

A ROUNDTABLE DISCUSSION ON THE STATE OF THE FARM ECONOMY

TUESDAY, MARCH 1, 2016

U.S. SENATE,
SUBCOMMITTEE ON AGRICULTURE, RURAL DEVELOPMENT,
FOOD AND DRUG ADMINISTRATION AND RELATED AGENCIES,
COMMITTEE ON APPROPRIATIONS,
Washington, DC.

The subcommittee met at 2:36 p.m., in room SD-116, Dirksen Senate Office Building, Hon. Jerry Moran (chairman) presiding.
Present: Senators Moran, Blunt, Hoeven, Merkley, and Tester.

OPENING STATEMENT OF SENATOR JERRY MORAN

Senator MORAN. Gentlemen, thank you for joining us. In consultation with the ranking member, we concluded that at the beginning of this appropriations process, it would be useful for us to have an update on the economic conditions that agriculture (ag) producers, agribusinesses, and rural America, are facing.

We will begin our normal appropriations process with the Food and Drug Administration (FDA) Commissioner, the newly confirmed FDA Commissioner, tomorrow, and then we will have Secretary Vilsack in front of the committee a week later, as we begin our efforts to determine appropriate funding within the U.S. Department of Agriculture (USDA) and FDA.

But as a broader backdrop, we would like to hear what you believe is going on in the ag economy. Then we invited some of the representatives from a variety of farm and commodity groups to join us for any kind of follow-up discussion that we might have with you and among ourselves.

My intention is this is not a hearing. We have described it as a roundtable. The goal is to just have dialogue. I noticed they gave me a gavel. Maybe that is just psychological, but we will use it to try to keep us working in an orderly fashion.

Again, we appreciate you taking time to bring us up-to-date on your latest findings and conclusions in regard to agriculture. We have three outstanding—if there is an outstanding economist, we have three of them with us. I am delighted you could spend the time.

Senator Merkley, anything you would like to say?

Senator MERKLEY. I very much appreciate you bringing your expertise. Agriculture is the second-largest driver of our economy in the State of Oregon. It is a continuously shifting landscape. I know, doctor, you gave the state of agriculture in America report last week, and I very much look forward to your insights. Thank you.

Senator MORAN. Senator Merkley, thank you.

Senator Blunt, anything?

Senator BLUNT. I think I am fine.

Senator MORAN. All right. Very good.

We have with us Dr. Robert Johansson, Chief Economist at USDA; Dr. Nathan Kauffman, Kansas City Federal Reserve's lead expert in agricultural economics, headquartered, in this case, in Omaha; and Patrick Westhoff, the director of the Food and Agriculture Policy Research Institute at the University of Missouri.

Senator Blunt has insisted that we both be on our best behavior when it comes to Kansas and Missouri.

Thank you for joining us.

Dr. Johansson, please tell us what you think we should know.

**STATEMENT OF DR. ROBERT JOHANSSON, PH.D., CHIEF ECONOMIST,
DEPARTMENT OF AGRICULTURE**

Dr. JOHANSSON. Thank you very much for inviting us up to talk about the agricultural outlook for 2016 and beyond. I am sure our discussion today will take us to many different sectors and perhaps past 2016.

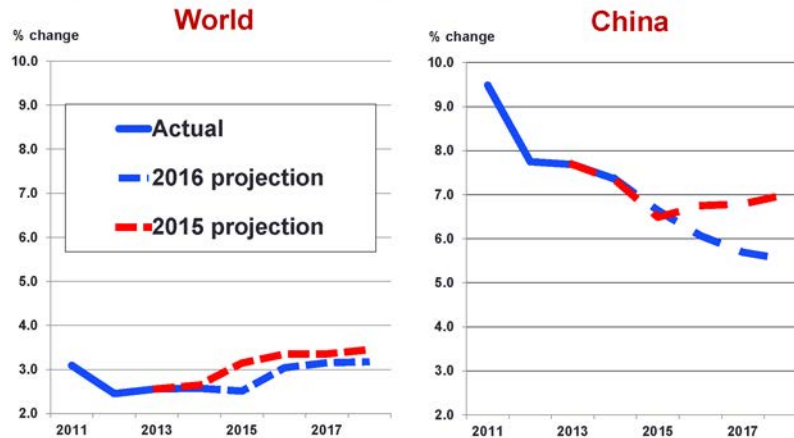
As you mentioned, a lot of the comments I will make today are based on the agricultural outlook that the Department put together last week at the Agricultural Outlook Forum. I summarized a couple of those in the handout that I put together for you, so you do not have a statement from me, but you have some slides, and I will just talk from those slides, sort of walk through them as we go along.

So last year, the outlook for the ag economy was driven mostly by microeconomic factors. If you recall, transportation issues were on everybody's minds, energy prices declined, a drought in the West. This year, while energy prices and drought are still important components of the outlook, the overall picture for agriculture in the United States is being driven more by macroeconomic factors such as economic growth and currency values.

So turning to slide 2 in the handouts.

[The information follows:]

World GDP growth slows, compared to last year's projections, most notably in China



Source: USDA.

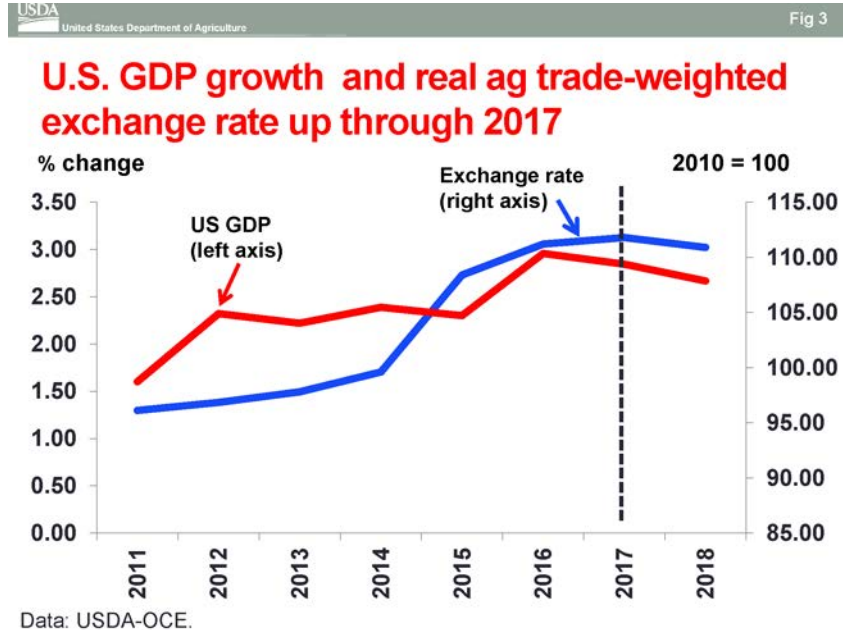
Dr. JOHANSSON. We can see that 2015 marked a change in the global business cycle. World GDP growth, the blue dashed line, is now expected to rise more slowly and to plateau at just over 3 percent.

A key component of that slowdown is the slowing economic growth in China. We see China's GDP growth slowing to 6.1 percent in 2016, and edging down over the next 10 years to about 5 percent. That means China's economy is now forecast to be about 8 percent smaller in 2020 and about 15 percent smaller in 2025, compared to last year's forecast.

Now, by comparison, the United States is expected to be a growth leader amongst developed economies in the next decade.

Slide 3 illustrates the expected 3 percent growth for the U.S. economy in 2016 and 2017—that is the red line—before gradually moving to a longer term growth rate of 2.3 percent.

[The information follows:]



Dr. JOHANSSON. Driven by relative strength and safety of the U.S. economy, the value of the dollar has increased substantially in 2015. That is the blue line. That growth is expected to continue through 2017.

A stronger dollar, as we all know here, means it is more difficult to sell our products abroad to countries with weaker currencies, such as Egypt and Nigeria, major wheat importers. And it is easier for countries such as Canada and those in the European Union (EU) to sell their agricultural products abroad, making for an extremely competitive trade environment for U.S. producers.

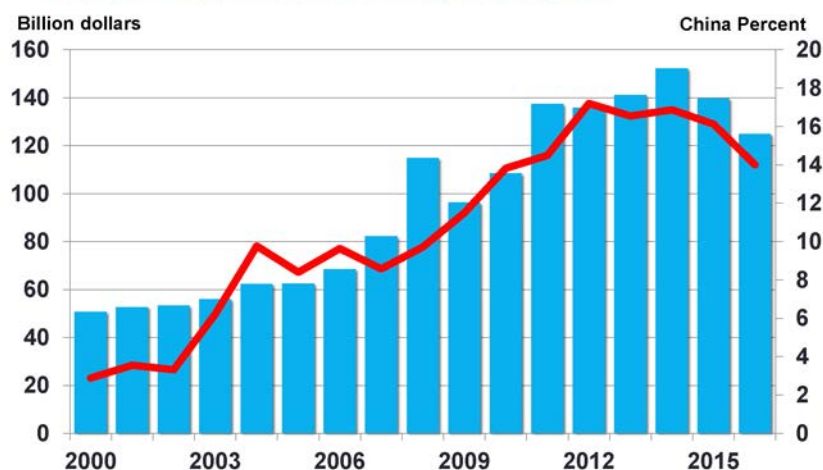
That being said, a strong U.S. economy does help U.S. producers in several ways. I have summarized three of them here. There are likely more that some of my colleagues may want to talk about.

But first, it is easier for U.S. buyers to import goods such as fertilizer from countries with weaker currency, such as Canada, Russia, and the Ukraine. Second, a stronger U.S. economy provides off-farm income opportunities for a large majority of U.S. farm households. And third, 80 percent of ag products produced in the United States are sold domestically, so a strong U.S. economy likely means more opportunities to sell those products and provide value-added here in the United States.

Turning to the outlook for trade on slide 4, U.S. ag exports are forecast in fiscal year 2016 at \$125 billion.

[The information follows:]

Decline in agricultural exports expected in 2016 --- China share falls in value



Source: USDA.

Dr. JOHANSSON. That is down 10.5 percent from last year, and a third of that decline comes from reduced sales to China.

Slide 5 summarizes some specific categories of exports compared to last year.

[The information follows:]

U.S. agricultural exports mostly lower in FY2016

Total and selected categories (\$ billions)	FY2015	Forecast FY2016
Total agricultural exports	139.7	125.0
Grain and feeds	31.6	27.2
of which, Corn, Feed, Fodder	16.9	14.3
of which, Wheat	5.8	5.0
of which, Rice	2.1	1.8
Oilseed products	31.7	25.4
of which, Soybean	21.6	17.0
Cotton	4.1	3.2
Livestock products	18.2	16.0
Dairy products	5.6	4.9
Horticulture products	34.1	34.7

Source: USDA.

Dr. JOHANSSON. So for example, we expect grain and feed exports to be down \$4.4 billion this year. Soybean exports are projected down by \$6.3 billion. I will note, however, that we expect 46 million metric tons of exports of soybeans and soybean products in fiscal year 2016. That would mark the second highest volume of soybeans exported.

Cotton exports are forecast \$900 million below last year on shrinking global demand. Rice exports are forecast down \$300 million, mostly on declines in volume. Livestock products are down \$2 billion from last year, due to lower prices. And dairy has dropped \$700 million due to lower prices and strong competition from the EU.

So that is a lot of reductions. I just wanted to point out that sales of horticultural products driven by fruit and vegetable processing and tree nut exports are up \$600 million in 2016 relative to 2015.

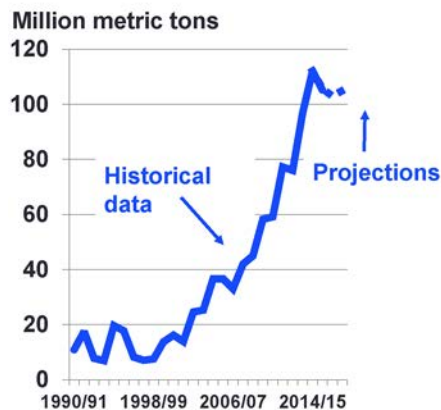
So what explains those projections? Turning to slide 6, for example, we know that over the past 10 years, ag exports to China have increased by more than 125 percent.

[The information follows:]

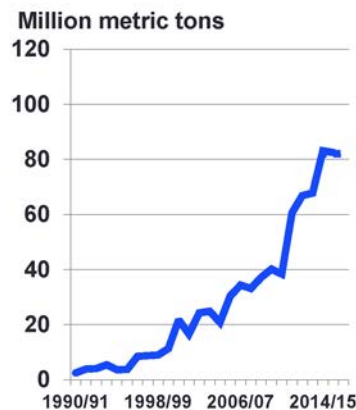


China imports soften and strong Brazil exports

China total imports of grains, soybeans, and cotton



Brazil total exports of soybeans and corn



Source: USDA.

Dr. JOHANSSON. However, we project China's imports of corn, sorghum, and barley to slow in the near future as they seek to lower their relatively high stocks of corn that have been fueled by their domestic policies.

Nevertheless, we expect global trade with China to grow about 30 percent over the next 10 years for combined grains, oilseeds, and cotton.

Similarly, for Brazil, we expect their producers to respond to high prices for corn and soybeans, given their devalued currency. And therefore, we expect them to increase planted acreage and in-

crease production. Over the longer term, that is likely to translate into a 30 percent increase in Brazilian soybean and corn exports, and continued competition for U.S. exporters.

Slide 7 shows the recent history of the U.S. crop prices.

