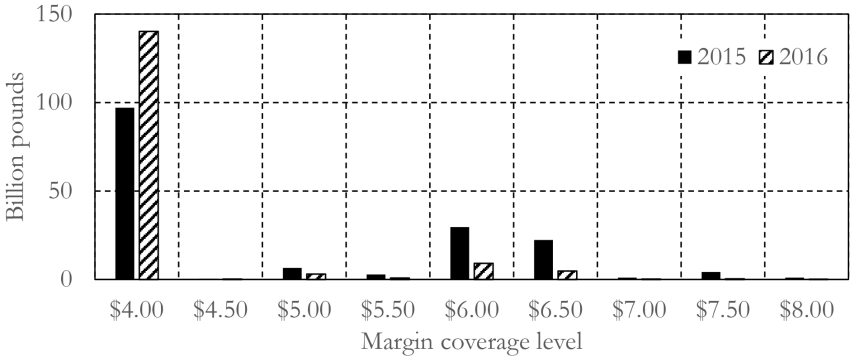
Source: USDA-Economic Research Service.
*2017 USDA–ERS forecast.

The Congressional Budget Office currently estimates annual dairy CCC expenditures at $79 million over the FY2017 to FY2027 period. Identifying a safety net program for dairy producers that can moderate the billions of dollars change in dairy cash receipts that have occurred in the last few years and yet only show an average cost of $79 million to the Federal Government is a large challenge.

There is a high correlation between the level of government expenditures for the dairy industry safety net and the effectiveness of the safety net. Changes to the MPP or for that matter any other alternative that may be debated as the 2018 Farm Bill comes into focus will likely result in a more effective safety net only if the estimated cost of the program rises. It is important to remember that dairy farmers will always remain in a better financial situation when market conditions result in little to no government spending, as a safety net program hardly ever completely offsets lower market returns.

We are entering our third full year of the MPP. The level of dairy farmer participation in the higher margin coverage levels has continually fallen as premium costs have exceeded anticipated MPP payments. In 2016, 140 billion pounds of production history or about ⅔ of U.S. milk production was enrolled in only the catastrophic $4 level of coverage. That catastrophic level of coverage is a pretty low safety net with margins not falling below that level since 2009. No region of the country has shown an appetite for much buy-up beyond the $4 level. 2017 MPP enrollment data will show even more production history has shifted to the $4 coverage level as many producers are not willing to buy up coverage given the low probability of payments.

MPP-Dairy Production History, by Coverage Level



Source: USDA-Farm Service Agency.

The state by state data on MPP participation shows that all states have little to no buy up coverage at this point. The $4 catastrophic coverage that costs a producer $100 annually does show some variability when looking at signup on a state basis. Two of the larger western states, California and Idaho, have more than 80 percent of their 2016 milk production levels covered under the $4 level while upper [M]idwest states like Minnesota and Wisconsin have about 60 percent of 2016 milk production covered under the $4 level. Many states in the northeast and southeast areas of the U.S. are like the upper [M]idwest in terms of the amount of milk signed up at the $4 level.

MPP participation has been much lower than many estimated when the program became law in early 2014. When MPP was being debated before the 2014 Farm Bill was finished, many assumed that 70 percent of milk production would be signed up for $6.50 coverage. The 2016 MPP data shows that slightly more than two percent of 2016 milk production was signed up for the program at the $6.50 level. This data and experience should inform that estimates of sign up under similar programs must be reevaluated carefully and lowered relative to original estimates.

The MPP experience has been very different than many projected during the debate on the program, especially the level of government spending. In the largest bimonthly payment period since enactment of MPP which occurred in May/June 2016 payments totaled less than $12 million. CBO estimated spending under the MPP as passed in the Agricultural Act of 2014 at $912 million over the FY14 to FY23 period. Other estimates of government outlays on the program topped $2.5 billion over even shorter timeframes.

In my original analysis, the stochastic results suggested that at a $6.50 margin level nearly 80 percent of the time there would not be a MPP payment. The remaining 20 percent of stochastic outcomes where payments occurred they were large enough to offset the 80 percent of the time of paying the premium without a payment. Historical examination would suggest similar findings of payments that don't occur often but when they do they offset the longer periods of time with no payments. It would be important that producers are signed up at the "right" time to make the MPP work for producers over the long term.

In addition to the experience that participation in the MPP has been much less than expected, feed costs have moved much lower than estimated when the program was first enacted into law in 2014. The CBO baseline as well as other long-term baselines had projected corn prices much higher then than are currently forecast. The 2013 CBO baseline had corn prices that averaged $4.59 per bushel over the 2013 to 2023 marketing years. The most recent CBO baseline has lowered the average corn price estimate over the 2017 to 2027 marketing years to $3.79 per bushel. Other feed costs have also moved lower than originally estimated.

All else equal, the decline in feed costs should reduce MPP program costs and reduce the expected cost of alternative programs driven in part by feed cost levels. It is interesting that this decline in corn prices and feed costs in the different baselines provides nearly an offset on average to the policy proposal to raise the feed coefficients back to the levels first set in 2012.

The 2016 MPP experience left many dairy farmers disenchanted with MPP. The reduction in feed costs as represented by national corn, soybean meal and alfalfa prices resulted in the MPP margin falling far less than the decline in national milk

prices. The MPP margin seemed out of sync relative to many producers who saw their financial situation erode much faster than the MPP margin. In some cases weather played a role in the disconnect while in other cases farmers that grew a significant portion of their feed inputs did not benefit from the decline in feed costs suggested by the declines in market prices for corn, soybean meal and alfalfa prices.

USDA–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 posit[i]on 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. USDA–ERS reported 2013 total corn production costs at $676.45 per acre while they estimate 2016 at $672.39 per acre.

An adequate safety net for dairy farmers remains the goal for Federal dairy policy. The reduction in financial risk and the stronger safety net afforded dairy farmers under alternative dairy polices must be absorbed by others. The Federal Government remains the largest source of producer risk reduction through government spending on farm programs. Given the inelastic nature of supply and demand of dairy products, the cost of a dairy program can go from zero to billions of dollars quickly. Understanding the most critical risks to cover for dairy farmers today is important. One only has to look back to years like 2009 to understand that a program like MPP can cost billions of dollars. Although the likelihood of 2009 occurring in the future may be low, it makes the scoring of these kinds of policy options extremely difficult. Finding ways to spread risk across Federal policy and market risk tools may be the balance needed to provide a better safety net for producers.

The MPP was a major change in dairy policy relative to the past safety net provided to the dairy industry. The move to a policy 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. MPP participation has moved to the lower levels of margin coverage when at times producers may be better served to participate at higher levels.

A balance must be struck in setting parameters of Federal dairy policy. We have had experience with dairy programs that provided too much support to the industry and resulted in large milk surpluses and chronically low milk prices or large government expenditures. No one in the dairy industry liked these periods. However, setting support too low means it may never trigger in those times that it is most needed. This tradeoff will always require modifications as future farm bills are debated and passed.

Mr. Chairman, thank you for the opportunity to discuss the many issues facing the livestock and dairy industries today and I am looking forward to working with the Committee on finding solutions that provide a better safety net for dairy farmers that can be embraced by all dairy market participants as the 2018 Farm Bill process unfolds.

The CHAIRMAN. Well, thank you, gentlemen.

The chair would remind Members 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.

I will be strict on the 5 minute clock, in respect to the fact that most all of us are here today. I would ask our witnesses when the red light goes on, finish your thought, and then for any other comments you would like to make, we will take those for the record. But I appreciate my Members being respectful to allow us all to get through this.

So I will now recognize myself for 5 minutes.

I don't like the lyrics to your song, but you apparently are all singing off the exact same sheet of paper. If the mid-1980s are the gold standard of crisis in production agriculture, I didn't hear anybody say that that is where we are today, but how will we recognize that? And, what would be your thoughts, on decling prices, collateral values down both in equipment and land, all those things that all of you talked about? None of that was particularly rosy in

terms of the next 4 or 5 years. Could each of you quickly just say what you think the risks are of us moving into something that would approach the 1980-level wreck that folks tried to live through? Dr. Johansson?

Dr. JOHANSSON. Thank you, Mr. Chairman. As you mentioned, none of us at least are painting the same picture as we saw in the 1980s situation.

Things I would be looking for, continue to look for in the data, would be rising interest rates faster than we expect, pressuring interest payments, as well as declining land values. Repayment delinquencies, they have been trending upward but they still remain relatively slow. If we see those continue or increase, that would be an increasing cause for concern. And similarly, if we see a rapid drop in cash rents, that is likely to bring land values down, that is likely to bring the asset base down that is underlying the relatively strong debt-to-asset ratio we are seeing right now.

Dr. KAUFFMAN. Thank you, Mr. Chairman. In the 1980s, I would say that it was a liquidity crisis that turned into a solvency crisis.

We do have some of those concerns around liquidity today, but as I noted in my statement, debt-to-asset ratios remain relatively low and historically low. If we were to see more of a decline in land values than what we have seen so far, that would be an additional risk to the farm sector and to solvency, where we haven't seen those kinds of bankruptcies yet. So I would list that as one.

We have seen some pretty significant declines in commodity prices and in farm income, but they haven't necessarily been coupled with a commensurate decline in land values of the same magnitude.

Dr. OUTLAW. We are all about to say the same thing. Essentially, the only thing I would like to add is that, from our research, they are exactly right. The cash flow situation is really bad. The equity situation isn't quite as bad, but we can see it really on the horizon. If cash flows continue to struggle, then they are going to lose equity.

Dr. WESTHOFF. Yes, the same song sheet. Yes, we do expect to see continued increases in debt-to-asset ratios, but starting from a very low base. What will really be concerning, of course, if you had a big increase in interest rates that could simultaneously increase interest costs and put further downward pressure on land values.

Dr. BROWN. Trying to add something different, I will say one of the issues that we see relative to the 1980s, which I remember very well, is that I still see a lot of farmers today, maybe older in age, that are looking for opportunities to purchase land. I don't think it is the same across-the-board dire situation that we would have seen in the 1980s. And I remind us that, yes, calf prices for my Missouri producers were $3+ a pound in early 2015 are now sitting more like $1.50 a pound, so they have fallen by ½. But that is a far cry from where we were in let's say 2008, when we might have talked sub-$1 cattle prices.

The CHAIRMAN. So we are going to be writing a farm bill that will become effective October 1, 2018, and then we are going to go over that next 5 year timeframe, so about 7+ years. Anybody have a horror story where we would be in those kind of circumstances within that 7 year period?

Dr. OUTLAW. The only horror story I can say is that producers are going to need every bit of the safety net that you can provide them. And I know that with resources being as tight as they seem to be up here, you are going to have to be really imaginative to figure out how to spread that money as far as you can.

The CHAIRMAN. Dr. Kauffman, let me ask you real quickly, you study the debt of farms, both the official and unofficial debt. Do your numbers capture all the unofficial debt; folks using credit cards and other things that might not be dedicated to agriculture specifically, to try to keep their farms afloat? Are your numbers capturing all the debt that would be associated with it?

Dr. KAUFFMAN. The numbers that I reported did refer specifically to commercial banks in the Farm Credit System, which account for about 80 percent of farm debt that is out there. It is true though that there has been a bit of an increase over time in debt coming from input suppliers. So that is something that USDA and others seek to capture in their measures and goes into the debt-to-asset ratios, but the data on that is a little bit harder to come by as they are not necessarily regulated entities.

The CHAIRMAN. All right, so the debt-to-equity ratios wouldn't be any better if you captured that debt?

Dr. KAUFFMAN. Either of those is measuring debt holistically as we are trying to capture all of those main categories.

The CHAIRMAN. All right, Mr. Peterson, 5 minutes.

Mr. PETERSON. Thank you, Mr. Chairman. And thank you all for your testimony.

What I am looking at in this next farm bill is looking at stuff that needs to get done. And cotton, I don't know a whole lot about cotton, but I support getting it back into title I and helping the Chairman get that program to work.

The CHAIRMAN. Thank you.

Mr. PETERSON. One of the other things I would like to see us do is get the CRP back up to 35, 40 million acres, which is where it should be. It needs to be streamlined, and some other things. And the other thing is the milk situation. CBO was so far off, and I guess we were too in terms of how this was going to work. Now, we are still struggling with the situation where CBO, when we get these numbers back, when we are looking at alternatives, are just completely out-to-lunch, in my opinion. So I don't know how we are going to ever fix this thing if we can't get CBO to understand what is going on in the real world. Maybe we need to send them out and talk to some of these dairy farmers that I have been talking to, maybe that will wake them up.

How we are going to fix this with the numbers that I am seeing, it just looks like maybe we can do something with the catastrophic coverage and raise that from $4 to $5, probably wouldn't be too expensive. Would that cost very much, Dr. Brown, if we did that, do you think?

Dr. BROWN. Given our experience the last few years, I would have to think $5 catastrophic coverage would have a fairly small price tag because we have not seen MPP margins below $5 since we enacted the 2014 Farm Bill.

Mr. PETERSON. And they are probably not forecast either out in the future.

Dr. BROWN. Not at this point in time, especially given how low crop prices are.

Mr. PETERSON. And what I am worried about is with these prices when they collapse, and they will, we are not going to have people in the program, we are not going to have the coverage for this. And the dairy farmers that I am talking to, they think we are going to bail them out, and I don't see that happening. So somehow or another we have to fine tune this thing, figure out how to get people to participate.

But I have to tell you, talking to my producers and other producers around the country, it is going to be a tough sell because they look at this thing and they say if I am not going to get any money out of this, then I am not going to do it. And we had other people that went with block coverage and didn't get paid, and come up to me and said, "I am never going to go back in that program again. I don't care what. I am not even going to buy catastrophic coverage." And I said, "Well, what are you going to do if this thing goes to heck?" Well, I mean it is a big problem.

So the only thing I can see, if we can't get CBO straightened out, the only thing I can see is we might be able to do something for the $4 per hundredweight and below, and maybe the CAT coverage, and beyond that I am not sure there is anything we can do.

So one of the other questions that I had though is that one of the things that is happening is people are looking at this 1 year at a time. They are talking to people and saying, "Well, I am not going to get any money so I am not going to sign up." Would it be better if we had a 5 year situation, if we had a little better safety net, and we made them make a decision for 5 years, would we get more people participating, do you think, than we have under the current situation, and does it make sense to look at that?

Dr. BROWN. It would seem, when you are doing it year by year, you give folks the chance to move around a lot, and sometimes they don't make the best decision. We know milk prices move so quickly that the choice they make turns out to be the wrong one. If you have them in for a longer period of time, perhaps they rethink that strategy and would pick a higher level of coverage.

Mr. PETERSON. Are they going to have to get burned before they finally wake up and use this?

Dr. BROWN. Given what we have today, yes. It is going to take a situation where payments would have occurred to really get folks to understand how the program operates.

Mr. PETERSON. And milk, it has always been a problem, but it seems like it is more of a problem now. When the prices go down, dairy farmers produce more milk so they can cover their overhead. And when the prices go up, they produce more milk. So do we have more fixed cost in the system now, more people that have come into dairy and they have to have a certain amount of cash flow to make things work? Is that what is driving this production that keeps going up, even though the prices are going down?

Dr. BROWN. When you look at the structure of the industry today, and we have a lot of very large dairy operations that are in place, even if the current operators were to go out of business, what happens to those large operations, someone buys them for

cents on the dollar and produces milk. So we can't get milk out of the system as easily as maybe occurred 10 or 15 years ago.

Mr. PETERSON. Well, thank you, Dr. Brown, and we look forward to working to figure out how we can make this work. Thank you.

The CHAIRMAN. The gentleman yields back.

G.T., 5 minutes.

Mr. THOMPSON. Thank you, Mr. Chairman. Thanks to all members of the panel for being here as we look at some forecasts for the rural economy.

For me, personally serving on this Committee is about making sure that we have a strong rural economy. Specifically, the largest commodity, and I really appreciate the insight that many of you offered on the largest commodity in Pennsylvania, which is our dairy industry, which is hurting dramatically. I was very proud to be asked by Pennsylvania Agriculture Secretary Russell Redding, to join an appropriately named, a dairy development workgroup, to be able to parallel the work that we do here but at a state level. We have dairy farmers and co-ops and real diverse stakeholders sitting at the table, trying to look at what are the local, state, and Federal issues impacting the challenging economics of our dairy farm families today. We have some of the larger farms that you made reference to, but in Pennsylvania it is largely smaller farms, and a lot of them.

Dr. Brown, I want to kind of explore this. One potential fix that has been identified on dairy relates to how producer feed costs are calculated. Obviously, we kind of went some different rounds on this with the farm bill. Specifically, it is my understanding that during the drafting of the current farm bill that we have, which by and large, actually was very successful, but when it came to the feed factor for corn, soybean meal, and alfalfa, they were reduced by ten percent from those originally proposed in consultation with the dairy producers, nutritionists, and economists. Do you believe that restoring the feed factor to their original proposed levels would help the program, reflect the needs of the dairy farmers, and really allow the MPP to be able to be utilized, to have a return on investment for those who buy into that risk management program?

Dr. BROWN. Well, as you recall during the 2014 Farm Bill debate, and this would have been early in the process, 2012, we did reduce those coefficients by ten percent, trying to hit some budgetary scores that were needed at the time. If you were to revert back to the original coefficients, that roughly is going to mean another $1–$1.25 in terms of potential payments. So it moves the margin $1–$1.25 lower, which, if you look back at 2016, that would have made a much larger payment, especially in the May/June 2016 time period that what we ended up making. So that change all by itself will, in fact, would have made larger payments for dairy producers across the country.

Mr. THOMPSON. Thank you. Another challenge, and it has been referenced in the testimony that was provided today, I appreciate it being identified, that we have to look towards the next farm bill is how we encourage young people, that succession planning, to get involved in farming and to contribute to the farm economy, especially now when the net farm income is forecasted to be flat or decline.

The average age of U.S. farmers is 58 years old. As the population continues to grow, so does our demand for farmers. Dr. Brown testified that Missouri producers in the 35 to 44 year old age group saw debt-to-asset ratio that nearly doubled from 14.5 percent to 28.8 percent from 2012 to 2015. And most young people lack the capital to start a farm, and fewer are eager to incur large sums of debt needed to grow a successful farming operation.

Now, I am working with my friend, Representative Courtney from Connecticut, to reintroduce the Young Farmers Success Act that would provide farmers and ranchers with eligibility for loan forgiveness under the Federal Direct Loan Program. Do you think a program like this is a meaningful way to incentivize young people to get involved in agriculture, and how can we supplement these efforts in the next farm bill? And that is for any of the witnesses that would like to take a shot at that.

Dr. JOHANSSON. Well, certainly, we had some direction in the last farm bill to make the programs a little bit more accessible to younger farmers, and that has been, by and large, successful, but as you mentioned, it is probably not meeting the certain level of farm turnover that we are likely to have.

I know that Dr. Outlaw's group has seen that happen with their representative farms, and I would just turn to him to talk more from a farm-by-farm basis.

Dr. OUTLAW. From the discussions and interaction we have with farms, it has been shocking how going and updating that information every other year or so, we have run across a lot more younger farmers than we normally had, and that is a good sign for agriculture.

The bad sign is those folks, according to anybody's numbers; ours, USDA, anyone's numbers, they are more highly leveraged than your older farmers. And they are going to be experiencing the worst of all these financial problems that we are talking about.

The CHAIRMAN. The gentleman's time has expired.

Ann Kuster, 5 minutes.

Ms. KUSTER. Thank you, Mr. Chairman. And thank you to our panel.

I am just going to pick up on this dairy question. I am from the State of New Hampshire and we are having problems with this Margin Protection Program as well.

Sadly, we have witnessed 19 of our 120 dairy farms going out of the commercial dairy business as a result of a drought. We had terrible drought conditions last summer. International market instability, high feed costs, and the Federal safety net that just isn't working for our producers.

My question is, in 2015, 81 percent of the dairy farmers enrolled in the Margin Protection Program purchased the insurance coverage above the $4 catastrophic margin level, but in 2016, the figure dropped 68 percent, to the point where only 13 percent of our dairy farmers had coverage.

Part of the problem for us is that the MPP uses the national average feed cost, and my question is, that fails to take into account the higher transportation and labor costs of moving feed to the Northeast when producers can't grow their own. And I am asking, this is for Dr. Brown, but if anyone else has a comment, you talked

about the decreased level of participation, if Congress passes a new farm bill without making the program more responsive or flexible to the regional needs, are you concerned that participation could drop even further, and do you have any suggestions for how we could repair this program, going forward?

Dr. BROWN. Yes, if we make no changes and we continue with the current program, we certainly are going to see less and less participation, unless we get a serious event similar to 2009, which was very low milk prices, or 2012, which was very high feed costs, those would have resulted in payments under that $4 catastrophic level.

I remind us, $4 is about as good a safety net as a concrete floor.

Ms. KUSTER. Yes.

Dr. BROWN. It does not provide much protection. And in terms of the question regarding regional effects, those have been discussed over the last several months. We are going to have to continue to look at exactly what prices we use to trigger the feed cost side of the equation. And I will sometimes remind us that the risk we want to try to cover from feed cost *versus* milk price. When you look back at 2016, we often see the big decline in milk prices that got folks in trouble, yet when you look at the feed cost side of the equation, it really offset those lower milk prices, yet that wasn't felt across the United States, especially for many of our producers who grow a large proportion of their own feed. Those are some of the issues that we need to continue to look at as we think about which prices should be triggering the feed cost side.

Ms. KUSTER. Thank you. And then this is just a question for anyone on the panel. I am concerned, as I know many Americans are, about the impact of these immigration raids on our agricultural community, and knowing that access to labor is an important component of the economics of any agricultural endeavor. Could you comment, and if we have time, also some of the statements about trade that are coming out of this Administration, I am concerned particularly with immigration but if you could comment?

Dr. WESTHOFF. Well, on immigration, clearly, anything that would reduce the supply of farm labor would raise labor costs to producers, at a time of already pretty tight returns. So for many people, that would be a very important consideration to think about.

On the trade side, the United States is very dependent on international trade for most agricultural commodities. For our major fuel crops it can be as high as over 70 percent in the case of cotton, over 50 percent in the case of soybeans and sometimes wheat, and even a significant portion of corn, even though we think about corn primarily being used domestically, we export a lot of it directly, and also by means of our meats and so on that we export. So if there were changes made in international trading rules that resulted in lower U.S. agricultural exports, that could have an important effect on the farm economy as well.

Ms. KUSTER. Anyone else want to add? We just have a few seconds left.

Dr. JOHANSSON. Well, of course, as you know, the current guestworker program for farmworkers has been beset by several problems, but there are fixes that have been contemplated, and

several pieces of legislation that have moved in the past and that are being contemplated.

Currently, the H–2A program in 2006 we saw 72,000 workers certified, or 72,500 workers certified. And last year it was up over 165,000 workers. So it is certainly providing some access to additional labor, but we know it is an issue.

Ms. KUSTER. So my time is up. I just hope that this Committee will have the chance to indicate our concerns about the raids and the impact on the farm economy.