[The information follows:]

 United States Department of Agriculture							
Fig 7							
Corn, wheat, and soybean prices soften, but still above 2000-2003 average							
Crop	Ave 2000-03	2011	2012	2013	2014	2015F	2016F
Wheat	3.1	7.2	7.8	6.9	6.0	5.0	4.20
Corn	2.1	6.2	6.9	4.5	3.7	3.6	3.45
Soybeans	5.5	12.5	14.4	13.0	10.1	8.8	8.50
Upland Cotton	46.5	88.3	72.5	77.9	61.3	59.5	58.0
All Rice	5.6	14.5	15.1	16.3	13.3	12.9	12.90

Source: USDA-NASS, OCE.

Red denotes record high.

Dr. JOHANSSON. Over the past 3 years, the global stock levels have increased on expanded global supplies. As mentioned, the dollar has strengthened.

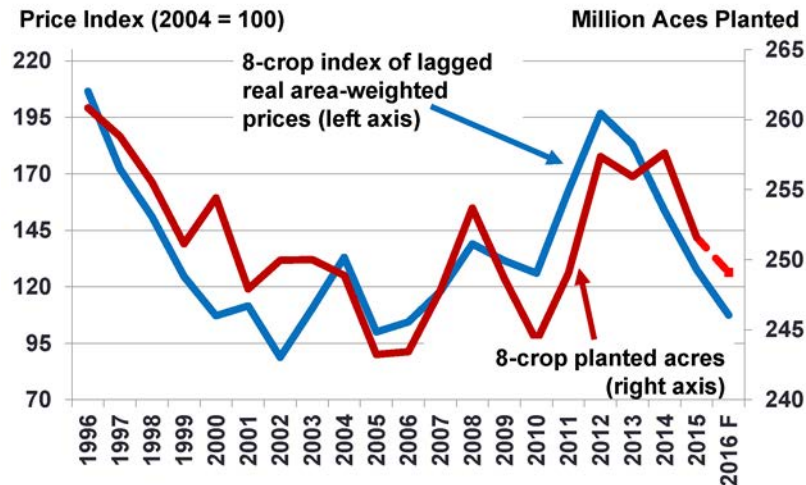
In addition, more recently, Argentina has taken recent actions to be more competitive in world commodity markets. Oil prices and fertilizer prices have continued to weaken, and China's demand for sorghum has slowed.

So as a result, we put that into our forecast for the 2016–2017 crop year, and we show that wheat prices are estimated to fall to \$4.20 a bushel. Corn prices are projected to fall to \$3.45 a bushel. Soybeans are expected to fall to \$8.50 a bushel. The all-rice price is projected flat at \$12.90 per hundredweight. Cotton prices are projected down to \$0.58 per pound.

Slide 8 shows how continued pressure on margins due to those falling prices is expected to lower the total area allocated to major crops in 2016–2017 by about 2.5 million acres from last year.

[The information follows:]

Last year's prices point towards a fall in area



Data: USDA-OCE.

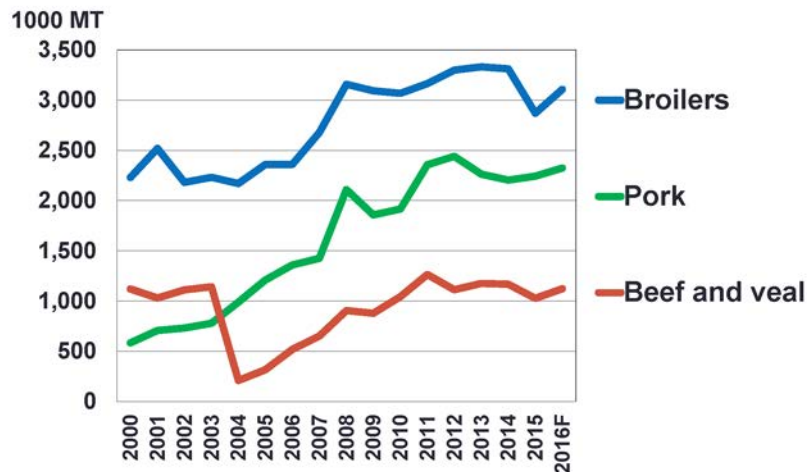
Dr. JOHANSSON. The eight-crop area is down nearly 8.5 million acres from the recent peak in 2014, despite falling Conservation Reserve Program (CRP) acreage. Along with weather, changes in harvest-time prices and import costs between now and spring planting will obviously determine final acreage.

Turning to livestock, dairy, and poultry sectors, we project that total meat and poultry production will be at a record high of 97 billion pounds in 2016, as production of beef, pork, and broilers and turkeys all increase. Milk production is also expected to be at a record 212 billion pounds in 2016.

Slide 9 shows how meat exports are expected to increase in 2016, and that is in volume terms, following declines in beef and broiler exports and slow growth in pork exports last year.

[The information follows:]

Meat exports expected to increase



Source: USDA-OCE.

Dr. JOHANSSON. Exports are expected to be up as larger supplies and lower prices increase the attractiveness of U.S. products to foreign consumers.

Still, a relatively strong dollar, Russia's continued ban on imports U.S. meat, and slow economic growth in a number of countries, may end up constraining those export growth forecasts for meats.

We see a similar story for dairy. Up until last year, exports were growing steadily. However, the confluence of a strong dollar, large competitor supplies, and lower imports in key markets, resulted in lower exports in 2015, and many of those conditions persist into 2016.

Turning to prices on slide 10, we expect fed steer prices to decline to 137 per hundredweight.

[The information follows:]

Cattle, Hog, dairy, and broiler prices expected to come down from 2015

Animal products	2011	2012	2013	2014	2015	2016F	% change
	Dollars per cwt						
Steers	114.7	122.9	125.9	154.6	148.1	137.3	-7.3
Hogs	66.1	60.9	64.1	76.0	50.2	47.3	-5.9
Broilers	79.9	86.6	99.7	104.9	90.5	87.5	-3.3
Milk	20.1	18.5	20.1	24.0	17.1	15.7	-8.4

Source: USDA-OCE.

Prices in red denote record levels.

Dr. JOHANSSON. Hog prices are expected to fall to \$47 per hundredweight. Broiler prices are expected to average about \$0.88 per pound. Although domestic demand for milk and milk products provide support for product prices, we do expect milk prices to fall to \$15.65 per hundredweight for all milk in 2016. That is down 8 percent.

We can show how this affects farm budgets and farm incomes in a number of ways. I just put one slide on here.

[The information follows:]

Illinois case shows crop budgets tightening

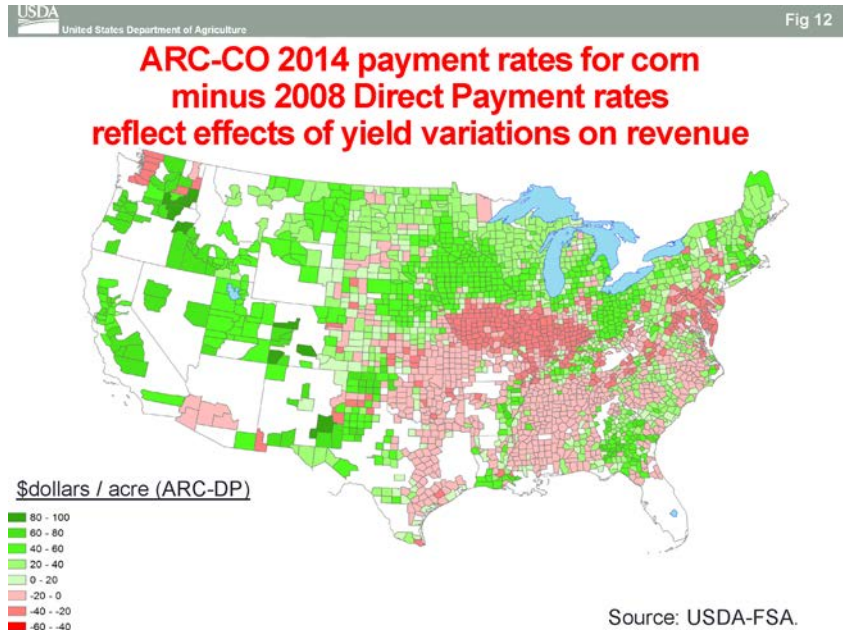
	Corn After Soybeans	Soybeans After Corn
Fertilizers and pesticides	\$190.00	\$75.00
Seed	\$122.00	\$76.00
Crop insurance and other direct costs	\$55.00	\$23.00
Machinery and power	\$124.00	\$113.00
Total non-land costs	\$558.00	\$348.00
Yield	201.00	58.00
Price	\$3.45	\$8.50
ARC-CO	\$30.00	\$30.00
Crop Revenue	\$723.45	\$523.00
Revenue to cover rent and salary	\$165.45	\$175.00
Cash Rent for Illinois	\$228	\$228

Source: USDA-NASS, Univ. of Illinois.

Dr. JOHANSSON. I apologize. I did want to update this for a Kansas example, but I do have two examples here from the University of Illinois, updated to show more recent prices for 2016. Of course, these costs are likely to come down in 2016, so this just serves to show as an example of what a farmer may be looking at right now thinking about planting.

Revenue to cover such things as rent and salary after accounting for other costs is lower than the average cash rent value. As a result, producers will likely increase loan demand, seek to scale back on the cost side, such as limiting chemical inputs, seed purchases, crop insurance, machinery costs, and negotiating down cash rents, if they are able. Of course, we would also know that government payments are expected to help contribute to farm revenues this coming year. For example, county-level Agricultural Risk Coverage payments of \$30 an acre are assumed in this example. That could be higher or lower, depending on how benchmark revenues are for that county.

Just turning to slide 12, for example, that illustrates the point. [The information follows:]



Dr. JOHANSSON. Those are county payments to corn-based acres for the 2014 crop. This is relative to direct payments under the 2008 Farm Bill.

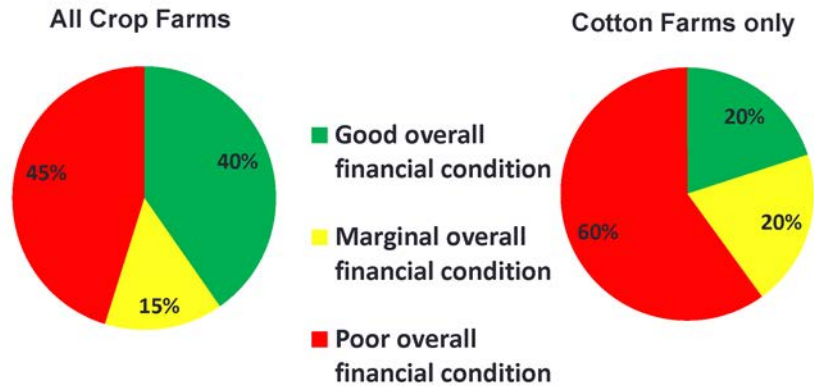
We can see that where county yields and revenues were relatively high in 2014 compared to a 5-year olympic average, producers received lower payments—those are the red counties—versus counties where yields and revenues were lower than the average. Those would be the green counties. So higher payments in the green counties, and lower payments in the red counties, compared to 2008 direct payments.

Overall, government payments are expected up in calendar year 2016 by about \$3.4 billion relative to calendar year 2015. Most of that is due to the new payments for agriculture risk coverage (ARC) and price loss coverage (PLC).

Turning to the next slide, representative farm data generated by Texas A&M this past December also show pressure on farm finances over the next few years.

[The information follows:]

AFPC Representative Farms, Liquidity and Equity Prospects for 2015-20

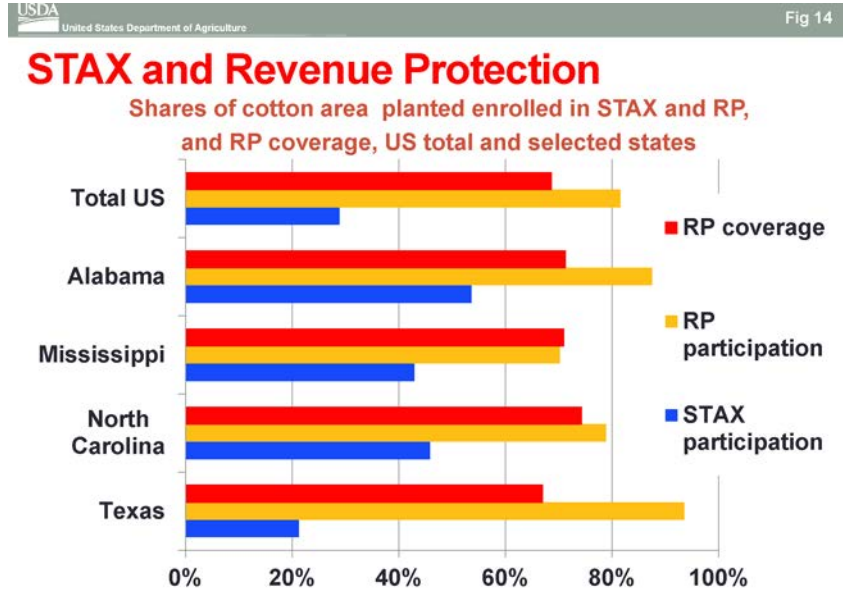


Source: Texas A&M Agricultural and Food Policy Center, Representative Farm baseline, March, 2015, p 9 summary of cash and real net worth projections.