Thank you. I yield back.

The CHAIRMAN. The gentlelady's time has expired.

Mr. Gibbs.

Mr. GIBBS. Thank you, Mr. Chairman.

Just quickly, Dr. Kauffman, the current situation and the 1980s, I can vividly remember the 1970s and 1980s because I lived through it. The big difference was we came through the mid-1970s with record farm prices, then we had record interest and hyperinflation, and then we had the disastrous price crash, but farmers were highly leveraged in that period as compared to now. Is that a true statement?

Dr. KAUFFMAN. Yes, certainly, leverage was more of a problem, and combined with the interest costs that you were describing.

Mr. GIBBS. Yes. I just wanted to make that clear.

Two things I want to hit on. One is, first of all, obviously we have a totally different situation than we had when we wrote the last farm bill, obviously, the commodity prices, and with the ARC program, the PLC program, and crop insurance. Whatever we come up with, Mr. Chairman, as you know, we have to go and sell it to the floor, and we have to sell it to the public. And is there a better way to provide protection through crop insurance, obviously for crop losses, but also revenue insurance compared to doing it in title I? Is there something we should be looking at differently? Anybody can respond to that.

Dr. JOHANSSON. Well, certainly, we have seen the success of the crop insurance program grow over time. We are now over $100 billion in liabilities, upwards of 90 percent of the commodity crops are covered, and we see continued increase and participation by specialty crops in the program. The crop insurance program, obviously, there were a lot of changes that were introduced in the last farm bill that have had mixed responses, as we noted earlier, the STAX program and the SCO Program, for example, haven't been viewed as successfully as some of the other parts of the crop insurance program.

Whether crop insurance can be used to provide more of a longer-term structural safety net that is typically provided by the commodity title I programs, I am sure that there are ways to evaluate that. I would say that, at least for right now, the crop insurance program seems to be fairly popular amongst most producers and seems to be working well. Obviously, as we have heard today there are other ways to think about commodity title I programs that I am sure you guys will be debating that over the next year or so.

Mr. GIBBS. Specifically in the ARC and PLC program, how is that working right now? How would you compare it then?

Dr. JOHANSSON. Well, as had been mentioned by some of the other panelists, ARC and PLC program are functioning as designed, although the coverage of those programs vary across the country depending on which producer signed up for the different program. And obviously, those choices that were made in 2014 are held for the life of the farm bill.

Mr. GIBBS. That is right.

Dr. JOHANSSON. And, of course, due to the Olympic averaging nature of the ARC program, we know that, certainly as revenues have come down, that that program has provided substantial payments to a lot of producers, but that is expected to decline over time as those Olympic averaging revenues start to run out.

Mr. GIBBS. I need to cut you off. There is one another issue I want to bring up, and that is trade. We all know that trade is very important to agriculture. The reason we had the situation is we were out-producing the demand, and one way you can make that up is trade.

There is talk of tax reform and the border adjustment tax could be a tariff. Does anybody have a comment on the effects of that, and then the effects with our other countries, our trading partners, and with WTO GAAP compliant.

Dr. WESTHOFF. And I won't pretend to understand all the WTO implications that there might be, but I know that some issues have been raised about the border adjustment tax that will need to be resolved.

Clearly, what happens on taxation of anything that crosses borders will have implications, and you can expect that there will be discussions internationally about them. If we do things that, again, restrict our ability to export our products, that is also very important for U.S. agriculture for reasons we talked about.

Mr. GIBBS. Yes. I am concerned, because to me, it smells like a tariff, 20 percent on imports. And it could trigger a trade war, and that would be devastating to American agriculture, so I am really concerned. So I know nobody brought it up in their testimony, but that is something, if you just turn on the cable news TV this morning or read the papers, that seems to be the number one issue that is developing and impacting. It is raising a lot of red flags for a lot of people.

So thank you, Mr. Chairman. I yield back.

The CHAIRMAN. The gentleman yields back.

Ms. Adams, 5 minutes.

Ms. ADAMS. Thank you, Mr. Chairman and Ranking Member Peterson, and thank you, gentlemen, for being here today.

As we begin a new Congress and the reauthorization of the farm bill, it is important to remember that the farm bills have only been passed and into law with bipartisan support, including with the votes of Members representing metropolitan areas throughout the United States. The coalition of Members of Congress from both farming communities and metropolitan areas are vital for passing a farm bill during this Congress as well. It also requires that we continue to use the farm bill as a vehicle for developing new policies to further promote and improve access in all communities to local fresh foods including the many food deserts that are found throughout Charlotte, that I represent.

Dr. Johansson, as a follow-up, in addition to increasing local sourcing of foods in Charlotte, there is willing interest in promoting food consumer co-ops as local food markets for communities where the local supermarket has moved out of the neighborhood. Has USDA carried out any research on the economic impact of consumer food co-ops and other community-owned food retailers in under-served communities?

Dr. JOHANSSON. I know I saw that local food co-ops were going to be an interest of yours, and I looked at some of the data that we have collected over the last 5 years or so, and since the 2014 passage of the last farm bill we did put some more programs in place that would support local and regional food distribution, including some work done by the Cooperative Rural Development Mission area at USDA to support information and toolkits necessary, and some loan programs to support local food co-ops. So in that sense, we have certainly looked at the issue. A successful food co-op, obviously, that is going into an area where you have a lack of other available choices for the population in that region, will obviously need a couple of things for success. You need to have available funding, you need to have the conditions, and certainly demand necessary, to keep the food co-op in profitable operation. There is some information available on that. I would certainly be glad to compile that and get it back to you for the record.

Ms. ADAMS. Thank you, I would appreciate it.

What are the economic benefits of extension programs carried out by 1890 institutions in both urban and rural communities throughout the United States?

Dr. JOHANSSON. Well, certainly, the extension service and the United States, both 1862 institutions and 1890 institutions, are sort of a crown jewel of the United States ag system. I would say it is certainly something that is envied by other countries around the world. The benefits to extension can be spoken to much more intimately by the extension folks that are here today. I will just note, before turning it over to them, that as part of our ag outlook forum we do have the student diversity competition that we promoted each year. And this year we have 28 graduate students that will be coming in for our forum, and of those, we have, I believe, ten coming from 1890 institutions and another 11 coming from 1862 institutions, and several from Hispanic-serving institutions.

Ms. ADAMS. Thank you very much. Mr. Chairman, I yield back.

The CHAIRMAN. The gentlelady yields back.

Mr. Crawford, 5 minutes.

Mr. CRAWFORD. Thank you, Mr. Chairman. I appreciate you gentlemen being here today.

My colleague, Mr. Gibbs, touched on this a little bit on the border adjustment tax. There is some talk about retaliatory measures that Mexico is not waiting for those, at least not rhetorically, because we have heard some reports coming out that they would no longer buy U.S. corn, they would rely exclusively on Brazil and Argentina. That may just be pure rhetoric. I suspect that it is, in the heat of the moment. But in reality, this could happen, correct?

Dr. WESTHOFF. Yes. There has been discussion from Mexican circles about what they might do, and to try to get peoples' attention, if you will. What is very important is to remember that we have

a global corn market. And certainly, we have lots of advantages of selling our corn into Mexico and that is hugely important too to our industry. It is also true that if you just rearrange trade patterns the net effect on the corn market may not be all that huge. And if we sell products to countries that Brazil formerly sold things to, and Brazil picked up the Brazilian market, the effect on the corn market is not as large as if Mexico just disappeared from the corn market entirely. So it will be very important to watch this discussion as it goes forward.

Mr. CRAWFORD. Sure. Well, it is particularly important to me personally, I represent a big rice district. It is 25 percent of the U.S. rice market. Mexico is our number one customer.

Dr. WESTHOFF. Right.

Mr. CRAWFORD. So while they made that statement about corn, I think it is safe to say they would extend that to the U.S. rice industry as well. Agree?

Dr. WESTHOFF. Yes, certainly. I mean Mexico is our number three trading partner on the export side, and so what happens there is hugely important to our sector.

Mr. CRAWFORD. Let me switch gears just a little bit. I want to talk about the loss of farms that is taking place. I think everybody in this room that has a rural district would probably agree that we have seen a precipitous loss of farmers. But we haven't really talked about the infrastructure associated with that production base. And I am concerned about what kind of impact this might have on our ag infrastructure, our equipment dealers, our bankers, processing and other components of the ag sector. Can either of you comment on that or what you foresee?

Dr. WESTHOFF. Yes, I will just start by saying that, certainly, we have seen a lot happen already. I mean obviously, farm equipment sales are far off the peak levels, and that is having ramifications across lots of America. So those things are very real, and if the pressures continue, you can expect more of that to happen in front of us.

Mr. CRAWFORD. Yes. Dr. Outlaw, let me ask you, the cotton industry, not a real pretty picture over the last few years. A lot of factors. A lot of it had to do with China stockpiling cotton. As we know, some of it is weather-related. We had a steep decline in cotton acres in my district, some 40 percent decline year over year in the last crop year. The 2014 Farm Bill, cotton was taken out of title I. We touched on that a little bit, and opted for the STAX program, which has performed much worse than expected. How are farmers going to cope with that situation, and what kind of policy recommendations would you make in light of the way the STAX program has performed?

Dr. OUTLAW. Well, one of the ways that the farmers have coped is that they have used the generic base to plant other crops that might have more potential for them. So that has been a very big positive, having that generic base available. But really, all these crops need some sort of price protection, and not having it makes the producers and their lenders, who have a partnership, look at other commodities as options a little bit stronger than cotton. Cotton's infrastructure is so unique, which is how you started this

question, when a cotton infrastructure moves out of a community it is very difficult to get it back.

Mr. CRAWFORD. Yes.

Dr. OUTLAW. And so basically, I think that there has to be some sort of price protection afforded to cotton producers, whether it is through the seed, that will work, obviously, but there has to be some sort of protection in this next bill.

Mr. CRAWFORD. In the 45 seconds I have left, if anyone wants to comment on the viability of ag trade in Cuba. I have a bill that would lift the credit restriction, that is really the only impediment to selling U.S. ag commodities in Cuba. Would anybody like to weigh-in on that, what the potential there is for U.S. agriculture?

Dr. JOHANSSON. Initial analysis that we have done at the Department suggests that we could triple trade to Cuba under certain conditions. And certainly as has been noted, improving market access and expanding trade is key for U.S. agriculture as we continue to see increasing productivity like we did last year. We need to find places to sell that overseas.

Mr. CRAWFORD. Thank you. My time has expired.

The CHAIRMAN. The gentleman's time has expired.

Mr. Lawson from Florida.

Mr. LAWSON. Thank you. Thank you very much, Mr. Chairman, and thanks for this Committee to be here this morning.

I represent six counties in north Florida, rural counties in north Florida, so I know the importance of farm economics and recovery. We have watched cattle prices begin to weaken over the last year or so, and I can you tell, that is one question, can you tell us what is behind your outlook for increase in productivity, even as prices continue to decline? And second question, we are seeing cotton prices recover some time this year, and understand that the outlook is for that to continue. What factors are influencing the recovery, and are they likely to remain at this pace for a long time?

Dr. JOHANSSON. Well, I will touch briefly on those, and then turn it over to the folks on the panel to chime in.

Certainly, we are seeing cattle prices pressure downwards. We are expected to see record production next year nevertheless. A part of that is lower feed costs. The January, as has been mentioned, the January cattle inventory estimated total cattle and calf numbers in 2017 had increased for the third consecutive year. It is still in recovery from the drought that we saw in the Southern Plains earlier in 2011, 2012, and 2013. Beef cattle numbers are above 2016 and producers indicate they are holding more heifers in addition for the breeding herd.