Dr. JOHANSSON. Considering cash and real net worth prospects, they find that 45 percent of their representation crop farms and 60 percent of their representative cotton farms are in poor financial positions. The data suggests that only 20 percent of cotton farms are in good financial condition. The share of representative farms for all crops that are in good condition are at about 40 percent.

The new farm bill also provided producers with more options for Federal crop insurance, including new policies like peanut revenue insurance and the Stacked Income Protection Plan, or STAX, for upland cotton.

Slide 14 shows some statistics.
[The information follows:]

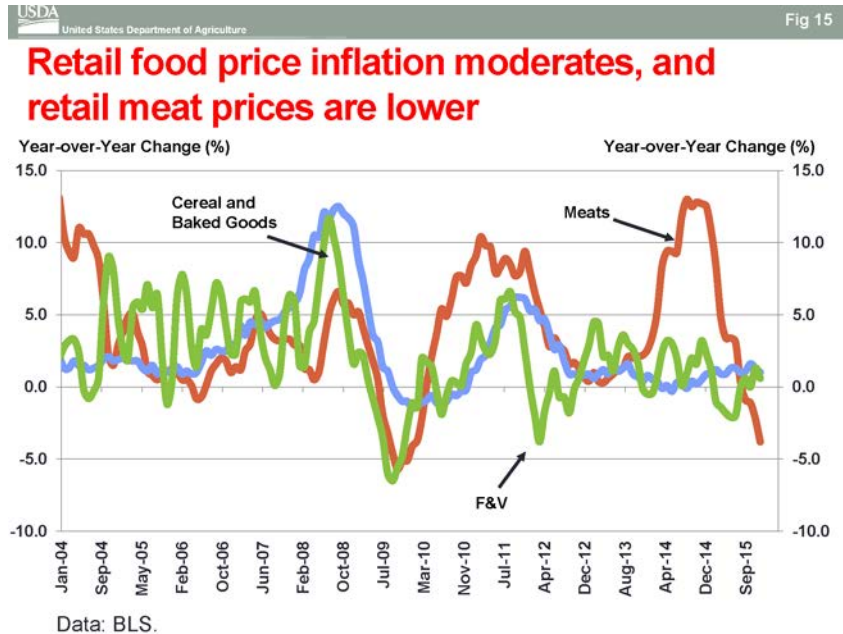


Sources: RMA for STAX area and NASS for area planted.

Dr. JOHANSSON [continuing]. On how STAX uptake has been higher in some States than others, reaching over 50 percent of planted acres in Alabama, but generally well below the purchase of traditional crop insurance for revenue protection policies.

Lastly, slide 15.

[The information follows:]



Dr. JOHANSSON. This suggests that consumer food price inflation has slowed. Prices for cereals, fruit, and vegetables are currently rising at relatively low levels. Meat retail prices have fallen recently, representing a sharp turnaround after a period when price changes were more than 10 percent year over year.

So to conclude, continued record global crops for grains and oil-seeds has contributed to stock building and price declines over the past year. High stock levels and the strong U.S. dollar contribute to lower export demand. Commodity prices are expected to soften. And food prices for most categories are expected to show little inflation in 2016.

Lower commodity prices will lead to reduced planted acres and imply lower overall farm incomes. However, debt-to-asset ratios remain historically low and the majority of farm households are expected to see increases in household income in 2016, mostly due to off-farm opportunities.

The new farm programs will benefit many producers. Falling energy prices will lower input costs, and new crop insurance products will cover more products at higher coverage than in previous years, so it is not all bad news.

So thank you. I am willing to take questions now or after the other speakers.

Senator MORAN. Let's hear from Dr. Kauffman.

Dr. Kauffman, welcome. We are glad to hear what is going on in our region. I hope it is better than what Dr. Johansson says is true for the country.

**STATEMENT OF DR. NATHAN KAUFFMAN, PH.D., ASSISTANT VICE
PRESIDENT AND OMAHA BRANCH EXECUTIVE, FEDERAL RE-
SERVE BANK OF KANSAS CITY**

Dr. KAUFFMAN. Thank you, Mr. Chairman. Thank you for the invitation to participate. It is a good opportunity for us, and this is obviously an important conversation for the Federal Reserve Bank of Kansas City, as agriculture is a very significant part of our district. We do have a high rural concentration in our area.

My name is Nathan Kauffman. I am assistant vice president and economist at the Kansas City Fed. The Kansas City Fed has long devoted significant attention to U.S. ag. In our district, we cover all of Kansas, Nebraska, Oklahoma, Colorado, Wyoming, part of New Mexico, and part of Missouri. As I noted, we do have a high concentration of agriculture.

I lead our efforts at the bank to track agricultural and rural economies, both at a regional and national level. Primarily, I will be focusing my comments this afternoon and on issues pertaining to agricultural credits. I will provide a little bit of context as it relates to farm income and what we see in that area, but ultimately with the goal of describing a little bit more what we are seeing as it relates to credit.

Let me emphasize before I begin that these are my statements. My statements are my views only, which are not necessarily those of the Federal Reserve system, or any of its representatives.

I will spend just a few minutes talking about what we see on farm income before moving into credit conditions.

As Rob noted, following multiple consecutive years of strong incomes in the farm sector, farm income has steadily weakened the past few years and is expected to remain low in the coming months. Again, as Rob noted from the USDA, net farm income in 2015 was forecasted to be more than 50 percent less than 2013, and the forecast for 2016 is for an additional modest decline.

Regional Federal Reserve surveys of agricultural banks, both in the Kansas City Fed district and nationally, paint a similar picture. Most bankers expect farm income to remain low through 2016 and have expressed increasing concern about the potential implications of that development.

The drop in farm income since 2013 has been primarily due, both in our district and nationally, to significant declines in the prices of major U.S. row crops. Corn prices, for example, dropped by more than 50 percent from the peak in 2012 to the latter part of 2014.

Since 2014, prices have fluctuated some, but have largely remained flat over the past 18 months. Soybean prices also dropped significantly from 2012 to 2014 and have continued to fall over the past year. The prices for other major crops such as wheat, sorghum, and rice, have experienced similar declines in varying degrees.

Input costs for crop production have declined somewhat over the past 12 to 18 months due to lower fuel costs and modest reductions in fertilizer prices. However, costs have generally remained high, and many producers have continued to report negative profit margins with crop prices below their breakeven cost of production.

In the latter part of 2015, sharp losses in some segments of the livestock sector—and again, particularly in our district—have exac-

erbated the sense of pessimism in the agricultural economy. From peak levels around the beginning of 2015, cattle prices have dropped by about 25 percent by the end of the year. Hog prices have declined by a similar amount. And milk prices have also continued to drift lower. Although cow-calf operations have generally remained profitable, some cattle feed lot operators reported losses of up to \$500 per head just several months ago, and profitability in other segments of the livestock sector have generally also worsened over the past year.

So with that glance into farm income, let me turn now to agricultural credit conditions.

The persistent declines in farm income and poor profit margins have reduced cash flow and increased short-term lending needs in the farm sector. The Federal Reserve's agricultural finance data book shows that the volume of new short-term farm loan originations at commercial banks increased more than 50 percent from 2012 through 2015. These loans are primarily operating loans used to finance ongoing expenses required for production.

This development is particularly concerning, I would note, because it has occurred during a time when farm income has been roughly cut in half, raising concerns about the debt service capacity of farm borrowers for the coming year.

Similarly, agricultural credit conditions have also steadily weakened over the course of the downturn in the agricultural economy. Data from Kansas City Fed surveys of agricultural banks in our seven-State region that we cover show that loan repayment rates have declined in each of the past nine quarters, with the sharpest change reported in the most recent survey in the fourth quarter of 2015.

Moreover, bankers expect repayment rates to weaken further in the coming months amid further increases in loan demand and increasing demand for loan renewals and extensions.

Bankers have also indicated that credit availability has tightened somewhat in recent months, alongside farm borrowers' heightened demand for credit to finance their operations.

Despite the softening credit conditions, delinquency rates for both real estate and non-real estate farm loans have remained historically low. In the fourth quarter of 2015, the delinquency rate on farm real estate loans was only 1.5 percent, compared with 3.6 percent just 5 years ago, and was significantly less, I would note, than the delinquency rate on residential real estate loans, for example, in the fourth quarter.

Similarly, delinquency rates on agricultural production loans have declined over the past 5 years from 2.7 percent to less than 1 percent.

Although delinquency rates have remained low, it is important to note that many lenders have indicated that it has largely been the strong incomes of previous years combined with low interest rates that has kept loan performance strong during this intensifying downturn in the farm sector.

However, significant working capital deterioration in 2015 has placed many borrowers in a more precarious financial position this year. If the current environment of low farm incomes persists

through 2016, lenders generally expect to see loan performance deteriorate through the year.

Although farm income has dropped considerably, farm land values have declined at a more modest rate pace. In the Kansas City Fed district, for example, the average value of high-quality cropland has declined in each of the past four quarters, but by less than 5 percent in each quarter relative to the previous year. Farmland values are an important part of the health of balance sheets in the farm sector, and the fact that farm land values have remained relatively strong has helped support the overall financial position of many farm borrowers.

Nevertheless, our survey data also show that farmland values are expected to continue to soften over the next year, alongside lower incomes in the sector.

To briefly summarize the recent downturn, and the ag economy has continued to intensify over the past year, barring significant increases in agricultural commodity prices in the coming months, which seem unlikely based on current market fundamentals, the sharp drop in farm income last year appears likely to persist through 2016.

Although outright defaults in the farm sector have been limited to date, it is possible that financial stress among farm borrowers could increase through the year. This could further weaken agricultural credit conditions, and also place additional pressure on farmland values. As a result, some producers, and I would note here particularly those producers who are most highly leveraged, could face difficulty financing their operations in the coming year.

Again, thank you for participating today. I look forward to questions.

[The statement follows:]

PREPARED STATEMENT OF DR. NATHAN S. KAUFFMAN

Thank you, Mr. Chairman and members of the subcommittee, for the invitation to participate in today's roundtable discussion on economic conditions in the U.S. farm sector. My name is Nathan Kauffman, and I am assistant vice president and economist at the Federal Reserve Bank of Kansas City, a regional Reserve Bank that has long devoted significant attention to U.S. agriculture. The economy of our Reserve Bank's district, which includes all or parts of Missouri, Nebraska, Kansas, Oklahoma, Colorado, Wyoming and New Mexico, has a high concentration of agriculture, and I lead several efforts at our Bank to track the agricultural and rural economy at both a regional and national level. These efforts include a regional agricultural credit survey of commercial banks in our district, the Federal Reserve System's Agricultural Finance Databook, which is a national survey of agricultural lending activity at commercial banks, as well as other research and ongoing outreach efforts. I will be sharing with you today, information on recent developments in the agricultural economy, with an emphasis on agricultural credit and lending conditions. Before I begin, let me emphasize that my statement represents my views only, which are not necessarily those of the Federal Reserve System or any of its representatives.

FARM INCOME CONDITIONS

Following multiple consecutive years of strong incomes in the farm sector, farm income has steadily weakened the past few years and is expected to remain low in the coming months. According to the U.S. Department of Agriculture, net farm income in 2015 was forecasted to be more than 50 percent less than in 2013, and the forecast for 2016 is for an additional modest decline (Chart 1). Regional Federal Reserve surveys of agricultural banks, both in the Kansas City Fed District and nationally, paint a similar picture. Most bankers expect farm income to remain low

through 2016 and have expressed increasing concern about the potential implications of this development.

The drop in farm income since 2013 has been primarily due to significant declines in the prices of major U.S. row crops. Corn prices, for example, dropped by more than 50 percent from the peak in 2012 to the latter part of 2014. Since 2014, prices have fluctuated some, but have largely remained flat over the past 18 months. Soybean prices also dropped significantly from 2012 to 2014 and have continued to fall over the past year. The prices for other major crops, such as wheat, sorghum and rice, have experienced similar declines in varying degrees. Input costs for crop production have declined somewhat over the past 12 to 18 months due to lower fuel costs and modest reductions in fertilizer prices. However, costs have generally remained high, and many producers have continued to report negative profit margins, with crop prices below their breakeven cost of production.

In the latter part of 2015, sharp losses in some segments of the livestock sector have exacerbated the sense of pessimism in the U.S. agricultural economy. From peak levels around the beginning of 2015, cattle prices had dropped by about 25 percent by the end of the year. Hog prices have declined by a similar amount, and milk prices have also continued to drift lower. Although cow-calf operations have generally remained profitable, some cattle feedlot operators reported losses of up to \$500 per head several months ago, and profitability in other segments of the livestock sector generally have also worsened over the past year.

AGRICULTURAL CREDIT CONDITIONS

The persistent declines in farm income and poor profit margins have reduced cash flow and increased short-term lending needs in the farm sector. The Federal Reserve's Agricultural Finance Databook shows that the volume of new, short-term farm loan originations at commercial banks increased more than 50 percent from 2012 through 2015 (Chart 2). These loans are primarily operating loans, used to finance ongoing expenses required for production. This development is particularly concerning because it has occurred during a time when farm income has been roughly cut in half, raising significant concerns about the debt service capacity of farm borrowers for the coming year.

Similarly, agricultural credit conditions have also steadily weakened over the course of the downturn in the agricultural economy. Data from Kansas City Fed surveys of agricultural banks in our seven-state region show that loan repayment rates have declined in each of the past nine quarters, with the sharpest change reported in the most recent survey in the fourth quarter of 2015 (Chart 3). Moreover, bankers expect repayment rates to weaken further in the coming months amid further increases in loan demand and increasing demand for loan renewals and extensions. Bankers have also indicated that credit availability has tightened somewhat in recent months alongside farm borrowers' heightened demand for credit to finance their operations.