The year over year increase in the number of cattle outside feedlots is also indicative of increasing production, so we are likely to see record production in 2017, meanwhile, as prices come down. The cattle cycle is a longer run phenomenon that perhaps Dr. Brown can mention in a second.

On the cotton side, we are seeing China, as had been mentioned, had built up significant stocks. As much as 60 percent 2 years ago of the world's global stocks were held in China. They have been unwinding that stock position as well as moderating their domestic support policies for their cotton producers in China, so we are seeing an increase in the amount of auctioning of their stocks that

they were holding. They are down to about 10 million tons since last year. They are holding about 48 percent of the global stock right now. Despite that fact, the U.S. continues to sell our cotton at a premium, higher-quality cotton, and we expect that to continue, going forward. And certainly, we have seen a recovery to a certain degree in global economic demand for cotton. An increase in price for crude oil, which decreases the attractiveness of synthetics as a substitute.

Dr. BROWN. Two back-to-back years of one million head growth in beef cattle numbers in the United States is much of what is at play in terms of lower cattle prices. When I look back, I will say 2014, when we had $3 calves, made the industry want to expand, and that expansion is just now what we are dealing with as we look ahead. It takes the industry a long time to make changes in the supply side because of just the biological nature of the industry, and I am afraid we are not done with that expansion. Much of the expansion is, again, occurring in the Midwest; Texas, Oklahoma, Missouri, where we had a lot of drought conditions occur in 2012 and 2013, and we are just rebuilding herds back to where they were pre-drought conditions. But the supply side of the industry that gives us three percent more meat supplies in 2016, another three percent in 2017, spells for me that we are probably not done in terms of where lower cattle prices hit.

The CHAIRMAN. The gentleman yields back. Thank you, Mr. Lawson.

Mrs. Hartzler, 5 minutes.

Mrs. HARTZLER. Thank you. Sounds like we all need to eat more beef, and wear more cotton, I guess.

But anyway, wanted to ask you, Dr. Brown, about the dairy policy, you talked about in your testimony the low participation and how it is like a concrete floor, the current safety net. And so I want to run a couple of ideas by you, and then just ask you generally what you think we need to do about the 2014 levels.

But based on your testimony where you say finding ways to spread risk across Federal policy may be the balance needed to provide a better safety net. So under the current farm bill dairy producers must make a choice between the MPP dairy and the Livestock Gross Margin Insurance Plan for Dairy (LGM-Dairy), which is run by the Risk Management Agency. Once farmers make that choice, they are locked into it for the life of the farm bill. However, these programs offer very different forms of risk protection. So in your view, what would be the policy consequences of either allowing dairy farmers to participate in both programs at once, or at the very least, allowing farmers to decide each year which program they would like to be in?

Dr. BROWN. Yes, that choice is very interesting because you could envision a program where MPP provides the catastrophic coverage, if you will, and yet you provide producers the chance to maybe buy-up via the LGM insurance route. So there may be some options as we look ahead into the next farm bill.

We always have to be careful that those complement each other and don't compete, *i.e.,* that producers somehow can't double-dip in terms of those two programs, and that we figure out how to make them work together, but it might provide the ability to use both in

a way that is helpful. And I will say LGM for dairy might provide a little more short-term decision process for producers as they could make that on a month-by-month basis, whereas currently when you think about MPP, that is an annual decision that we have made. So it might allow producers a little more flexibility if we give them the choice.

We would probably have to talk about uncapping LGM for dairy, or at least talking about the cap for LGM for dairy relative to where it sits today as well.

Mrs. HARTZLER. Okay, well, that kind of goes into the next question which talks about making programs workable and responsive. So currently, MPP dairy calculates margins on a bimonthly basis, so this could make the program less timely for participating farmers as margins can fluctuate on a monthly basis. Do you think a monthly calculation would make the program more effective and more attractive for producers?

Dr. BROWN. Certainly, going to a monthly calculation means that we will get payments more often. If you look back at 2016, if we would have done it month-by-month we would have gotten larger payments than we ended up with using the bimonthly process that was laid out in the 2014 Farm Bill. So I do think that is more what the dairy industry is accustomed to is seeing month-to-month. They get a milk check every month, so it might make more sense to give them payments on a monthly basis as well.

Mrs. HARTZLER. Yes. And from both your testimony and Dr. Westhoff's, you talked about how the anticipated amount of money that was going to go out in these programs fell far short of actually what was going out. So it seems to be there is some extra money there that had been budgeted that could be used perhaps to provide that relief.

So the last question, just in general, what do you think needs to be done to fix the dairy program to make it truly responsive?

Dr. BROWN. Well, first, we have to learn from our experience. We made a big swing in 2014 in terms of the dairy policy change that we made. We are learning that producers are not as interested in participation as maybe we thought when the 2014 Farm Bill was passed, understanding that our working assumption was that 70 percent of milk production would be signed up at $6.50, to find out now that it is less than two percent is signed up at that $6.50 level should tell us participation is less, that perhaps government costs are less than we expected. That might provide us then what are the alternatives that provide a better safety net, and get a more reasonable cost estimate for those different alternatives.

Mrs. HARTZLER. Great. Thank you very much. I yield back. I appreciate it.

The CHAIRMAN. The gentlelady yields back.

Mr. Panetta, 5 minutes.

Mr. PANETTA. Thank you, Mr. Chairman. And thanks to all of you gentlemen for being here. I appreciate your testimony as well as your preparation for being here to testify. Thank you.

Dr. Johansson, I come from the central coast of California. My Committee Members are going to get sick of me saying I come from the salad bowl of the world where there are over 100 specialty crops grown there. Those types of crops, we can't just run a ma-

chine through the fields, unfortunately. We need a labor force to go in there and pick them. Obviously, with the immigration issues that we have been having, and you talk to farmers for the past year and then some, they basically say, even with the drought, water is not the number one issue; labor is the number one issue.

You said that there are some fixes. You mentioned the rise in number from 72,000 to 165,000. What else can be done when it comes to the H–2A program, what can we be focused on? Because I believe that is where we can go to help alleviate the situation.

Dr. JOHANSSON. Yes, and certainly, I would defer any policy responses to when we get confirmation of a new Secretary. And I was just noting that, over the past several years, Congress, both on the House and the Senate side, have contemplated adjustments to the H–2A program to make it more workable for farmers to use that program to get a more stable supply of labor. In those various bills, there are a good number of ideas that could work with both Labor or with USDA, depending on how those different facilitating adjustments were made.

I would be glad to put a more formal response together for you for the record, and certainly would like to defer to the new Secretary when he has a chance to get on-board.

Mr. PANETTA. Understood. I look forward to that response.

Thank you very much. I yield back my time.

The CHAIRMAN. The gentleman yields back.

Rodney Davis, 5 minutes.

Mr. DAVIS. Thank you, Mr. Chairman. And I am glad I got to follow my colleague, Mr. Panetta, because I have actually seen his district and it is the salad bowl of America. And I got to witness organic leafy greens being put into the bags that end up making it to the grocery stores in my district. And thankfully my wife was with me because she got to see the same greens going into the generic bag and the name-brand bag. So I always remind her of that when we are at the store, let's go ahead and just buy that one. So thank you for what your district does.

And I am going to segue that into what my district does in central Illinois. I don't have a lot of specialty crops, but I have what I call our special crops; corn and soybeans. And today's hearing is about the farm economy, and the current state of affairs in my area, it is pretty troubling in my state. What is also troubling to me is that many of my colleagues on both sides of the aisle, they rally, and we talk about rallying around rural America, and instead of seeing that, I see that some trotted out the same proposals to gut the Renewable Fuel Standard. And it is a program that I believe drives growth in not only rural America but throughout the country. And for anyone who still thinks that the RFS was causing commodity prices to skyrocket, let me point out the following: we are producing more ethanol than ever before, the price of corn is lower today than it was when the RFS was expanded, last year food prices fell in the longest decline since the 2009 recession, and the overall 2016 food price fell below 2015, the first annual decline since 1967. Claims of corn being diverted from food products ring hollow when we see that, even during the drought of 2012, America's farmers produced the eighth largest corn crop in history, with record harvests in 2014, 2015, and 2016.

I want to ask two questions, Dr. Johansson. What can Congress do to encourage growth in the biofuel sector, and would repealing the RFS contribute to instability in the agriculture sector, particularly in the corn markets?

Dr. JOHANSSON. Well, it's is a great question.

Mr. DAVIS. Thank you.

Dr. JOHANSSON. Two. First, I will note that in the weekly briefing packets we put together for senior leadership, we do have two slides in there from central Illinois cash markets; one for corn and one for soybeans.

Mr. DAVIS. Thank you.

Dr. JOHANSSON. So those feature prominently in our briefing package each week.

Turning to the Renewable Fuel Standard, as you noted, we are currently producing—conventionally, we always thought capacity for ethanol production was around 15 billion gallons. Annualized basis right now, we are at 16 billion gallons. So we are producing more ethanol, and that is primarily a function of the fact that we are getting better at it over time, and we are exporting more than we have in the past.

In terms of providing incentives for increased production, by and large, from the RFS standpoint, the conventional standards capped at 15 billion gallons, so additional gallons that are produced above that are going to have to find a home, for the most part in the export market, or in higher blends.

So those are two opportunities for increasing conventional corn ethanol production past the 15 billion gallon cap.

The question about whether or not changing the RFS in such a way to get rid of the mandates, essentially, what would that effect have on corn production and prices, *et cetera,* in the rural economy, I think is your question. I think that is a two-part answer to that, and I will give you an economist's answer. All right? So on the one hand, in the near-term most studies have shown that you wouldn't see a lot of changes because the way that the refineries sector has set itself up, they produce a blend stock that assumes that you are going to have a ten percent mix with ethanol. So changing the refinery technical engineering standards will take some time, if they were to do that. I will also point out that you still need octane in your gasoline, and ethanol provides the cheapest octane, so you are still going to have a good amount of ethanol production. If you didn't mandate it, it would vary more by price. So right now you have gasoline prices that are relatively low, although they have been ticking up lately. As a substitute, ethanol has generally been cheaper than gasoline, but right now it is about break-even. I defer to people on the panel. If you were to change the matter in such a way that it would become more, I guess, reflective of the relative price you have between corn ethanol and gasoline, similar as to what you see in Brazil with respect to the sugarcane and gasoline usage.

Mr. DAVIS. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. The gentleman's time has expired.

Mr. Soto.

Mr. SOTO. Thank you, Mr. Chairman. And I am hopeful by hearing concerns about a potential trade war or immigration crack-

down, since either of those things would be a disaster for our farmers, for rural America, particularly when we see that agriculture is just getting by now.

I am from Florida's Fighting Ninth, which we have the top cattle producing county in the state, Osceola County, and Congressman Lawson already touched on that. And I also have the second highest citrus producing county in the state, Polk County, and we are taking a beating on citrus right now due to the greening disease. So I was wondering what you all could advise us as far as what we should be putting into the farm bill. Citrus is a huge crop in Florida, Texas, California, and many other states, I would love to hear your thoughts on that.

Dr. JOHANSSON. As you mentioned, well, the Florida citrus crop has been getting hammered by citrus greening over the last 5 years or so, probably even a little bit longer, and we have noted that decrease in production in our reports at USDA. We are down to one of the lowest Florida orange crops that we have seen, probably since back to the 1960s, if I am not mistaken, even perhaps further back.

Mr. SOTO. We are down 70 percent from over a decade ago.