Despite the softening credit conditions, delinquency rates for both real estate and non-real estate farm loans have remained historically low. In the fourth quarter of 2015, the delinquency rate on farm real estate loans was only 1.5 percent, compared with 3.6 percent 5 years ago, and was significantly less than the delinquency rate on residential real estate loans in the fourth quarter (Chart 4). Similarly, delinquency rates on agricultural production loans have declined over the past 5 years from 2.7 percent to less than 1 percent. Although delinquency rates have remained low, it is important to note that many lenders have indicated that the strong incomes of previous years, combined with low interest rates, have kept loan performance strong during the recent downturn (Chart 5). However, significant working capital deterioration in 2015 has placed many borrowers in a more precarious financial position this year. If the current environment of low farm incomes persists through 2016, lenders generally expect to see loan performance deteriorate through the year.

Although farm income has dropped considerably, farmland values have declined at a more modest pace. In the Kansas City Fed District, for example, the average value of high quality cropland has declined in each of the past four quarters, but by less than 5 percent in each quarter relative to the previous year (Chart 6). Farmland values are an important part of the health of balance sheets in the farm sector. The fact that farmland values have remained relatively strong has helped support the overall financial position of many farm borrowers. Nevertheless, our survey data also show that farmland values are expected to soften over the next year alongside lower incomes in the sector.

CONCLUSION

To summarize, the recent downturn in the agricultural economy has continued to intensify over the past year. Barring significant increases in agricultural commodity prices in the coming months, which seem unlikely based on current market fundamentals, the sharp drop in farm income last year appears likely to persist through 2016. Although outright defaults in the farm sector have been limited to date, it is possible that financial stress among farm borrowers could increase through the year. This could further weaken agricultural credit conditions and also place additional pressure on farmland values. As a result, some producers, particularly those who are highly leveraged, could face difficulty financing their operations in the coming year.

Chart 1a: U.S. Real Net Farm Income Chart 1b: Tenth District Farm Income

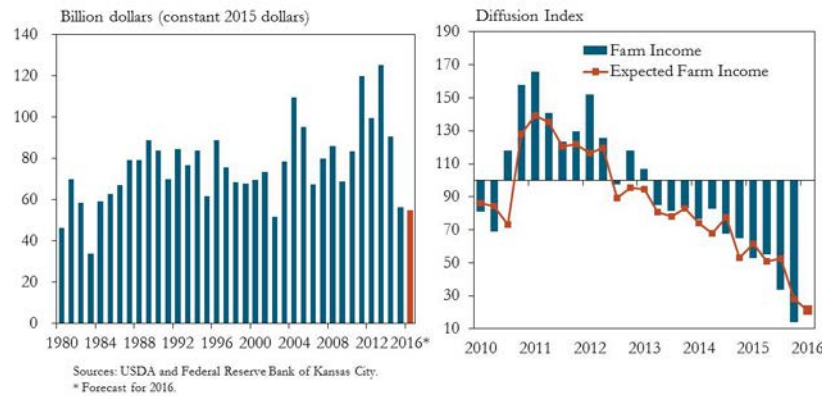


Chart 2: U.S. Farm Income and Operating Loans

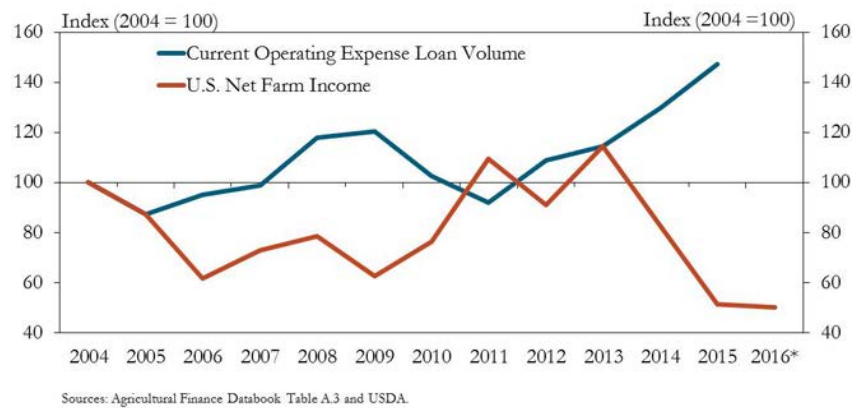
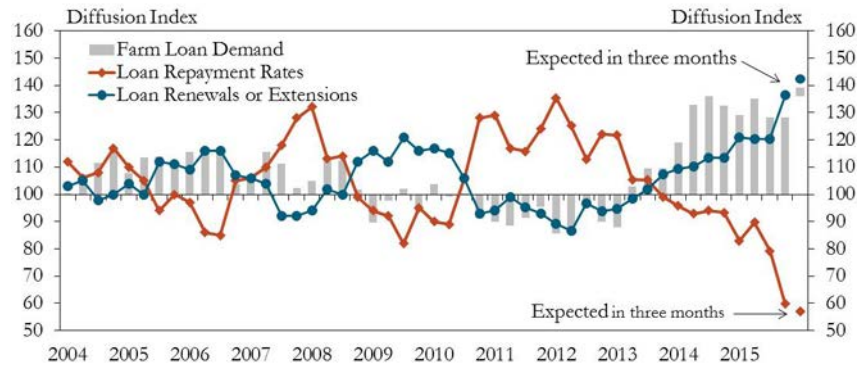
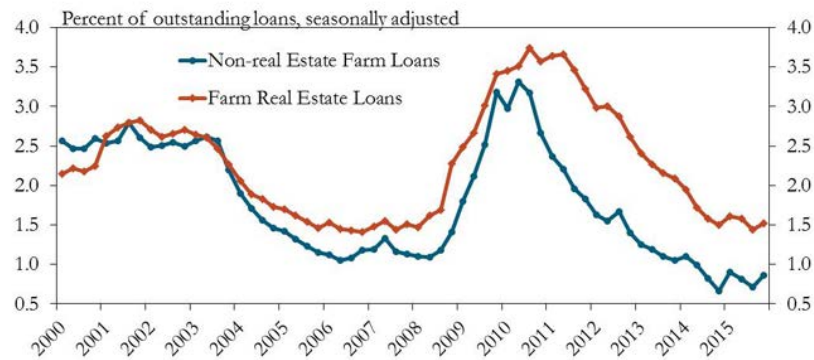


Chart 3: Tenth District Credit Conditions

2015, Fourth Quarter

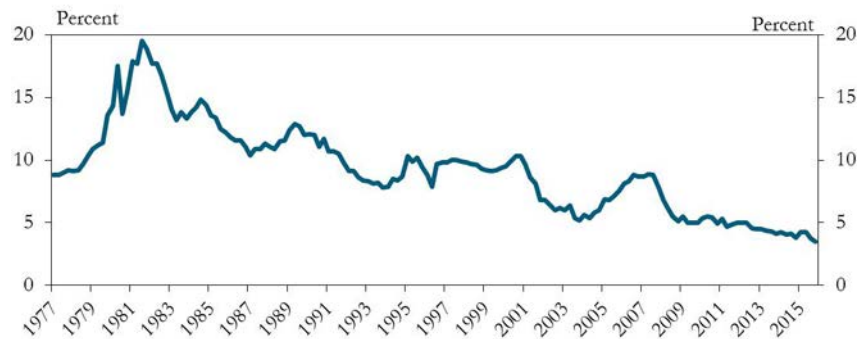


Source: Federal Reserve Bank of Kansas City, Survey of Ag Credit Conditions

Chart 4: U.S. Farm Loan Delinquency Rates

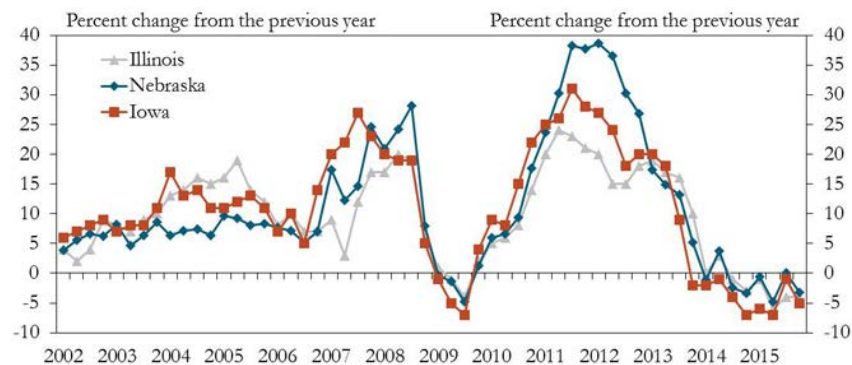
Source: Federal Reserve Board of Governors

Chart 5: Average Effective Interest Rate on Non-Real Estate Commercial Bank Loans



Source: Federal Reserve Bank of Kansas City, Agricultural Finance Databook

Chart 6: Changes in High Quality Farmland Values



Source: Federal Reserve Banks of Kansas City and Chicago.

Senator MORAN. Dr. Westhoff, let's see if you can make us feel a little bit more optimistic.

STATEMENT OF DR. PATRICK WESTHOFF, PH.D., DIRECTOR, FOOD AND AGRICULTURAL POLICY RESEARCH INSTITUTE

Dr. WESTHOFF. I would like to tell you that I have a very different story, but I am afraid you are going to find it is more of the same song.

I thank you very much for the opportunity to discuss the outlook for the U.S. farm economy. For more than 30 years, our institute has developed 10-year projections for agricultural commodity markets and analyzed the impacts of various policy options.

Today, I will briefly summarize some key findings from our new baseline, which we expect to release next week, probably next Thursday. Note that the estimates were not final at the time I prepared these remarks, but they should be pretty close, and I think the stories will hold.

Farm commodity prices, as has already been discussed, have declined sharply after reaching record highs in recent years. For example, the marketing year average price for corn fell from \$6.89 per bushel back in 2012 to an estimated \$3.60 per bushel this year. Wheat, soybean, and cotton prices have also declined very sharply, as shown in table 1 of my statement.

The high prices of the 2010 to 2012 period and more favorable weather conditions resulted in a large increase in U.S. and global crop production, while a variety of factors, including the strong dollar, have served to limit demand growth, so carryover stocks have increased.

Crop cash receipts fell by an estimated 17 percent between 2012 and 2015.

On the livestock side, prices for cattle, chickens, and milk all reached record highs in 2014 because of strong export demand, disease outbreaks, delayed effects on production of droughts, and high feed costs. So that happened in previous years.

Total meat and milk production rebounded in 2015 at the same time a strong dollar helped constrain export sales.

Prices fell sharply for hogs, chickens, and milk in 2015 relative to the previous year.

Fed steer prices peaked in the final quarter of 2014, and then declined very sharply during 2015, as you have heard.

Livestock cash receipts are down 12 percent in 2015.

Now looking forward, for the crop outlook, our baseline projections assume a continuation of current policies and a macroeconomic outlook developed by IHS Global Insight, a private forecasting firm.

We recognize that the world is a very uncertain place, so we use our models to derive distributions of various agricultural sector variables.

Figure 1 in my handout shows the average of the projected corn prices as a way of giving you an idea of what that variability might look like in front of us. In 10 percent of the model's 500 outcomes for the future, the average corn price in most years is above the top line there, about \$5 per bushel most years. And in 10 percent, it falls below the bottom line, about \$3 per bushel.

I should point out that these estimates only consider a subset of the factors that cause commodity prices to be uncertain. The actual uncertainty around our long-term projections may be even longer than what those numbers might suggest.

The story would look very similar for other crops. For the next few years, we expect wheat, soybean, and cotton prices all to average near their 2015, 2016 levels. We are a little bit more optimistic than U.S. standard price projections, but not very much. It is the same basic story.

Population and income growth around the world contribute to rising food, feed, and fiber consumption, but global crop supplies are projected to be adequate to meet that demand, even at prices well below the 2010 to 2012 peaks. The United States continues to face strong competition, as you have heard already, from Brazil, Argentina, Russia, Ukraine, and many other exporters. And demand growth in China may be slowing.

On the livestock side, beef, pork, chicken, and milk production are all expected to increase in 2016, even as the strong dollar constrains growth in export sales. The result is a further projected decline in prices for cattle, hogs, chicken, and milk. Cattle prices could decline further in 2017 and maybe even 2018 as additional cows in the breeding herd today eventually translate into more beef production. In the long run, livestock prices will tend to move with beef prices.

The projected prices and production levels suggest that both crop and livestock receipts could decline again in 2016, as shown in figure 2. In later years, however, increasing production contributes to a moderate rate of increase in projected cash receipts.

However, note that even in 2025, both crop and livestock receipts remain below their peak values of recent years. That is even in nominal terms, adjusted for inflation being even lower than that.

Just briefly on the farm program side, I will not read all of my prepared remarks here, but to say that the 2014 farm bill, as you know, significantly reoriented U.S. farm policy. Price Loss Coverage payments occur when marketing year average farm prices fall below fixed reference prices. County agricultural risk coverage (ARC-CO) payments occur when a proxy for per county revenues for a particular crop fall below a trigger tied to past prices and yields.

Most corn, soybean, and wheat-based acreage enrolled in ARC-CO while most sorghum, barley, rice, and peanut base is enrolled in PLC.