Dr. JOHANSSON. Yes. So in terms of assistance that can be provided, we are certainly working—as the Chairman of the Federal Crop Insurance Corporation, we are certainly looking to find new products that provide help to tree crop growers, and we have added a number of tree crops, including citrus crops, to the crop insurance portfolio. I think that will continue on into the future. Research and development on ways to address diseases like citrus greening are another way that USDA has been active in trying to find a solution for producers down in Florida.

Regarding new farm bill proposals, I will turn that to folks that can speak more freely about that.

Dr. WESTHOFF. Just to add a quick point as to university research. It might be a little self-serving to say that we need more university research, but we are obviously trying to get on top of the issues. It is obviously a very critical industry.

Mr. SOTO. Well, thank you, and we were blessed to have over $125 million in assistance through the last farm bill, and the situation is dire in our state and in our nation, and we will be drinking mostly Brazilian orange juice if we don't get active on this, and so I just wanted to make sure we highlighted it.

The other issue I wanted to hear you all speak about is, found it a little disturbing that young farmers seem to be in far more debt than older farmers, and it seems to trace a similar line with student loans and the like of young professionals, as opposed to 10, 20 years ago. So what can we do to help our young farmers get out of debt like the generation of farmers before them?

Dr. OUTLAW. Well, I will add a few things and then defer to probably Rob. But the programs that had been put in the previous farm bill seemed to work very well. I have received quite a bit of feedback from the producers we work with; the young producers, saying they really appreciate the consideration that was provided in the past farm bill, with lower interest rates and things like that, that that has been helpful to a good extent.

The big question is, and it is not easy to handle, is, agriculture is a very capital-intensive occupation, and if you want to have control of land where you control the outcome of getting to farm it every year, you have to buy it, and that is the problem. And so I know there are a lot of programs geared towards new farmers, but anything you can do to try to help alleviate some of that cost would probably be appreciated.

Mr. SOTO. Thank you. I yield back.

The CHAIRMAN. The gentleman yields back.

Mr. Allen, 5 minutes.

Mr. ALLEN. Well, thank you, Mr. Chairman. As you know, in my home State of Georgia, agriculture is the number one industry. And according to the Georgia Cotton Commission, in 2014 Georgia planted around 1.38 million acres of cotton, and had an average yield of about 900 pounds per acre. In my district, cotton is among the largest crops planted, and currently many of my farmers are very concerned with; and obviously the gin folks, the folks that make the equipment, everybody has great concern about what is the future of our economics as far as cotton.

And in speaking to the farm people, when I have talked to our farmers, they are particularly concerned with two things: first, crop insurance is a big deal; and then second, some type of price support. And, for the last farm bill, commodity prices were at all-time highs, and today, obviously, they are very low. And I have talked to commodity people to try to understand that market, and maybe how we can smooth out that line, because that seems to be the biggest problem is in planting, and our farmers say, "Let us worry about the yields, we will deal with that," but we have kind of got to know what and where these things are going to be.

What is really driving this commodity, like the high prices before and now the low prices, and is there a fix, is there something we can do? And is it caused by trade? I don't know. Dr. Johansson, do you want to start with that and tell us how we can stabilize that thing?

Dr. JOHANSSON. Well, not so much for cotton prices, I guess, but I would say that volatility and commodity prices in general would be expected, going forward, to be less volatile than we have seen, both in the upside and the downside. Our projection is for relatively flat prices, going forward, and over the next 10 years, we don't expect to see dramatic increases or decreases. Dr. Westhoff mentioned that, of course, things can change, that will change that situation, whether it is a drought or a change in policy, or a change in trading arrangements could affect that, either for a positive or a negative. Just due to the fact that we do have so many relatively high global stocks right now, I would say that that is going to minimize any upward or downward movement in the near-term. Going out 10 years, we do still forecast the U.S. to be the number one cotton exporter, going forward. And by that time, China is going to be the number one cotton importer. So to the extent that we maintain a good trading relationship with our number one customer, I think that will keep the picture, in terms of at least our outlook for trade, stable.

Mr. ALLEN. What drove up the commodity prices that we saw a few years ago?

Dr. WESTHOFF. Well, it was any number of factors, obviously. We did have 3 straight years, from 2010 to 2012, when global average yields for the grains and oilseeds were below trend. And so that made not as much commodity available in the world. China was increasing its consumption very dramatically, and we also had the biofuel revolution had just passed its most extreme phase in this country. So you had a very severe shortage of stocks in many commodities across the board, drove prices dramatically higher.

Since 2012, we have now had 4 straight years with above-average yields. It has pushed prices lower. And that suggests as we go forward if we had more normal yields, going forward, that might give you a bit of a price recovery, but we are starting from very high levels of stocks, as Dr. Johansson indicated, so it will take some time to work through those.

Mr. ALLEN. Okay. Obviously, cotton was pretty much ignored in the last farm bill. What, going forward, can we do as far as cotton is concerned in the new farm bill?

Dr. OUTLAW. I have already said it once, but cotton needs to have some sort of price protection on either lint or seed, and it looks like seed is an avenue that might work. So that has to happen.

Mr. ALLEN. Okay. All right, well, I yield back, Mr. Chairman.

The CHAIRMAN. The gentleman yields back.

Dr. Kauffman has a 12 o'clock hard stop, which we are running past. Dr. Kauffman, just leave when you need to, sir. Thank you very much for being here this morning.

Ms. Lisa Blunt Rochester, 5 minutes.

Ms. BLUNT ROCHESTER. Thank you, Mr. Chairman, and Ranking Member Peterson. I also want to thank the panel. I feel like you have simultaneously given us a glass half empty and full. So thank you for that.

And my question is actually for Dr. Kauffman. I represent the State of Delaware, and so many of you might know we have farmers, as many chickens as people, we also have financial services sector that is very important.

And so first, I wanted to clarify. Did I understand you to say in your testimony that there has been a reduction in loan volume for operating expenses? That is the first part of the question. And then is this solely due to lower input prices, because farmers don't need loans to pay for fuel or fertilizer or seeds, *et cetera,* or is it a result of lenders being skittish about extending credit to farmers, or both?

Dr. KAUFFMAN. It does seem like it is a combination of several things.

To clarify first to the first question. Outstanding farm debt has still been rising. So looking at last year, it had been increasing but perhaps at a slower pace. Some of the data that we collect that reflects new loan originations shows that there was a notable slowdown in the fourth quarter of last year in terms of loan volumes at commercial banks, and that is due to a couple of factors. First, as you noted, on the input cost side, certainly lower fertilizer prices, lower livestock prices in terms of inputs, that has represented some reduction. Anecdotally, we have also heard some statements that prepaid expenses were a bit lower in the fourth quarter. So farmers perhaps delaying some of those decisions. We did in many areas see stronger than expected crop yields. And so

in terms of the timing on cash flow and when some of those loans might be made, I think that was also a contributing factor.

And then certainly, to your point, there has been a bit of hesitation and apprehension going through this loan renewal season, just making sure that finances are in order before getting to the next phase of production.

Ms. BLUNT ROCHESTER. Got you. Does anybody else on the panel have a comment?

Okay, thank you. I yield back my time.

The CHAIRMAN. The gentlelady yields back.

Mr. Marshall, 5 minutes.

Mr. MARSHALL. Good morning, panel. Let me add my gratitude for being here, and bring greetings from the State of Kansas.

As I think about Kansas, I would bring to you just not the macroscopic level. When you talk about income of $150 billion of income, it doesn't mean much to me, but the average income for the farmer in Kansas for 2015 was $6,000. For 2016, it will be less, and in 2017 it will be even less. And it is very hard to raise two kids on $6,000 a year.

As a physician, I hate to use the term *crisis* ever, but it is certainly nearing that. The economy in my district is 60 percent agriculture, so when you have an ag economic issue, you have a statewide economic issue, and the dominoes are starting to fall. So we are very, very concerned in Kansas.

My first question is for Dr. Kauffman, who probably has the closest connection to Kansas. How severe have low commodity prices been on farmers' bottom lines, and are we seeing farmers going out of business yet, or are they still managing to live off equity?

Dr. KAUFFMAN. So to the first question on low commodity prices, it certainly is having an impact. We aren't seeing a great deal of an increase in bankruptcies, in farm bankruptcies, and even loan delinquency rates have been relatively low. That said, most of us often report things in averages when we talk about the farm sector overall, but certainly, there are pockets, there are areas where things have perhaps been worse than some others, as we look at the downturn in commodity prices, and as we hear concerns being voiced by agricultural lenders. Certainly, we know that the environment in wheat has been particularly pessimistic, with prices much lower in wheat than they had been in other commodities. And as we look at the cattle sector, though prices have improved over the past couple of months, the previous 18 months had not been so good. And so in terms of lenders expressing some concern about cash flow in those areas, and obviously, both of those sectors are important for the Central Plains, so that has been an area where that there has been more concern.

Mr. MARSHALL. Okay, thank you.

Well, my next question is for Dr. Brown. Most people don't realize this, but I represent the fastest-growing dairy sector in the country, so dairy is becoming a bigger issue as well. And you have answered bits of this question, and maybe all of it, this is real important to my dairy people, so in your opinion, what combination of improved payments and reduced costs to participate would induce significant numbers of dairy farmers to sign up at more effective, higher margin coverage levels of the MPP program? And

again, you have answered bits and pieces of that, but I certainly want you to know we are concerned about it too.

Dr. BROWN. Yes, absolutely. So I will start, first, with talking about premiums for a minute.

Mr. MARSHALL. Okay.

Dr. BROWN. It seems to me that one of the options that we have talked about is lowering premiums for different levels of MPP participation as a way to get increased use of the program. However, I found dairy producers very disinterested in making payments for premiums and getting nothing in return. And so I am not certain that lowering premiums, all else equal, generates a lot of additional participation in the program. However, premiums have been higher than have been needed to pay for the program thus far. That is one area we have to think hard about how that affects participation if we were to lower premiums.

The other side of it is, what is an appropriate safety net? We talk about currently with $4 to $8 coverage options, and $4 being the catastrophic, how do we help pull that catastrophic level up. It is just very important that we think carefully about the policy as we move forward as, if we end up with policy that is too lucrative, we have all experienced that from the 1980s dairy programs that we had, and that was not much fun either. So it is a tightrope we have to walk between providing a safety net, without it becoming too lucrative.

Mr. MARSHALL. Okay. Quick question to Dr. Johansson. We are all awash in supply of many of our major commodities. What can we do to increase demand for these products?

Dr. JOHANSSON. Certainly, we know that, as I mentioned earlier, coming off of the record harvests we have had, where we had all three major commodities; corn, soybeans, and wheat, have record yields, first time in 40 years that that has happened. Agricultural productivity continues to move forward and it is essential that we find new markets for those products. Certainly, we are putting R&D into trying to develop new products from corn, for example, but the key will be trade. We need to find the ability to continue to move our products overseas to new markets.

The CHAIRMAN. The gentleman's time has expired.

Ms. Plaskett, 5 minutes.

Ms. PLASKETT. Yes, thank you, Mr. Chairman. And thank you, witnesses, for being here.

I have a question for you, and I don't know who would be the appropriate person to respond to this. However, we have seen in recent months the discussion of rural America, and its emergence is really a real focus of many of us here in Washington and in terms of politics. As we move from a post-industrial society in many respects, there seems to be, and tell me if I am correct or incorrect, a tension in the rural areas between agriculture and that post-industrial sector. I know in the Virgin Islands, where I am from, we are now seeing the closing of so many of our industries, and people are going back to agriculture as a source, as an economic driver. What do you see is the emergence of agriculture? Will it remain the strongest economic driver in rural areas? Is it changing, as we see the changing in pricing happening? What is the out-

look for that? I see they are looking over in that corner to Dr. Johansson.