Averaging across our 500 possible outcomes for the future, we project that ARC payments will peak in the current market year for 2015 crop, as shown in figure 3. Projected ARC payments then decline, not so much because of any major increase in projected prices or yields, but because the moving average of past prices that is used to determine guarantees will be declining over time. So that means there will be less support provided by these programs as time goes on, especially since most corn, soybean, and wheat farmers are enrolled in ARC.

Note that actual payments in any given year can be greatly different than levels shown, suggesting that the cost to taxpayers of these programs is quite uncertain. Just to give an example, in 2018, in about one-third of our 500 outcomes for that year, ARC payments are less than \$1 billion. But on the other hand, in 10 percent of the outcomes, it is more than \$4 billion. There is a lot of uncertainty about the future costs of these programs, depending on marketing conditions.

In terms of crop insurance, the 2014 farm bill creates a number of new crop insurance options for producers. Cotton producers, for example, can choose to purchase STAX, as was talked about already, an area-based policy that supplements individual coverage. There is no ARC or PLC program for upland cotton.

Across 500 outcomes, average crop insurance net indemnities are a little over \$5 billion per year. Projected ARC and PLC payments exceed crop insurance in 2015 and 2016, but the reverse is true in later years.

In terms of net farm income, I would like to tell you about an optimistic picture, but I do not have one for you today, I am afraid.

The declining crop and livestock receipts have resulted in a dramatic reduction in net farm income relative to the record level of 2013. Lower fuel, fertilizer, and feed prices help reduce production costs by about \$10 billion in 2015 and another reduction is expected in 2016. But the projected cost reductions are not nearly enough to offset revenue losses.

Given all the assumptions of our analysis, net farm income remains below recent peak levels throughout the next 10 years. Projected real, inflation-adjusted net farm income is about the same in 2025 as it was in 2015.

As with other projections, there is a lot of uncertainty around these numbers. Even modest proportional changes in costs or revenues can result in very large proportional changes in net income.

So in summary, and final comments here, if these projections prove correct, consistent with previous speakers, it suggests an extended period of financial stress in U.S. agriculture. Not only are farm incomes expected to remain well below recent peaks, but businesses that sell machinery and inputs to farmers are also likely to be negatively affected. Farm asset values are likely to be under pressure, especially if interest rates were to increase.

However, it is also important to maintain perspective. While rising debt is a serious concern, debt-asset ratios remain low by historical standards. Even if interest rates increase from current levels, they are likely to remain well below the levels that prevailed during the farm crisis years of the 1980s. While commodity prices are all below recent peaks, they remain high by pre-2007 levels.

You can look for our new baseline soon, probably by next Thursday at our Web site. Our baseline briefing book will provide detailed estimates for farm commodity markets, farm program costs, farm income, and consumer food costs.

Thank you for this opportunity. I am happy to answer any questions.

[The statement follows:]

PREPARED STATEMENT OF DR. PATRICK WESTHOFF

Thank you for the opportunity to discuss the outlook for the U.S. farm economy. For more than 30 years, our institute has developed ten-year baseline projections for agricultural commodity markets and analyzed the impacts of policy options. Today I will briefly summarize some key findings from our new baseline, which we expect to release next week. Note that the estimates were not final at the time these remarks were prepared, but I would expect the basic “stories” discussed here to hold.

THE DECLINE IN COMMODITY MARKETS

Farm commodity prices have declined sharply after reaching record highs in recent years. For example, the marketing year average price for corn fell from \$6.89 per bushel in the drought year of 2012/13 to an estimated \$3.60 per bushel just 3 years later (Table 1). Wheat, soybean and cotton prices have also declined. The high prices of the 2010–2012 period and more favorable weather conditions resulted in a large increase in U.S. and global crop production, while a variety of factors limited demand growth, so carryover stocks increased. Crop cash receipts fell by 17 percent between 2012 and 2015.

On the livestock side, prices for cattle, hogs, chickens and milk all reached record highs in 2014 because of strong export demand, disease outbreaks and the delayed effects on production of drought and high feed costs. Total meat and milk production rebounded in 2015 at the same time a strong dollar helped constrain export sales. Prices fell sharply for hogs, chickens and milk in 2015 relative to the previous year.

Fed steer prices peaked in the final quarter of 2014, but then declined in every quarter of 2015. Livestock cash receipts dropped by 12 percent in 2015.

TABLE 1. THE DECLINE IN FARM COMMODITY PRICES AND CASH RECEIPTS

	Peak year	Peak level	Recent year	Recent level*	Change
Corn price (\$/bu.)	2012/13	6.89	2015/16	3.60	-48%
Wheat price (\$/bu.)	2012/13	7.77	2015/16	5.00	-36%
Soybean price (\$/bu.)	2012/13	14.40	2015/16	8.80	-39%
Cotton price (cents/lb.)	2011/12	88.30	2015/16	59.50	-33%
Fed cattle price (\$/cwt)	2014	154.56	2015	148.12	-4%
Hog price (\$/cwt)	2014	76.03	2015	50.23	-34%
Chicken wholesale (cents/lb.)	2014	107.60	2015	90.50	-16%
All milk price (\$/cwt)	2014	23.97	2015	17.08	-29%
Crop receipts (\$ billion)	2012	232	2015	191	-17%
Livestock receipts (\$ billion)	2014	212	2015	186	-12%

* 2015/16 crop prices use mid-point of the reported range from USDA's World Agricultural Supply and Demand Estimates, February 2016.

THE CROP OUTLOOK

Our baseline projections assume a continuation of current policies and a macro-economic outlook developed by IHS Global Insight, a private forecasting firm. We recognize that the world is a very uncertain place, so we use our models to derive distributions of the agricultural sector variables.

Figure 1 shows the average of the projected corn prices as well as two more lines to give an idea of some of the uncertainty that producers face. In 10 percent of the model's 500 outcomes, the corn price exceeds the top line, about \$5 per bushel, and in 10 percent it falls below the bottom line, about \$3 per bushel. I should point out that these estimates only consider a subset of the factors that cause commodity prices to be uncertain—the actual uncertainty around our longer-term projections is probably even greater than the chart indicates.

The story would be similar for other crops. For the next few years, we expect wheat, soybean and cotton prices to all average near 2015/16 levels, but with considerable annual variation. Population and income growth around the world contribute to rising food, feed and fiber consumption, but global crop supplies are projected to be adequate to meet that demand, even at prices well below the 2010–12 peaks. The United States faces continued strong competition from Brazil, Argentina, Russia, Ukraine and other exporters, and demand growth in China may be slowing.

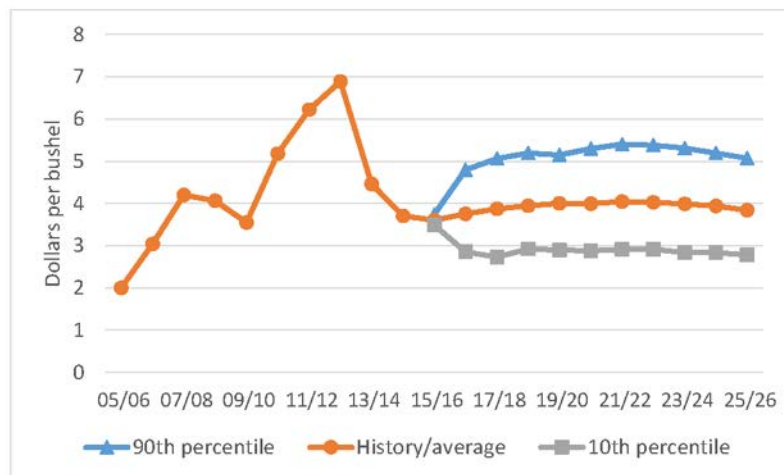


Figure 1. Actual and projected corn prices (source: FAPRI-MU estimates)

LIVESTOCK OUTLOOK AND CASH RECEIPTS

In 2016, beef, pork, chicken and milk production are all expected to increase, even as the strong dollar constrains growth in export sales. The result is a further projected decline in prices for cattle, hogs, chicken and milk. Cattle prices could decline further in 2017 and beyond as additional cows in the breeding herd eventually translate into more beef production. In the long run, livestock prices will tend to move with feed prices.

The projected prices and production levels suggest that both crop and livestock receipts could decline again in 2016 (Figure 2). In later years, increasing production contributes to a moderate rate of increase in projected cash receipts. However, note that in 2025, both crop and livestock receipts remain below their peak values of recent years.

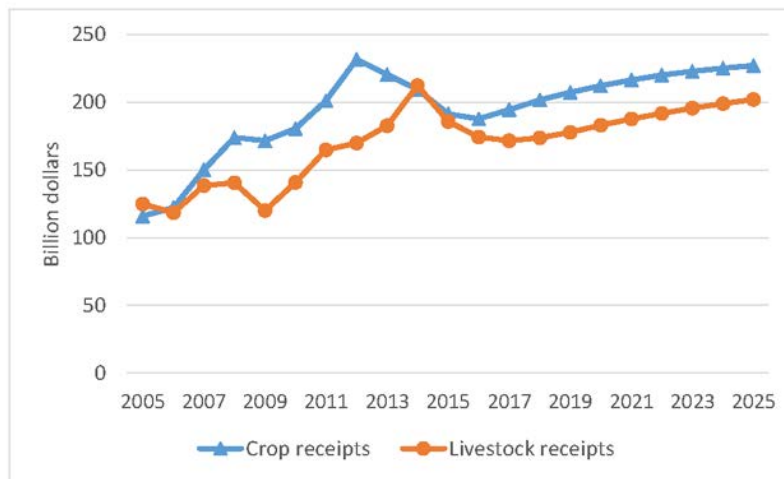


Figure 2. Crop and livestock cash receipts (source: FAPRI-MU projections)

ARC AND PLC

The 2014 farm bill significantly reoriented U.S. farm policy. Gone are fixed annual direct payments and other past programs, and in their place are two new programs that only make payments when prices or revenues fall below trigger levels. Price loss coverage (PLC) payments occur when marketing year average farm prices fall below fixed reference prices. County agricultural risk coverage (ARC-CO) payments occur when a proxy for per-acre county revenues for a particular crop falls below a trigger tied to past prices and yields. Most corn, soybean and wheat base acreage is enrolled in ARC-CO while most sorghum, barley, rice and peanut base is enrolled in PLC. Few acres are enrolled in ARC-IC, an alternative version of the program.

Averaging across 500 outcomes, we project that ARC payments will peak in the current marketing year (Figure 3). Projected ARC payments then decline, not so much because of any major increase in projected prices or yields, but because the moving average of past prices used to compute guarantees declines. The chart only shows outcomes through the 2018 expiration of the current farm bill.

Note that actual payments in any given year can differ greatly from the levels shown, suggesting that the cost to taxpayers of these new programs is quite uncertain. For example, in more than one-third of the 500 outcomes for the 2018 crop year, projected ARC-CO payments are less than \$1 billion, but they exceed \$4 billion in the 10 percent of outcomes with the greatest payments.

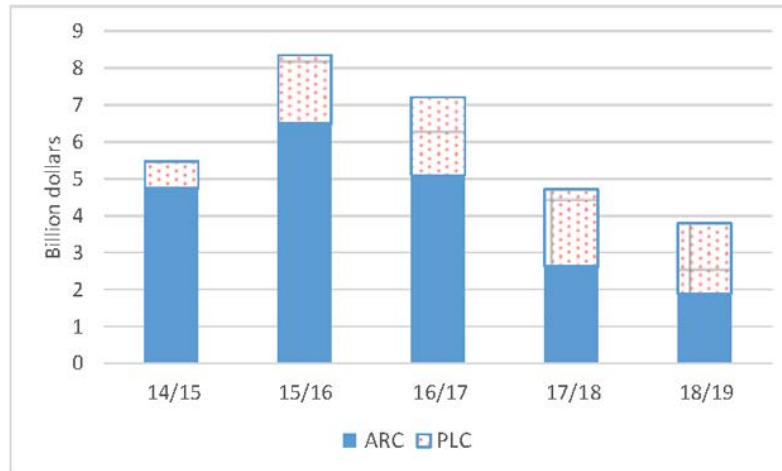


Figure 3. ARC and PLC payments (Source: FAPRI-MU projections)

CROP INSURANCE AND COMMODITY PROGRAMS

The 2014 farm bill also creates a number of new crop insurance options for producers. Cotton producers, for example, can choose to purchase STAX, an area-based policy that supplements individual coverage. There is no ARC or PLC program for upland cotton.

In any given year, indemnities can differ greatly from premiums, but on average, we would expect total indemnity payments to be similar to total premiums. Premium subsidies cover more than 60 percent of total premiums.

Across 500 outcomes, average crop insurance net indemnities (indemnity payments for losses minus producer paid premiums) average a little over \$5 billion per year (Figure 4). Projected ARC and PLC payments exceed crop insurance net indemnities in 2015/16 and 2016/17, but the reverse is true in later years. For years after 2018, we follow the lead of the Congressional Budget Office and assume an extension of 2014 farm bill provisions.

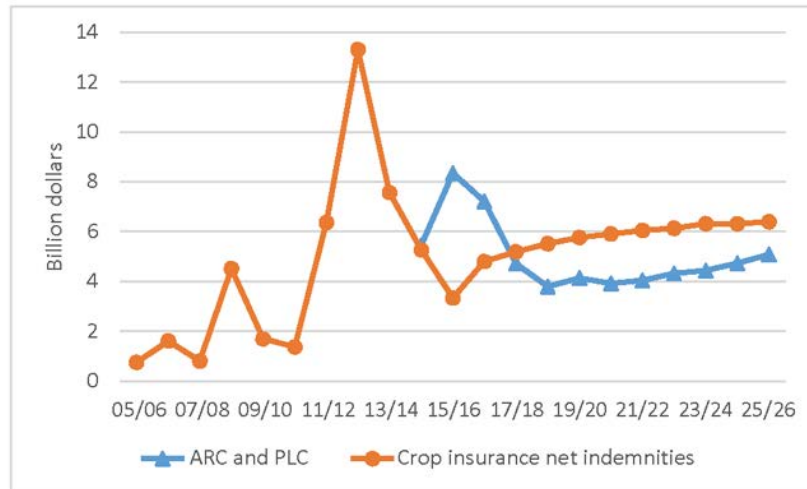


Figure 4. Crop insurance net indemnities and ARC and PLC payments

NET FARM INCOME

The decline in crop and livestock receipts has resulted in a dramatic reduction in net farm income relative to the record level of 2013. Lower fuel, fertilizer and feed prices helped reduce production costs by about \$10 billion in 2015 and another reduction is expected in 2016, but the projected cost reductions are not nearly enough to offset revenue losses.

Given all the assumptions of our analysis, net farm income remains well below recent peak levels (Figure 5). Projected real, inflation-adjusted net farm income is about the same in 2025 as it was in 2015.

As with other projections, there is great uncertainty around projections of net farm income. Even modest proportional changes in costs or revenues can result in large proportional changes in net income.

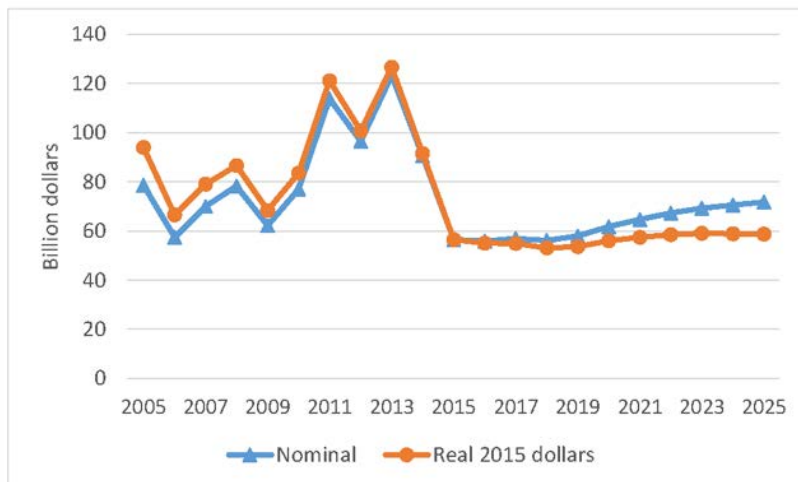


Figure 5. Net farm income (Source: FAPRI-MU projections)

FINAL COMMENTS

If these projections prove correct, it suggests an extended period of financial stress in U.S. agriculture. Not only are farm incomes expected to remain well below recent peaks, but businesses that sell machinery and inputs to farmers are also likely to be negatively affected. Farm asset values are likely to be under pressure, especially if interest rates increase.

However, it is also important to maintain perspective. While rising debt is a serious concern, debt-asset ratios remain low by historical standards. Even if interest rates increase from current levels, they are likely to remain well below the levels that prevailed during the farm crisis of the 1980s. While commodity prices are well below recent peaks, they remain high by pre-2007 standards.

You can look for our new baseline soon, perhaps next week, at www.fapri.missouri.edu. Our baseline briefing book will provide detailed estimates for farm commodity markets, farm program costs, farm income and consumer food costs.

Thank you for the opportunity, and I will be happy to answer any questions.

Disclaimer:

The projections reported here are based upon work supported by the U.S. Department of Agriculture, Office of the Chief Economist under Agreement No. 58-0111-15-008 with the Curators of the University of Missouri. Any opinion, finding, 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.

INTRODUCTION OF OTHER WITNESSES

Senator MORAN. Dr. Westhoff, thank you very much.

The only thing worse than having three economists who disagree each other is having three economists who agree with each other when the outlook is bad.

We have others who are at the table. I probably should explain this. We invited three significant and highly respected ag economists to have a conversation with us. But as I indicated earlier, we thought there might be policy questions related to specific farm programs, commodities, regions of the country. So we have Colin Woodall from the National Cattlemen's Beef Association; Tom Sell, who has a variety of interests in different farm commodities, but also a significant interest in crop insurance; Reece Langley, cotton; Randy Russell, former USDA official with, again, a variety of interests in farm commodity groups across the country; and Dale Moore from the American Farm Bureau.

I am going to yield my time to Senator Blunt, who needs to get to the Intel Committee. Then I will go to Senator Merkley. Senator Hoeven is headed back to Homeland Security, and I will yield my time when it comes back to me to you as well.

Senator Blunt visited with me as I became the Chairman of this Appropriations Committee, Dr. Westhoff, to make certain I understood the value of the Food and Agricultural Policy Research Institute (FAPRI) at the University of Missouri. And from my days as a member of the House Agriculture Committee, we appreciate the analysis. Senator Blunt was only reminding me of something that I already knew.

Senator Blunt.

LONG-TERM AGRICULTURAL OUTLOOK

Senator BLUNT. I would say, Chairman, things were a lot better when I was the Chairman, whenever I was the top Republican on this Committee.

There are very few days when the option of going to Intel might look like a little bit of a relief. This probably is still not one of them.

One of the things I have been wondering about, and I do hope that you all have left plenty of room for optimism to change some of these projections, but one of the things I have been thinking about, even in the most optimistic scenario with what we believe, from the lowest estimate of world food demand to the highest estimate, it is still a big estimate. I have been wondering what we do that helps farm families have some sense of how those two things come close to evening out. I can certainly see 3 decades, where 1 year we are low and the next year we are high, and the challenge is just to meet the demand that is going to be growing in what all of us would see as an exponential way based on anything we have ever seen in world food.

Now, clearly, if you have less money to spend, that demand for better food might not be what it otherwise would be.

But, Mr. Russell, do you have a sense, and then Mr. Moore—and this will be my only question, and anybody else can weigh-in that wants to. Do you have a sense of what farm families need to be looking at and anticipating as many of us are excited about what can happen in agriculture, but agriculture being what it is, trying to figure out how these things happen at the right time is I think a challenge that I have not been able to quite figure out yet. I have been saying recently to the Missouri Farm Bureau, Blake, yesterday and others, it is going to be a great 35 years for agriculture, but that does not mean the next 2 or 3 years are going to be great, and it does not mean there will not be some years in the middle.

I am just trying to figure out myself how we can look at this in a way that can be helpful. Hopefully, we can stop doing foolish regulatory things. Just the law of averages you would think would eventually catch up with us on the regulatory front.

But let's go to the two of you.

Mr. RUSSELL. Thanks, Senator Blunt.

And thanks, Senator Moran, for holding the hearing. I think it is important to have a good backdrop as to what the farm income situation is this year, as you start your appropriations process, because so many of those items are dependent upon the farm economy.

Senator Blunt, I would just say that this is a very tough economic period, 2015 was tough. We had a precipitous decline in cash and farm income. As we just heard, we have another decline in 2016. I would suspect we'll probably have a rough year in 2017 as well, before we get out of this.

I would also say, prior to that, and I am not talking to any specific sector or subsector, we had 5 good years. Our equity is strong. Our debt-to-asset ratio, debt-to-equity ratio in agriculture, we go into this downturn in pretty good shape.

I think what we really have to do is focus on the longer term. I personally am very optimistic about ag and food over the long term. All of you have talked about it many times. I mean, we are going to grow the world's population to 9.3 billion by 2050. Eighty percent of those people are going to be in developing countries.

We have a situation where we are going to have to produce more food in the next 40 years than we did the last 10,000 years combined. That is an amazing kind of situation that we are facing. Now, does that mean we will not go through some upturns and downturns, because agriculture is cyclical? We understand that.

But the future is very, very bright. Also, we are going to have to produce probably twice as much food in the next 40 years as we have previously. That is a huge challenge for our sector, but I think we are up to the challenge. But we are going to have to do certain things in order to get it right. Let me just tick off four things, then I will yield to others who may want to comment.

First, we have to have a macroeconomic policy that fuels growth. What do I mean by that? You look at a situation where the Congressional Budget Office (CBO) just came out and said the difference between 2 percent growth and 3 percent growth over the next 10 years is \$4 trillion to the economy. That is job creation. It leads to lower deficits. And it leads to more demand. As we just heard here, still 80 percent of farm production is consumed in the United States, so that is critically important.

So I think we are in a situation where we need a strong economic policy to fuel our growth.

Second of all, I think we are in a situation where we need to have aggressive trade agreements. Look, I would love to sit here and say we are going to get a World Trade Organization (WTO) global trade round, and it is probably not going to happen in the rest of my professional career, and I do not plan on retiring anytime soon. So I think we have to put our emphasis on regional trade agreements and bilateral trade agreements. And I am not going to comment specifically about the Trans-Pacific Partnership (TPP) or the Trans-Atlantic Trade and Investment Partnership (TTIP), but that is really the future of our growth, in trade agreements. And it is focusing on nontariff trade barriers. The phytosanitary areas are the things we really have to aggressively pursue to grow things like meat and poultry exports and others in the future.

Third, as Senator Blunt talked about, we have to have a more rational regulatory policy and system in this country. You go out and talk to farmers, as people do around here all the time, and what you hear about are Department of Labor standards and Environmental Protection Agency (EPA) and other things. It is not one particular reg. It is the cumulation and impact of those regs on farmers and agricultural supply companies and people in agribusiness that is really serving as tax on many of them.

Finally, I would say, and something that this Committee has been deeply involved with, we need to more effectively reinvest in what I would call the seed corn of agriculture, and that is research. You look at the National Institutes of Health (NIH). And, Senator Blunt, you have been a leader, and others here, on NIH funding. They stand at \$32 billion. The National Science Foundation (NSF) is at \$7.5 billion. USDA ag research is \$2.3 billion. Its peak was \$2.9 billion in 2003.

So clearly, if we are going to meet this global food demand, we have to do a better job of reinvesting and doing it in the right way, in the manner that NIH and NSF do in a more competitive fashion

to ensure that we have investments in basic and fundamental sciences so that we can meet these food challenges.

So like I said, I think we are in a very tough period. I think that period is going to continue for probably another 18 months or so. But overall, I am very optimistic about the future.

One last point, who knows this best? Our young people. Look at enrollments at land grant universities. For most of them, it is going up. They are building new dorm space. They are going into ag sciences, ag marketing, ag communication, ag engineering. Why? Because they can get jobs. They see the future. They see the trendline. And there is a great opportunity to get jobs in these professions.

So I think investment in the right way, done properly, leads to a very bright future in ag.

Mr. MOORE. Thank you, Senators, for this opportunity. One of the great things, when you go next to a really smart guy, you can say "ditto" a lot. Randy covered the waterfront. I want to start kind of from the last point he made about the young people. It is one of the things that we are picking up. I have family that is in the banking business. The big concern that is out there for us when it comes to the credit side of the equation is the new generation, the youngest generation that has just gotten started in farming in the last decade. This is going to be their first downturn, and there is a lot of concern among our members, whether it is those just getting started, those who have established, those who finally got their feet on the ground and now are learning that agriculture is not always in an upswing.

I am not pessimistic, but more pragmatic than optimistic because, again, as Randy pointed out, agriculture goes through these peaks and valleys. We talked about it, day in and day out. This is why we write farm bills. This is why we need a safety net that is secure out there. This is why in the rewrite that has gone through, there are certainly some dollars that are going out. But we are also spotting some things that are posing challenges, depending on what part of the country and which options a producer may have selected when he or she goes down through the process at their Farm Service Agency (FSA).

We also look across the sector, whether it is the largest farmers, the smallest farmers, this regulatory creep issue is something that we really wrestle with. Because, again, you can deal with Mother Nature and with the protection tools we have, crop insurance, the safety net, and the farm program. You can deal with the vagaries of the market cycles. But when you start getting the margins nicked year in and year out with one more thing that I have to check the box on, and it is not just on the potential economic cost of having to comply with the regulation, but it is time that farmers and ranchers spend away from managing their operations in terms of the productive side of it to essentially be paper pushers, checking all the boxes to make sure they are in compliance so they do not lose out when that next roll comes around and I have to deal with somebody looking over my shoulder and telling me I am out of compliance, and now I am facing penalties, now I am facing fines, whatever that may be.

We are in a time when we are seeing a lot more bears than bulls. I look down and think about, when you look at where some of these prices have been, we talk about historic highs, a lot of the infrastructure has built in and invested to respond to that, whether it is in the cattle industry, the row crops, specialty crops, and a number of things that are now pushing these numbers down, giving us that much more of a challenge in terms of having to borrow operating credit and making sure we get that paid back.

Some of us are old enough to remember when we went through credit reforms back in the mid-1980s, trying to get that all lined out. We do not need to go through another cycle like that. And our hope is that we can get some sort of evening out of these troughs, get some of the issues, figuring out the careful way to say this, but those that would like to help us rearrange parts of the farm bill by chopping things out or adjusting the numbers in some way, we appreciate the steadfast support for keeping the farm bill intact and giving us a chance to make sure it works.

Let's talk about some of those areas where we think we can see some improvements without having to open up the farm bill.

Senator MORAN. Very good. Let me turn to Senator Merkley.