Dr. JOHANSSON. Well, it is a great question, it is really interesting, and you will get five different answers when you ask five different economists.

Ms. PLASKETT. You sound like us up here, saying the same thing.

Dr. JOHANSSON. We have seen consolidation occur in agriculture in the United States, as well as in the sectors that are upstream and downstream of agriculture. When you enter into a tight economic situation like we are seeing right now, that you are likely to see additional consolidation occur. Obviously, that consolidation has slowed down substantially from what we had earlier, over the last 50 years or so, but I would suspect that we do see additional consolidation as producers that have more liquidity and have better financial bottom lines are able to increase the size of their production, despite the fact that prices are relatively low, but we project them to be stable. In that situation you could see additional consolidation in several sectors.

Ms. PLASKETT. Well, when you talk about the consolidation of the products and what is happening in the industry, what is the support that we in the farm bill could give to expanding other markets? We are looking at the global market, but as my colleague, Ms. Adams, was talking about, there is also the urban markets that could be an additional market that we have not really supported and allowed growth in. If there are food deserts in America, then that is obviously a marketplace that we should be moving into. How do we as Members of Congress support that?

Dr. JOHANSSON. Well, the business sector is very good at finding ways to meet demand. And when we have demand occurring, certainly, for diverse products like organics or other types of products in that sector, we are seeing producers in the United States as well as processors respond to that demand. I think that is likely to continue trying to pick winners and losers is, from my perspective, never a very easy thing to do when we look towards creating particular provisions. In general, I like to say that if you let the business opportunities operate transparent to market signals, then you are going to see the most efficient allocation of resources. But, again, that is sort of a——

Ms. PLASKETT. Okay. So that is interesting you talk about demand because I believe that there is a demand in these food deserts, it is we haven't found a way to bring the pricing or the support for them to be able to meet the demand of their pallets, to be able to have those foods.

But another question I had is, in the period of low pricing that we have now, there seems to be, and will there be a delay in purchasing of equipment or machinery among farmers? Are there ways for us to encourage purchasing of products? I know in the Virgin Islands we have cooperatives that are looking at food processing plants to support production. What are the ways that the farm bill can support that?

Dr. WESTHOFF. Well, just make the point that obviously, when agriculture suffers, it has an effect on lots of upstream and downstream industries.

Ms. PLASKETT. Yes.

Dr. WESTHOFF. And so we have seen that play out the last couple of years here, and it is going to be an issue, going forward. So trying to make agriculture healthier will, of course, have ramifications for the rest of the economy as well.

So just general things you do to support agriculture will have an effect.

Ms. PLASKETT. Yes, because I am just concerned because I know that having the equipment will assist them, but if the prices are low that is going to mean a delay in them being able to purchase those things.

Dr. WESTHOFF. Right.

Ms. PLASKETT. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. The gentlelady's time has expired.

Mr. Dunn, 5 minutes.

Mr. DUNN. Thank you, Mr. Chairman.

I would like to address my question to Dr. Johansson. The greatest concerns that I hear from timber owners in my district and harvesters regard policy variables related to regulatory and tax uncertainties, which impact their management practices and business models. Certainly, wildfires, insects, and disease all are concerns, and I will recognize them only to bring them up at a later time. But what I would like to have from you, if I could, is any additional indicators that you are tracking that, and can you discuss your outlook for the timber industry?

Dr. JOHANSSON. You are correct that the Forest Service is part of the USDA, although the Forest Service economists and folks that work at the Forest Service generally provide that outlook. I don't focus a great deal of attention on that outlook when I develop the outlook, which I will be doing next week for the agricultural sector. That being said, we know that, as you mentioned, timber production and timber resources in the United States has been responding to a lot of signals. You have the private-sector forests and you have the public-sector forests. They are managed slightly differently. Interest rates are certainly going to play a big role in how those are managed in terms of timber managers looking at what their optimal harvest schedule is.

There is a lot of, obviously, interaction with our trading partners on some timber issues. Certainly, in California we have seen, due to the drought there, there are a lot of timber issues in terms of trying to remove a lot of that dead timber that we are seeing as a result of the drought. Of course, in the Southeast you have completely different issues where we are trying to make sure that we continue finding opportunities to export a lot of those wood pellet products overseas to a lot of demand that is coming from Europe. And so I would imagine that it is a tough question to answer, a lot of issues that are tied up in timber, and I would certainly be happy to get back to you.

Mr. DUNN. Let me turn your attention to a different one then. Let's pay attention to dairy just for a moment there. Producers are faced with very poor returns currently in the price of milk, they are very low, and they remain concerned in my district regarding outlook for the dairy sector. However, the USDA's report called for increasing milk production and increasing milk prices. Can you address that in 2017?

Dr. JOHANSSON. Yes, and I will just touch on it briefly, and I am going to let Dr. Brown speak because he is the——

Mr. DUNN. Yes, and I was going to ask Dr. Brown the same question.

Dr. JOHANSSON. You are right, our 2017 dairy outlook right now is for all-milk price to be upwards of about $17, $18 a hundredweight. That is up from the previous year. And in addition, we are seeing increasing productivity in milk per cow, increase in the dairy herd, due to some stronger signals from abroad in terms of being able to export that. I will stop there.

Mr. DUNN. Do you think exporting is key to that?

Dr. JOHANSSON. I think exporting is key to that, yes.

Mr. DUNN. All right. Dr. Brown.

Dr. BROWN. Yes, I would agree, higher milk prices in 2017 are not coming from less supply. We are going to have more milk supplies again in 2017. It is a combination of demand for U.S. dairy products abroad, as well as you look at a number of other countries, ASEAN (Association of Southeast Asian Nations) in particular, where milk supplies are down relative to a year ago, that I think are important to the higher price outlook.

I remind us the risk around these outlooks, and I will say when you are very much dependent on increases in exports, we could look back a few months here down the road and not get the kind of milk price increase that we think if we don't get a strong increase in U.S. dairy exports in 2017.

Mr. DUNN. Well, let's hope we do. Thank you very much.

Mr. Chairman, I yield back.

The CHAIRMAN. The gentleman yields back.

Mr. Arrington, 5 minutes.

Mr. ARRINGTON. Thank you, Mr. Chairman. And thank you, panelists.

I think you will agree with me, but I certainly believe strongly that if we are going to make America great again, we need a strong and sustainable rural America. I don't know who is going to feed and clothe the American people if rural America isn't healthy, and I don't know who is going to fuel the American economy if rural America isn't healthy. I know there are a lot of factors. I serve on the Committee on the Budget, we have been talking about regulatory burden, the $58 billion in additional regs burden to our community hospitals out of ACA. I have more rural community hospitals in my district than any other in the State of Texas, and they are just getting crushed and they are going out of business. And there are 600 on the brink of going out of business around the country, and I think that having viable health care is about sustaining rural communities. No greater effect than our agriculture though, especially where I come from. Twenty-nine rural counties in west Texas.

And I just came from a Budget hearing and I have to say it has kind of thrown me off. I had a really good statement or two about rural America and free trade and fair trade, and a good, strong farm bill. I don't think it is drought, I don't think it is insects, I don't think it is trade wars, the meeting I just came from where we have a fiscal crisis, and where we have mandatory spending eating away at very important discretionary investment, domestic

investment, is going to be the biggest challenge of the 21st century, and every committee, every policy committee, every authorization committee.

I represent the largest cotton patch in the world, and I want to ask you, if I may, some questions about cotton. And I am just going to tee them up, and if you guys would knock them down in any order that you so choose.

What was the rationale behind the Brazilian case that they made to WTO in pulling cotton out of the farm bill, out of the title I as a covered commodity, what was the rationale? Just real quickly.

Dr. JOHANSSON. The argument was that the U.S. support for cotton via both its direct payment programs as well as some of the other programs was causing adverse harm to Brazilian producers, due to the fact that prices were low.

Mr. ARRINGTON. Could that argument or that rationale be applied to other crops?

Dr. JOHANSSON. Yes.

Mr. ARRINGTON. What would happen if all of our crops were outside of the safety net?

Dr. JOHANSSON. I mean essentially, if we were to not have any farm bill?

Mr. ARRINGTON. Yes. Yes, let's apply that rationale to every crop, pull it out of the safety net, the word *disaster* comes to mind, or would be a challenge and adjustment? Anybody? Federal Reserve, Dr. Kauffman?

Dr. KAUFFMAN. Certainly, if it were to happen immediately it would be a shock, as there are a number of lenders that would look to crop insurance as one of the risk management strategies, and borrowers, as Dr. Johansson reflected, are primarily interested in the products——

Mr. ARRINGTON. I will tell you, with cotton in west Texas, it has been a disaster. I can't imagine if it were the citrus guys or the soybean and corn it has been a disaster.

Let me move on to the next question. How much does China's dumping and their mass subsidization, I understand that they are allowed to subsidize because they are a developing nation, which I find hard to believe that we have agreed to do any kind of trade deals when those are provisions, but how does their dumping and mass subsidization of cotton affect the global market, and specifically the U.S. cotton producer? Significant, slight, *de minimis?*

Dr. JOHANSSON. As I mentioned earlier, China did have, and still does have significant cotton stocks relative to the global level of stockholding abroad. They are currently about 50 percent of total global stocks, and they were about 60 percent as recently as last year. The way that we have addressed that in terms of our outlook is that it does put a damper on the potential for upward price movements due to the fact that you have that many stocks out there.

Mr. ARRINGTON. National security, I think it is number one, and this is a big part of it.

I have one last question, if the Chairman will allow me.

The CHAIRMAN. Sorry, the gentleman's time has expired.

Mr. ARRINGTON. Okay.

The CHAIRMAN. Mr. Faso, 5 minutes.

Mr. FASO. Thank you, Mr. Chairman. I appreciate the panel coming today, and I very much appreciate your advice and expertise in terms of dealing with the 2018 Farm Bill.

I represent a district in the Catskills in Mid-Hudson Valley in Upstate New York, and I can tell you I have talked to dozens of dairy farmers and not a single one of them thinks the Margin Protection Program works, they are very cynical about it, and some are angry and some are just resigned.

We have listened to a number of the discussions, depending on what commodity we are dealing with or whether it is dairy, about the need for exports and the need for trade. I am a little concerned about the border adjustment issue, especially when I hear that the value of the dollar will rise, and it is somewhat speculative in terms of that rise, but what are the consequences, what are the unintended consequences of it.

So I guess this is to Dr. Johansson, as well as the other panelists, but particularly Dr. Brown. What can we be doing, because it seems to me we just go through this boom-bust cycle, what can we be doing to expand the domestic market for fluid milk and other dairy products? We are spending more now for this stuff; bottled water, than we are for milk. And I look at the USDA that says we can't sell a whole or two percent milk or flavored milk in a school lunch program, and yet the other parts of the government are saying how do we come up with programs to shield people from the results of lower prices. And yet we don't seem to be spending enough time and effort to actually increase our consumption of what many of us would argue is a much more desirable product than some of the other things that we may be consuming as Americans and as school children. So perhaps we could address the question of what should we be looking at, what could we be doing to increase our domestic consumption of fluid milk and dairy products.

Dr. BROWN. Consumer trends have, of course, always been very difficult to follow. We have gone through the boom and bust of consumers wanting more dairy fat, less dairy fat in their diets. When you look at the very recent data, however, we are starting to see some signs of some more positives occurring with some of the more whole milk products starting to share a little bit of growth in terms of demand that we haven't seen for a long time.

There is a lot of work left to do in terms of product innovation. I see the industry spending a lot of time trying to figure out an answer to that question with some of the new products that are on the marketplace today. But we have to continue to think about the packaging and delivery of fluid milk products to consumers, trying to find new experiences for them to consume milk products. Some of the few things that are available to us right away that might help stem what has been a long-term decline in fluid milk consumption.