AGRICULTURAL IMPORTS BY CHINA

Senator MERKLEY. Thank you.

Dr. Johansson, I wanted to ask you about your figure 6, in your chart. First of all, you have a chart that shows China's total import of grain, soybeans, and cotton. Is that specifically from the United States? Is that the import of U.S. products?

Dr. JOHANSSON. No, these are global imports.

Senator MERKLEY. Okay, those are global imports.

I found it interesting that the total amount had dropped, given that while China's growth rate is not as high as it was, it is still a very positive 5 percent to 6 percent.

Dr. JOHANSSON. That is right.

Senator MERKLEY. So what do you attribute that? Is that more domestic production of Chinese grains and soybeans?

Dr. JOHANSSON. This chart actually goes out for 10 more years. Unfortunately, it was truncated just to make it fit here, but it does show the upward growth. But in the most recent period that we are showing here, where you see this downturn, this adjustment down, that is primarily due to the fact that, as you mentioned, the Chinese have supported their domestic producers using support prices for a variety of products, corn, cotton, wheat, and rice, for example. As a result, their producers have responded with increased production. But on the other hand, their prices now sit above global prices for most commodities, so they need to protect their markets with quotas.

As a result, they want to bring down the stocks of their maize, for example, as well as their cotton, not so much for rice and wheat. That is still projected to continue increasing. But they have extremely high shares of global stocks. I think the percentage right now—we are estimating they hold about 60 percent of global stocks of cotton and about 50 percent of global stocks of corn.

We have known from our experience in the United States that using those types of policies to support farm income are fairly inef-

ficient and are very expensive. So they are trying to unwind those stock levels, as a result. That is why we are seeing them drop off in terms of the global imports that they are demanding from other countries.

Senator MERKLEY. If we had subcategories of the imports of various countries into China, would we also see specifically a drop in the U.S. share as a result of that? I think you referred to appreciation of 18 percent over the euro.

Dr. JOHANSSON. Yes, the major exporters to China—for example, soybean is their largest import commodity. The United States has typically been the major supplier to China for soybeans. That is falling in recent years and being replaced by increasing exports coming out of Brazil and Argentina, so we are seeing an increase in South American exports. We expect to see that intensify this year slightly due to the fact that, as Senator Moran said, we might expect things to change over time, but Brazil has seen 4 excellent years right now. They have essentially rolled sixes on the dice for the last 4 years when it comes to weather, so they have been producing increasing amounts of soybeans.

And due to the fact their currency has been depreciating relative to the dollar, they can be more competitive on the global market. As a result, they are sending a lot more of their stocks to China than before, and that has taken over some of the U.S. share of that.

Senator MERKLEY. So just to wrap up this particular point here, you mentioned that you have projections that go out another 10 years.

Dr. JOHANSSON. That is correct.

Senator MERKLEY. When you look at the Chinese process of eating more meat, requiring more grain input and so forth, do we anticipate that over the 10 years to come that the exports of U.S. commodities to China will go back up?

Dr. JOHANSSON. I do not know, for example, if U.S. exports specifically to China are going to go up by a certain percentage rate, but I can say that, over the 10 years, we expect China's imports of these commodities to increase by 30 percent over the next 10 years. And that is the majority of soybeans, soybean products, although they are going to continue to increase, increasing quantities of grains and cotton as well over the 10-year period.

In the short term, though, as I mentioned, their stock levels are extremely high, so they are moving to limit those.

Going forward as far as U.S. exports to the global economy, which would include China as well, we expect U.S. exports to continue to increase over time, move up. We expect to maintain our dominant share of the corn export trade as well as the cotton export trade over the next 10 years. But we would expect Brazil to take over the number one place from us in terms of soybean exports over the next 10 years, and the EU to remain the number one exporter of wheat over the next 10 years.

Senator MERKLEY. Thank you.

Senator MORAN. Senator Hoeven.

FARM BILL PROGRAMS—HOW ARE THEY WORKING

Senator HOEVEN. Thank you, Senator Moran.

Thanks to all of you for being here today. My question relates to the farm bill and maybe start with the industry representatives, maybe with Dale.

But for each of you, is the farm bill working, specifically ARC and PLC? Is it working like it is supposed to? And if there are things we need to adjust or address, what are they, particularly given this current downturn in commodity prices?

Mr. MOORE. Senator, it is a little hard to say exactly that, yes, the farm bill is working the way we hoped it would work. We basically have one data set to work from, the 2014 crops. Those payments were just going out. We know that in certain parts of the country, I am talking particularly like on the ARC payments, talk to producers in Kansas, the youngsters that are farming mom's ground. They farm in four different counties, and those counties are all adjacent to each other, but their corn ARC payments, for example, vary dramatically from county to county.

I talked to a producer just last week in the panhandle of Texas. The county to the south of them got an \$85 corn ARC payment. They got zero, just right across the county line. Now we understand part of that is due to some of the data sets that they have to work with in those counties where those crops may not be as productive.

Certainly, I am going to shut up and let Reece talk, because the cotton experience has been more than a little challenging from the standpoint of the STAX program and how that has not worked as well as we had hoped. It is probably working the way the Brazilians hoped it would, but not the way we hoped it would.

Senator HOEVEN. Well, for starters, right on. We need to address that issue in the ARC payment and have flexibility where the ag survey does not provide enough information, so that like counties are treated consistently, and farmers are treated consistently and fairly. I mean, that is exactly the kind of thing that can help right now, some flexibility from USDA to fix that. That is something we need to work on. So you are off to a good start.

It is tough to follow there, because that was dead on.

Mr. RUSSELL. I will not try.

Senator HOEVEN. With Dale, not that we are surprised. But that was a bull's-eye.

Mr. RUSSELL. I know you have a couple counties in North Dakota that have had problems because of lack of data. I think that points to a problem though underlying some of this and that is the data itself. Rob can talk about this far better than I can. But you talk to the National Agricultural Statistics Service (NASS) folks, we were down there a week ago, talking with them. And the number of farmers who are actually providing information via surveys is declining. I think that is part of the challenge. What we are facing now in North Dakota are a couple of these counties, there is not sufficient data.

Now, is there a solution to that? I am sure there is.

Senator HOEVEN. In a sense, almost it would be used against them, adverse to their interests.

Mr. RUSSELL. Right.

Senator HOEVEN. This needs to be fixed.

Mr. RUSSELL. Yes, I am not questioning that. Absolutely, when you have contiguous counties, in one you are getting large payments, and some are getting zero payments because of lack of data, that is a problem.

I do think though, the point I want to make, we need to look at these surveys and why it is that we are having a decline in some of the participation in them. I think we have to look at that because a lot of our information that we gather are off of these surveys.

Also, while I have the mike and then I will be quiet, I think we need to take a hard look at the agencies and who they report to. In the case of NASS, the World Board and Economic Research Service (ERS), those are all economic and statistics related agencies. I think they all ought to report to the chief economist.

They had previously. They were moved. I think that was a mistake. And I think all the major statistical and economic agencies ought to be under the Chief Economist. That is a natural fit. They were removed several years ago, and I think it was a mistake, and I think they ought to be moved back.

Mr. LANGLEY. Senator, for the cotton industry and specific to the Stacked Income Protection Plan that was developed for the 2014 Farm Bill, as you know, that was put together by the industry working with Congress. Really, that effort started in 2011 in the lead-up to this farm bill. The STAX policy had to be developed as an alternative to the traditional price and revenue support programs because of the WTO case that the United States had lost that Brazil brought where they challenged some of our cotton policies in previous farm bills.

The difficulty is that STAX was developed at a time when we had high commodity prices generally, and high cotton prices specifically. So like any crop insurance policy, it can provide adequate price and revenue protection at higher prices.

But the situation we are in now is, in the summer of 2014, just after this farm bill was approved, we saw cotton prices start to decline. And cotton prices are now 47 percent lower than they were just a few years ago.

With prices at that level, no crop insurance policy is going to provide a producer with adequate price or revenue protection. So that is the situation we are in today. The original STAX proposal that the council developed did include a reference price of \$0.65 a pound. If that had been included, that would make a huge difference today, given where we are with cotton prices. But without that reference price, we are at the mercy of the futures market, and so it really has left us without much of a safety net.

Senator HOEVEN. Anyone else who wants to weigh in here?

Mr. SELL. This is the kind of question I love. Senator Hoeven, thanks for asking.

Really, as a backdrop, I thought Senator Blunt's opening question was great. We had this great long-term, optimistic view for agriculture. We are going to have to double our production by 2050, and so everything should be rosy. But we have these temporary, no one knows how long, swells in the agricultural economy.

Obviously, every time we go into a downturn, things look pretty good at the start. We are coming from a good place. We just do not know how long and how deep this is going to last.

The answer to Senator Blunt's question, what do we have as tools to get through these things, the answer is the Farm Bill. To your question, how is the farm bill working? I think we can say definitively, there are farmers—and let me just say it is a great honor to get to represent production agriculture and family farms across this Nation. The work they do is a tremendous blessing to all of us, so it is a great honor to represent them. I can say with confidence there are farmers that will be in business this year, this spring 2016, planting because of the 2014 Farm Bill.

So judged on that, there is definitely success, and we are grateful to the Senate, to Congress, to those of you in the production agriculture world for taking the lead to promote a strong farm bill.

Is it perfect? Certainly not. I think what Dale and Randy pointed out, and certainly the whole of cotton that Reece pointed out, it points out some of the difficulties.

But I know one of the challenges you all face, and one that we as representatives of the agricultural industry face, is that we always have these wolves at the door. I can pull out two studies that have been published in the last couple weeks, one from the Heritage Foundation and one from EWG. These are a dime a dozen, just tearing us all a part.

So there is a real fear of reopening the farm bill for this reason. We would love to be able to fix some of these incongruencies and problems like across county lines, but it is a real problem that we all have in this great congressional body, where issues are debated and subject to amendment, the downside risks of tearing open the farm bill right now look to be fairly daunting, relative to the upside potential.

Mr. WOODALL. Senator, from the cattle perspective, we use the farm bill a little bit differently than our colleagues here. But two programs in particular have been very successful, very useful. The permanent disaster program kept a lot of producers in business while we went through the drought that we have finally broken through.

Another program is the Environmental Quality Incentives Program (EQIP). EQIP is one that I think the vast majority of cattle producers have utilized at some point in time.

Senator HOEVEN. Do you mean livestock indemnity on the first one?

Mr. WOODALL. Livestock indemnity is a part of the permanent program, yes, sir. EQIP, I actually have a member of ours from Texas over at the House Ag Committee right now talking about how he used EQIP in consultation with the Natural Resources Conservation Service (NRCS) to actually expand his herd in the middle of the drought. I think that is a great example of how these programs have been very successful in the cattle industry, and we are going to want to continue to work to protect them as we look at future farm policy.

Senator HOEVEN. Thank you, Mr. Chairman.

Senator MORAN. Yes, sir.

Senator Tester.

FARM BILL PROGRAMS—TITLE I

Senator TESTER. First of all, I want to thank you all for being here. I am an actively engaged farmer. I signed the papers at the FSA office just about 2 weeks ago.

I wanted to give you a little history. Back in the 1930s, if it would not have been for FDR's work with the farm program, I would not be on the farm today. It has been critically important.

In the 1960s when I was growing up, my folks, I remember them specifically saying that they were going to sign up for the farm program because it was the patriotic thing to do.

And now we have a farm program that has changed over the years, and rightfully so. I guess what comes to my mind is, what are the goals of the farm program? I would like to ask it to the Chief Economist of the USDA, since you are a big part of implementation. What are the goals of the farm program?

Dr. JOHANSSON. I think, as Senator Hoeven mentioned earlier, and as you are asking right now, we have seen a shift in the way that we meet the goal. I would describe the goal as providing a safety net for producers to help get through times like right now, or sort of adverse economic conditions, whether it be environmental through weather conditions, or whether it be economics, to sort of smooth out those peaks and valleys over time.

We saw big movement in that from the last farm bill, the 2008 Farm Bill, to this farm bill, in the sense that we moved toward a more countercyclical way of thinking about the Commodity—Title I Commodity Programs, in the sense of they are expected to provide a safety net when times are bad, but not necessarily pay out when times are good. You all were debating this during record farm income and at a time when Congress was looking for savings. So it made sense to sort of move to this ARC/PLC regime where you say, well, if your revenue is high this year, you do not get as big a payment. That is consistent with the sort of safety net notion. I point to that as the overarching goal of the farm bill or farm programs, in addition to providing technical assistance on the conservation side, to provide those kind of resources to producers to implement conservation programs, as well as obviously the food assistance. Eighty percent of the farm bill is food assistance, relative to 20 percent that is going to the farm.

Senator TESTER. Yes. And having adequate food for the populace, too.

Dr. JOHANSSON. Of course, yes.

Senator TESTER. I certainly do not want to open up the farm bill for any reason, because I share the same concerns you do. But I guess the concern I have is, I graduated high school in 1974. And by the way, my community is no different than any other rural community in the State. There were 165 kids in high school when I graduated, basically 40 kids to a class. Now there are 12 kids to a class, the same community. That was a long time ago, 1974. It should not be, but it is.

All that reduction, actually, is due to agriculture. It is grasslands, flat, wheat, and cattle. What we have seen is, we have seen nothing short of a mass exodus. So now the community is to a point where, if we lose Wells Fargo and we lose our medical center,

that community is going to become a ghost town, which rips my guts out. But that is where we are headed.