Dr. JOHANSSON. And I agree. We are seeing a projection for increased domestic milk consumption through the products that Dr. Brown had talked about, and I would expect some of those trends to continue. In addition, marketers are finding ways to get milk into the grocery store and find margin there for producers, such as through organic programs and organic production. But again, with

the forecast, at least that we have, and it is a little bit more optimistic than the FAPRI forecast in terms of production, going forward, over the baseline period, trade will be essential for making sure that we are able to move those products overseas and maintain margin for dairy producers.

Mr. FASO. Right. And I realize that Dr. Johansson might not be able to comment on this, but one thing that you just mentioned, when you mentioned organic, I have an organic yogurt producer in my district, they are paying $38 a hundredweight for milk, and certainly, we will see more and more producers looking in that direction.

But, Dr. Brown, and perhaps the others, what about this whole business of school lunches and two percent and whole milk, I mean does this make any sense whatsoever?

Dr. BROWN. We are going to have to continue to evaluate what we see in the school lunch side to make certain that we put in front of students what is nutritionally sound. We do go through ebb and flow in terms of what we think is *good,* if you will, and we have gone through a period of time where maybe we were avoiding some of the higher-fat products that are out there, to now maybe realize that, in correct quantities, we can talk about a different makeup of school lunch than we have had in the past. So perhaps that is more debate that we need to have as we move forward.

The CHAIRMAN. The gentleman's time has expired.

Mr. Lucas, 5 minutes.

Mr. LUCAS. Thank you, Mr. Chairman. And I appreciate the opportunity to be here today. And I would be remiss if I didn't note that your comments were very kind at the beginning of this hearing, and yes, on February 28, we are going to launch into a Subcommittee hearing. And for those of you who might be surprised that there are even trees in Oklahoma, I can assure you that forestry is a crop, to be planted, to be nurtured, to be harvested, to be replanted. So like all other good commodities that fall under this Committee's jurisdiction, we are going to work aggressively on that at the Subcommittee level.

That said, I have listened with great interest and enthusiasm to my colleagues' comments and the comments of the panel. I would hope everyone on the panel would acknowledge that the biggest miracle of all is the fact that we are operating under the 2014 Farm Bill. And as the Chairman, who was my loyal and dedicated wingman, and I hope to cover his back in this farm bill process, will attest to, there were times in that 2½ years not everybody in this town thought we would have a farm bill, and that we would wind up reverting to 1938 and 1949, and that the forces who didn't understand rural America would repeal those Acts and we would have nothing. Think about where we would be today with nothing, and that is the direction we were headed. So it is an accomplishment. It is a miracle that we have this farm bill.

And I know, gentlemen on the panel, that you appreciate this more than anyone, but the very basic concept in production agriculture, I guess, goes all the way back to my ag policy class 35 years ago at Oklahoma State, when Dr. Ray put so much effort into trying to explain the inelasticity of demand for food and fiber. And for some of my other colleagues, what that simply means in a ra-

tional way is, either you have enough to eat or you don't. And if you don't have enough, you will pay whatever it takes to get it, and if you have more than you need, you won't pay anything for the next. Is that a fair layman's assessment, gentlemen? And that is what drives ag policy to be such a complicated thing, compared to most other things in this building or in this town, or in this legislative process.

Then-Chairman Peterson and I had a long series of discussions in 2009 and 2010 that, whether it was in the feed cycle or in the grain cycles, or the indirect consequences of Renewable Fuel Standard, that we were building up productive capacity. Now, the drought in my region, from 2011 through 2014, and the drought that hammered my friends in the Midwest in 2012, distorted where we thought we would be, gave us a few more years of nice prices, and in some cases record prices, but reality came crushing back to us. And that is what farm bills are all about, as the Chairman alluded to earlier. We don't do farm bills for the good times, but we try to do farm bills to address the bad times. And that is where we are.

That said, at least, unlike Dr. Flinchbaugh and Chairman Roberts in 1996, we don't have to reinvent the wheel, or like Collin and myself and Chairman Conaway, reinvent the wheel again in 2014, we have something to work from. Not perfect. No legislative products are ever perfect, but at least we have something to work from. And my colleagues on this Committee, pardon me for raving and ranting just a little bit, you are going to find out over the course of the next 18 months or 2 years how tough this is. The pressures that we will encounter from our rights on the right, who, as I like to say back home in my town meetings, don't want to spend any money on anybody for any reason, and some of our friends on the left who don't want to spend any money on rural America or the concept of modern wondrous production agriculture in this country. We have to bridge that. We have to create a product that will meet the needs of our citizens, because after all, if those folks on the farm can't produce that food and fiber or that milk, then it is not going to be in the store, it is not going to be on the shelf. And in that strange concept called inelasticity of demand will kick in, and there will be a rumble. There will be a rumble.

So with that, I look to the panel and say, not a perfect document, but it is a document. And I look forward to working with each and every one of you, and with our new Secretary, when confirmed, and with our Chairman and Ranking Member, as we all together try to make sure that our fellow citizens have enough to eat, and that our friends on the farm have the capacity to provide that food and fiber, even if perhaps they don't always understand each other, or in some instances, at the end of the food chain they don't have a clue where it came from, we are still doing important work here, no matter what the think tanks may think scattered around this town.

And with that, Mr. Chairman, I feel better. I have gotten it off my chest. I yield back.

The CHAIRMAN. Well, I am sure the audience appreciates the therapy.

Mr. DesJarlais, 5 minutes.

Mr. DESJARLAIS. Thank you, Mr. Chairman.

Dr. Johansson, I don't know how much has been discussed today about trade, but probably the question I get most from my ag folks back in Tennessee, in addition to saving crop insurance, is what is going to happen with trade, because there was some great opportunities through the Trans-Pacific Partnership for our cattlemen, country-specific like Japan or South Korea, and with the current Administration not viewing those agreements favorably, what advice can you give us and how can I reassure them that things are going to be okay in terms of trade with the new Administration? What strategies do we need to be looking at?

Dr. JOHANSSON. Certainly, that is a question that is on a lot of folks' minds, and we did talk about trade a lot today. A lot of our baseline forecasts at USDA looking forward in terms of our price estimation and in terms of our production estimation for the major commodities have built into those assumptions that trade is going to continue on as-is going forward. It didn't have TPP built into it, but it has our just general trends in trade that we have seen occurring over the recent history. And I would say in that forecast we still foresee a role for trade, an increasing role for trade. As I mentioned earlier, as U.S. producers continue to become more productive, we are going to need to find a place to sell those products. And selling those products overseas is something I am pretty sure that we are going to continue to do, going forward.

Mr. DESJARLAIS. Okay, so right now, what you are telling me is that you see the *status quo* as being the policy until we are told otherwise?

Dr. JOHANSSON. I am just saying for our forecast that I base a lot of my testimony on that is based on the *status quo.* Certainly, the new direction that we are going to get on trade, or the current direction that we have right now, is going to continue to have to focus on trade for agriculture. In particular for this sector, it is important that we continue to trade, and I don't see that changing any time soon. I don't know if the other panelists want to take a bite at that one.

Mr. DESJARLAIS. Okay. Anybody else want to chime in?

Dr. WESTHOFF. No, I just certainly agree that trade is absolutely essential to many sectors in U.S. agriculture. What happens to trade policy, what happens to trade arrangements with other countries matters a lot. Our own baseline, likewise, assumes a continuation of current policies, going forward. We stand ready to look at what happens if there are alternatives.

Mr. DESJARLAIS. Okay. And have you reached out with the new Agriculture Secretary Purdue, do we have a strategy for addressing trade with him or has that not started yet?

Dr. JOHANSSON. Well, we are eagerly awaiting confirmation hearings, and we are looking forward to having the new Secretary onboard. And at that point in time, I am sure that we would be more than happy to provide some more responses to comments for the record.

Mr. DESJARLAIS. Okay. Any concerns with the proposed tax reform and the border adjustment tax in regards to trade? How will that affect our exporting?

Dr. JOHANSSON. I know there has been a lot of folks that have been studying that issue lately in Washington, and certainly, the border adjustment idea has a lot of question marks around it in terms of what I have looked at in the past in terms of border adjustments, but we haven't conducted any analysis on that at this point in time in my office.

Dr. WESTHOFF. Just to add, there are questions about the WTO compatibility of some of the proposals that have been made, different arguments, and I don't pretend to know the answer.

Mr. DESJARLAIS. Yes.

Dr. WESTHOFF. But clearly, that is when you want to get a handle of it before it goes forward.

Mr. DESJARLAIS. Maybe a question I shouldn't ask in an open forum, but I have asked several people and haven't got an answer, and I am sure it is simple. Are our exports taxed now? If we are sending beef to Japan, is it taxed on the way out? You will make me feel better by——

Dr. WESTHOFF. Well, there is no different tax treatment for exported product than domestically consumed product today.

Mr. DESJARLAIS. Right.

Dr. WESTHOFF. So it would be taxed the same way and be consumed domestically.

Mr. DESJARLAIS. Okay.

Dr. WESTHOFF. Under the border adjustment, the exported products would not be taxed, imported products would be taxed.

Mr. DESJARLAIS. Okay, but they are currently being taxed?

Dr. WESTHOFF. The same as——

Mr. DESJARLAIS. The same as tires or cars.

Dr. WESTHOFF. Same as anything else. Yes.

Mr. DESJARLAIS. All right. Thank you.

I yield back.

The CHAIRMAN. The gentleman yields back.

Mr. Arrington, do you have another question for a minute?

Mr. ARRINGTON. Thank you, Mr. Chairman.

The CHAIRMAN. And that is 1 minute.

Mr. ARRINGTON. Yes, real quick. I won't editorialize on this round.

Has there ever been a cost-benefit analysis with respect to our investment in agriculture, and my understanding is with direct support for farmers it is about a ¼ of a percent relative to the Federal budget that we invest in an ag safety net. Has anybody done the cost-benefit analysis on the cost to providing that and the return in national security, that is, to quantify the national security implications to not being able to feed your own people? Are you aware of any study, or have you yourself, Dr. Johansson, ever conducted such a study?

Dr. JOHANSSON. Well, I will turn it over to, actually, these guys. They may have looked at this in the past. We certainly do a lot of cost-benefit analyses, and in terms of the projections of national security implications of not being able to feed ourselves, that has occurred in the past. I don't really have any idea of what the numbers are on that. I was certainly more familiar with research that has been done on the returns to providing investments in agriculture in terms of basic research and development. Generally

speaking, in those types of analyses you find for every dollar that is invested in research, you get a return of between $10 and $20 in agriculture in benefits. And that spans a pretty large area. But I will see if other folks might have other things to add.

Mr. ARRINGTON. Thank you for your time.

The CHAIRMAN. All right.

Well, gentlemen, thank you very much for being here today. You have clearly laid out for the Committee and for Congress, and hopefully the other folks watching, the clear need for a safety net that is reliable, multi-year, and that can be counted on by not only producers but lenders and implement dealers. We intend to get this done and done on time. It hasn't been done in 16 years.

The 2014 Farm Bill could make this argument that we needed it, but it was harder to say in good times that you needed a safety net. That will not be the case over the next 2 years. My colleagues and I will have a little less difficulty, hopefully, explaining to our colleagues why it is needed.

The one group that is underrepresented in the conversation though are consumers, not just SNAP consumers but all consumers. You can love the current farm bill or you can hate the current farm bill, but it delivers, along with, quite frankly, our producers, the most abundant, safest, and most affordable food supply in the developed world. And it is their hard work, it is their sweat equity, it is their risk-taking, and it is relies on a safety net to be there during hard times. And we are clearly in hard times, based on the conversations you have had. We need to be engaging the consumer so that they understand the deal. Everybody likes to get a deal. They get a deal every time they go to the grocery store, every time they eat in a restaurant they pay less for their food than anybody else in the world, and that is a result of hard-working farmers and ranchers across this country, and yes, reliance on this safety net.

So engaging those consumers to help them understand why it is important to them: national security interests that my colleague just mentioned, and their own personal pocketbooks, that we have a strong production agriculture, and that, by extension, rural America continues to prosper. So you have laid out the *why* very well this morning, and I appreciate each of you coming to join us this morning, and whatever personal efforts you had to make to get here. I appreciate Dr. Kauffman swinging in from Omaha as well.

So with that, under the Rules of the Committee, the Committee's 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 Committee on Agriculture is adjourned. Thank you all.

[Whereupon, at 12:18 p.m., the Committee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUBMITTED STATEMENT BY AMERICAN BANKERS ASSOCIATION

Chairman Conaway, Ranking Member Peterson, and Members of the Committee, the American Bankers Association (ABA) writes to thank you for holding a hearing on the "Rural Economic Outlook: Setting the Stage for the Next Farm Bill." On behalf of the approximately 2,000 agricultural banks we represent, the ABA wishes to provide for the record our views and perspective on the state of the agricultural economy.

Banks continue to be one of the first places that farmers and ranchers turn when looking for agricultural loans. Our agricultural credit portfolio is very diverse—we finance large and small farms, urban farmers, beginning farmers, women farmers and minority farmers. To bankers, agricultural lending is good business and we make credit available to all who can demonstrate they have a sound business plan and the ability to repay.

In 2015, farm banks—banks with more than 15.5 percent of their loans made to farmers or ranchers—increased agricultural lending 7.9 percent to meet these rising credit needs of farmers and ranchers, and now provide over $100 billion in total farm loans. Farm banks are an essential resource for small farmers, holding $48 billion in small farm loans, with $11.5 billion in micro-small farm loans (loans with origination values less than $100,000). Farm banks are healthy and well capitalized and stand ready to meet the credit demands of our nation's farmers large and small.

In addition to our commitment to farmers and ranchers, thousands of farm dependent businesses—food processors, retailers, transportation companies, storage facilities, manufacturers, *etc.*—receive financing from the banking industry as well. Agriculture is a vital industry to our country, and financing it is an essential business for many banks.

As agricultural banks we have a vested interest in the success of the agricultural economy. These banks have significant investments in agriculture, and as an industry we monitor with diligence the performance of the sector. This statement informs you of the following developments which we discuss:

- A summary of the state of the different sectors that agricultural banks finance;
- The need for tools to enable banks to help finance farmers and ranchers; [and]
- The need for more appraisers in rural areas.

We thank you for the opportunity to provide our comments for the record. The ABA staff stands ready to answer any questions on these topics and looks forward to providing you with any additional information.

A Summary of the State of the Different Sectors that Agricultural Banks Finance

As has been reported in the press and based on feedback from our bankers and from agricultural economists, there has been a gradual increase in the level of financial stress in the farm sector which has caused agricultural lenders and borrowers to become cautious.[1]

The agricultural economy has been slowing, with farm sector profitability expected to decline further in 2017 for the fourth consecutive decline. However, farm and ranch incomes for the past 5 years have been some of the best in history. As a result of the passage of the 2014 Farm Bill, farmers, ranchers, and their bankers achieved a level of certainty from Washington about future agricultural policy. Interest rates continue to be at or near record lows, and the banking industry has the people, capital and liquidity to help American farmers and ranchers sustain through any turbulence in the agricultural economy.

Although declines in the cost of some key inputs have provided modest relief for farmers and ranchers, profit margins have remained very low and new farm loan originations dropped sharply in the fourth quarter as reported by the Kansas City Federal Reserve Bank. If profit margins remain low through 2017, the pace of new debt will be a key indicator to monitor in assessing the severity of financial stress through the year. As bankers, continued declines in farm income, and any potential leveraging of the sector, would be a cause for concern.

There are several economic factors in the agricultural economy impacting farmers and ranchers[2] thereby affecting the agricultural banking sector as well as follows:

Community banks are declining in number as a result of over-regulation and unfair competition. Most existing agricultural banks are purchased by other, expand-

[1] *Ag Finance Databook,* Federal Reserve Bank of Kansas City, 1/20/2017.

[2] Farmer Mac, *The Feed,* Winter 2016–2017; *Kansas City Fed Agricultural Outlook* 02/01/2017 and USDA Economic Research Service.

ing agricultural banks. This leads to the polarization of banks and communities not having a local agricultural bank.

Weather remains the biggest source of uncertainty in projections. There has been a dramatic improvement in drought conditions throughout California, and conditions in the Midwest are shaping up for a favorable spring plant. This bodes well for continuing record yields, but depending on the commodity, reduced prices.

After a down year in 2016, corn and soybean production in South America looks to rebound in 2017, which combined with record corn, soybean and wheat yields in the U.S. and worldwide, helped contribute to an excess of grain stocks this winter, however, prices are at multi-year lows, although soybeans have held up better on strong demand from China. Large corn, soybean and wheat crops have driven ending supplies higher and kept downward pressure on market prices. This lower commodity price cycle continues to be of concern to the agricultural banks.

Beef, pork, and poultry prices are down as a result of abundant supplies, but dairy prices are holding due to strong export demand and durable cheese demand. Lower retail prices have put downward pressure on profitability in the cattle industry, but market equilibrium may be in sight. Milk prices are up due to greater consumer demand for cheese.

A record U.S. rice crop in 2016 has contributed to lower prices, but strong global demand should provide a backstop for further drops. Cotton prices stabilized in 2016 due to weather disruptions in global production, but cotton continues to lack adequate support from USDA programs.

The new Administration's positions on agriculture are unknown at this time, which adds some uncertainty to the sector. With a new Secretary in place soon, these concerns should be allayed.

Markets are expecting two additional interest rate hikes in 2017, which would put the expected average farm operating interest rate between 5.2 and 5.7 percent by the end of 2017.[3] Banks will be stress testing their portfolios to address any potential repayment problems.

Debt-to-earnings and interest expense-to-earnings are climbing in the agricultural sector, however current and projected levels are still far below levels experienced in the 1980s. It would take a debt-load increase of more than ten percent, combined with a rate increase of more than 300 basis points and an income decline of more than 50 percent, to shock the interest expense-to-earnings ratio in 2017 to 1980 peaks. Agricultural banks will continue to monitor debt levels for overleveraging.

The Need for Tools To Enable Banks To Help Finance Farmers and Ranchers

Based on the above factors, and as the agricultural sector experiences stress as a result of 4 years of reduced farm income as reported by the USDA,[4] it will become increasingly important for banks to have the tools available to assist farmers and ranchers.

For agricultural banks to have the ability to assist farmers and ranchers to the full extent possible, it will be necessary to address the unfair competition in the agricultural credit markets. Increasingly tax-subsidized entities such as the Farm Credit System, utilizing their GSE status and other benefits, have migrated to lending beyond their mission, cherry picking the better credits while minimizing their lending to young, beginning and small farmers and ranchers. The ABA advocates for leveling the playing field by removing taxes from all banks that lend to agricultural real estate, reforming the Farm Credit Administration to make it more transparent and accountable, and requiring the Farm Credit System to stick to their Congressionally mandated mission.

Banks work closely with the USDA's Farm Service Agency to make additional credit available by utilizing the Guaranteed Farm Loan Programs. The repeal of borrower limits on USDA's Farm Service Agency guaranteed loans has allowed farmers to continue to access credit. These programs become vital in the current state of the agricultural economy. We ask that funding for these programs be increased to an amount necessary to refinance and take care of potential borrowers in distress, and take care of those borrowers, large and small that will need the credit to expand. Accordingly, with increases in funding levels, a corresponding increase in staffing and IT infrastructure will be needed to be able to deliver these valuable programs.

One success of the 2014 Farm Bill was the continued support of crop insurance programs. Agricultural lenders use crop insurance as a guarantee for repayment of their loans in the event of disaster. Crop insurance helps secure financing for oper-

[3] Farmer Mac, *The Feed,* Winter 2016–2017.
[4] USDA ERS *2017 Farm Sector Income Forecast.*

ating credit. With crop insurance, a lender has the ability to provide support based on individual producers' proven crop yields. This allows lenders to tailor a loan to a producer's operation and allow for year-to-year adjustments within that operation. Crop insurance has allowed lenders to provide the best possible terms for operating loans because it helps to lower the risk for the lender. ABA has been a long-time supporter of crop insurance programs and would like to see the programs expanded to help as many producers as possible.

The Need for More Appraisers in Rural Areas

We call to your attention the rapid aging of the agricultural appraiser workforce, with retirements exceeding new entrants, thereby leading to shortages in several rural areas of the country.[5] Our agricultural bankers are concerned that if measures are not taken to encourage the recruitment and reduce the onerous requirements to become an appraiser, there will be delays and missed opportunities to provide credit at a time when the agricultural sector needs it most. We thank the Congress for the hearing entitled "Modernizing Appraisals: A Regulatory Review and the Future of the Industry" held by the Financial Services Subcommittee on Housing and Insurance on November 16, 2016. ABA supports the continued Congressional efforts in this area.

Conclusion

In summary, the agricultural sector for the most part is doing well, however there are continued signs of distress as we enter the fourth year of reduced farm income and low commodity prices. With no expectations for increased commodity prices in the near future, and the potential for interest rates to start rising, it will be crucial for agricultural banks to have the flexibility to help our farmers, ranchers and rural areas through programs like the Farm Service Agency's Guaranteed Loans Program, Crop Insurance, the availability of qualified rural appraisers and a leveling of the playing field with the Farm Credit System. While the current state of the agricultural economy is not near the experiences of the 1980's, it does merit continued monitoring and the help of Congress in the coming farm bill. Agricultural banks across the country stand ready to assist farmers, ranchers and agribusiness in meeting their credit needs.

SUBMITTED QUESTION

Response from Nathan S. Kauffman, Ph.D., Assistant Vice President, Economist, and Omaha Branch Executive, Omaha Branch, Federal Reserve Bank of Kansas City

Question Submitted by Hon. Don Bacon, a Representative in Congress from Nebraska

Question. As you mention in your written testimony, the debt-to-asset ratio in the farm sector has increased over the trailing 4 year period and is projected to continue rising in 2017. You state that this benchmark is still significantly below levels during the farm crisis of the 1980s. Many in the farming industry have resorted to borrowing money to maintain the current level of their operations by leveraging the value of their farmland. If the current trend in borrowing persists while farmland values decline, how distant is the horizon where we might see debt-to-asset ratios reach a level similar to the 1980s farm crisis?

Answer. In the 1980s, farm bankruptcies in the U.S. began to surge when the debt-to-asset ratio for the U.S. farm sector reached, and exceeded, 20 percent. According to USDA, the debt-to-asset ratio is forecasted to rise to 13.9 percent in 2017, which is up from 11.3 percent in 2011, but is still low from a historical perspective. Recently, however, farmland values have been trending lower while debt in the farm sector has continued to rise. Specifically, farmland values throughout the Midwest have declined by approximately five percent year-over-year in each of the past 3 years and U.S. farm debt has also increased by about five percent annually in recent years. If these trends were to persist at this same pace in the coming years, the debt-to-asset ratio for the U.S. farm sector could reach 20 percent in approximately 5.5 years.

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[5] Appraisal Institute—*U.S. Appraiser Population Estimates 06/30/2016.*