The question is, when we are doing the farm program here in Congress, and we are doing a nationwide farm program, is that the best way to approach it? Or should we be in some way maybe dealing with regions, or may be dealing with crops specifically? We do irrigated, nonirrigated, that kind of stuff.

I guess the bottom line is, are we getting out of the farm program what you said? I agree with what you said. This year, there are people who are going to be in business because of the farm bill that would not have otherwise been. But looking at the overall thing, are we really doing anything for rural development with the farm bill, considering what has transpired over the last 40 years?

Dr. JOHANSSON. I mean, rural economic development, obviously, our Secretary has been extremely focused on that.

Senator TESTER. This is not to point a finger at anybody.

Dr. JOHANSSON. No, no. It is a tough nut to crack.

Since the 1980s and going forward, and certainly, if we go back even further another 80 years to the beginning of last century, we know that the number of people working on farms, the number of farms, have been consolidating over time. Now we have seen that flatten out over the last 10 or 15 years, so we do not really see the number of farms going much below 2.1 million farms right now. It has been pretty constant over the last couple censuses.

But that being said, commercial farms are getting bigger, so there is a lot more retirement farm, residential farms. You mentioned actively engaged, so I would imagine they are actively engaged, but they are not certainly producing the 80 percent of the food that we see in the country.

Senator TESTER. Right.

Dr. JOHANSSON. How to provide innovation, support and how to get those rural communities sustainable over a long period of time, there are a lot of different ways to do that. I do not know if anybody has settled on the right way to do that, but I think you have built some of those into the new farm bill. I would say, give it some chance a chance to work, and we will see what happens.

Senator TESTER. Good.

Dale.

Mr. MOORE. Senator, I would say that the parts of the farm bill—you shared this with folks, it is kind of like the Olympics. Everybody tunes in to watch the 100-meter dash or 220-meter dash or whatever, the hot-button thing, but they kind of do not really tune in for curling or when something like that is going on.

But the rural development title in the farm bill, there is a lot of work, time, and effort that goes into it. You all spend time on that every year in appropriations because a lot of that, having worked for an authorizing committee, I am very familiar with the phrase “subject to appropriations.”

Senator TESTER. And Senator Moran and I try to get every nickel we can out of it.

Mr. MOORE. Exactly. But one of the things the Farm Bureau and I know a number of groups—we work with in coalitions and partnerships on this. For a lot of our young farmers and ranchers, if you sit in the Farm Bureau’s young farmer and rancher committee,

they are focused on how they get started in agriculture and how they grow their operations. But they also want to live in these communities.

My high school graduating class was nine kids. With the exception of myself, everybody else is still back in the hometown area. They want that quality-of-life. They are looking for ways on how do they grow that local economy that entices somebody, not just in the ag sector, but some other business enterprise. The work you all do on broadband funding, for example, how that expands opportunity.

Senator TESTER. You are exactly right. But here is the problem. As population decreases, and correct me if it is not happening in every rural community in this country, then we are looking at putting money—and I will fight for it until the last dog is hung, and so will Moran and so will Merkley—but we are putting it into a larger, more expensive area with fewer and fewer people, so it makes it harder and harder to justify. And when we are dealing with a \$19 trillion deficit, it becomes a real problem.

I will give you a real-life example. They are talking about shutting down a border station in Raymond, Montana, the northeast corner of the State, just reducing it by 6 hours. Why? There used to be a lot of trucks going through, and now there are three a night. I am fighting like hell to keep that border station open, but, man, it is tough to fight.

If you are fiscally responsible, it really is a conflicting thing. So that becomes the point.

Go ahead, Randy.

Mr. RUSSELL. Just a couple of observations. I am probably one of the older people on the panel here, so I have been through seven farm bills. I can just make an observation about that.

We spent an enormous amount of time, and rightfully so, on what I would call Title I, the farm program. Of course, now crop and revenue insurance are the basic tenet of our farm program, very important. And I would urge Congress not to do anything to undermine crop insurance.

We are now in the third year of the 5-year farm bill, and we need to maintain that and let it work.

But what happens is we spend an enormous amount of time on Title I, an enormous amount of time on things like crop insurance, and we have 13 or 14 other major titles in the farm bill.

Senator TESTER. That is true.

Mr. RUSSELL. It is a fact of life, but we do not spend enough time on things like research and rural development, and many of the other areas, conservation, that we really need to focus more time on.

I would hope when we get to the next farm bill that we can do a little better job of allocating time, energy, effort, and prioritization to some of these other titles, because it is not one program that is going to be the silver bullet.

Senator TESTER. Yes. Thanks, Randy.

I just wanted to say one thing. In relationship to the surveys, I bet I get a survey every 2 weeks. The reason people quit filling them out is because you just get sick of the damn surveys. They get pretty specific on how much income you made and what your

net value is, some of them, not all of them. Quite frankly, farmers are pretty libertarian, generally speaking, and they do not like letting their neighbor know how much money they got or how many cattle they got or anything else about their operation. So that is why.

You were going to say something, Tom?

Mr. SELL. I think it is a great question. The thing is that the technology and research has allowed the American farmer to become so incredibly efficient. The fact is, one man can do the work today that in 1974—

Senator TESTER. There is no doubt about that.

Mr. SELL. So it is a problem, in that sense. But I would say, I think the general ag economy is where we need to focus. When there is money to be made in agriculture, people will be creative and come to those areas where there is money to be made.

I would say even in Title I and crop insurance, we do not talk about crop insurance this way, but it has been a great rural development tool. You look at communities across this Nation and the local independent or farm credit agency is one of the drivers of the local economy. They are employing people. These are good jobs in rural communities.

Ethanol is another one that has been a big driver in many rural communities, in the creation of new, value-added plants. Value-added is a term we used to throw around a lot kind of in ag policy debates back when I was a staffer on the House side. Maybe we need to get back to those times.

But it is a tough nut to crack, as Dr. Johansson said, because of that great efficiency of the American farmer. It is a blessing in so many ways.

Senator TESTER. A blessing and a curse.

I would just tell you this, and then I have to go. I thank you all for being here. Public education, family farm agriculture, if we lose either one, this country is changed and not for the better.

So I appreciate all your work in making sure that people in production agriculture get a fair shake. They need to get a return for their investment, too.

LONG-TERM AGRICULTURAL OUTLOOK

Senator MORAN. Senator Tester, thank you. I am going to yield now in just a moment to Senator Merkley, who also has to depart, and then I will have all of you to myself.

That was my plan from the beginning.

But in response, while Senator Tester is here, you all responded to Senator Blunt's question about the future of agriculture and the bright, long-term opportunities. But does that translate into success in the communities that Senator Tester described, his hometown, my hometown? Can we take comfort in knowing that the economy is going to, I guess the way we would say it is that, so many more mouths to feed, so much more demand for agriculture products, does that then translate into a revival of rural communities across the country? Or is that not a given?

Dr. JOHANSSON. I will just point out a couple things.

Looking out into the future, certainly we know that demand is going to be increasing dramatically, and we know the challenges to

producers are also going to increase dramatically too, whether it is water availability or changing climate, or what have you. Producing that amount of food is going to raise some obstacles, so I think the R&D component is certainly one that we should keep in mind.

But just thinking back over the last 5 years or so since the recession, we know that farm households have generally seen a rebound in their household income much faster than the overall U.S. household incomes have. So that is some indication that, while we are seeing a lot of issues that Senator Tester just brought up, there are opportunities out there, and off-farm income opportunities have been growing for the average farm household much more quickly than they have been for the U.S. household in general.

So looking forward, I think that we still look at that trajectory, and it is looking like one of the more positive aspects of the farm economy right now.

Senator MORAN. Again, I will go to Senator Merkley in just a moment, but one of the points I would make is that there has been an effort to highlight the importance and the phrase “do not open the farm bill,” crop insurance has value. I would remind ourselves that while we started down the path of a bright future, in the absence of that opportunity to hold things together in down times, the ability to take advantage of the great times that may follow disappears.

So you lose a farmer today, you lose a farm family, another young man or woman decides it is not the time to come home to the farm. When things get good, if we have not sent the right message and had the necessary safety net today, the chances of getting them to come then, or those who have experienced difficult times who have left to come back, disappear.

So if we do not do our correct policy decisions now, and we do not keep the policies in place that we describe as a safety net, our ability to take advantage of what was described earlier as a robust future, mouths to feed around the globe, it will mean a lot less for the communities that we all represent.

Jeff.

NON-TRADITIONAL FARMING PRACTICES

Senator MERKLEY. Just to continue this conversation, what we have seen in a lot of the farming communities in Oregon is a declining population. It is driven, as was pointed out, by the change in technology. There was a documentary down on the east side wheat farming called “Dryland” in Washington State, which is very similar to Oregon State.

It partly tracks the community through 10 years, and each year revisiting the big event of the year, which is the combine destruction derby. Not only is that a lot of fun and the kids have a helluva time welding up the machines to destroy each other, but it represents that they have all these combines, because combines just get bigger and bigger and fancier and fancier, so there are these old ones lying around to be used.

As those combines have gotten bigger and the amount of labor needed goes down, then the cafe disappears, and then the school merges with the next school over an hour away, so the school-

teachers are gone. Then the gas station starts to thinking about closing up business, and so forth.

I am not sure there is much we can do about that change in technology, but it does change the character of our towns.

The types of questions that I want to follow up with, which I will save for another time, are a range of things that are less macro, but things like we have a new biogas plant going in that is going to take advantage of a huge range of feed stocks, from potatoes, the fluids that I guess coming out of the potato plant, leftovers from the onions, and some local manure, all in the same place.

I am interested in how much use of agriculture waste is finding more beneficial use and adding to the local economy.

The aging of the ag economy, we are seeing in Oregon, a lot of the traditional economy, a lot of aging.

We are seeing a huge influx of nontraditional or organic farmers, in terms of younger folks getting involved. I was shocked by the Department of Agriculture's numbers for the number of new farms in Oregon, but they are not in the traditional sector.

Mobile slaughter facilities, which is something I hear about a lot as I rotate through the State in my town halls. I go to every county every year, and it comes up all the time. We have one mobile slaughter facility that Oregon State helped generate, and then one private one for chickens, but nothing on the cattle side. The economics of that, people are just spending a lot of money shipping their cattle a very, very long way to be slaughtered.

OPENING TRADE WITH CUBA

I am also curious about your thoughts about trade with Cuba, given that we have this opening and kind of a new market. So I am excited to see what might develop there.

But I am not going to take the time now, because I have to depart as well. But those are some of the different chapters of evolving changes in the agriculture world. I thank you very much for your expertise. Thank you.

Dr. JOHANSSON. Senator Merkley, if I might just point out one quick thing on the Cuba issue. I just put this slide together for the outlook last week. I will just mention it right now.

On average, we export about \$300 million worth of products to Cuba each year, a pretty limited set of products. If you compare that to the Dominican Republic, which is a country of roughly the same gross domestic product (GDP) and population size, we export about \$1.2 billion, with a much wider variety of ag products to the Dominican Republic.

So that just gives you a good point of comparison in terms of what the potential is. Obviously, it could be bigger or smaller, depending on a lot of other factors. But we could conceivably multiply our trade there by four times, if we get normalized relations.

Senator MERKLEY. I believe that the biggest share is chicken fryers?

Dr. JOHANSSON. Yes.

Senator MERKLEY. Chickens. I went down with Secretary Vilsack's first agricultural visit, the first trip since 1961. The Cubans are very, very interested in expanding. They do not have much money to spend, which means we have to provide credit,

which we are not willing to do right now. So they are buying from other countries that are willing to extend better credit terms.

So maybe that is a piece of the thawing that we can rethink, how to match other countries on the credit side.

FARM INCOME AND CROP INSURANCE

Senator MORAN. Jeff, thank you very much.

Thank you all for joining me here this afternoon.

I have just a series of questions that are not necessarily at the moment directed to anyone, in particular, but I want to start with the economists.

What in your projections do you include as far as farm bill or program payments and revenue or crop insurance protection? So when we talk about falling crop prices or commodity prices, that does not include the safety net features of the farm bill or crop insurance. Is that true? We are talking just commodity prices in the broad sense, correct?

So in the reductions that you all are predicting, what percentage of those reductions will be made better, made whole, by increasing farm programs or crop insurance payments to farmers?

Dr. JOHANSSON. Well, we do know that in the farm income numbers that I mentioned earlier, we are seeing a drop in farm income, farm cash income to the \$90 billion level. We are expecting this coming calendar year, calendar year 2016, to see an increase in government payments by about \$3 billion over last year. I have the numbers here, so I can pull this up in a second, Pat, if you want to talk about what you have in your numbers?

Senator MORAN. Did you say \$90 billion?

Dr. JOHANSSON. There is net farm income and net cash income that are little bit different, so let me just pull up that exact statistic for you.

Senator MORAN. Okay.

Dr. WESTHOFF. So if you look at crop years 2014 and crop year 2015, the actual payments for crop year 2014 were about \$5.5 billion for ARC and PLC, so part of the drop that occurred was in cash receipts. To put that in context, the drop in overall cash receipts in the crop sector was \$232 billion in 2012 to \$191 billion last year, so a \$40 billion drop in overall cash receipts.

Yes, ARC and PLC is making up part of that. It is not making up all of it, by any stretch of the imagination.

Senator MORAN. When you say not making up all, it is making up a very modest amount.

Dr. WESTHOFF. Making up a modest share of the overall drop in overall cash receipts for the entire crop sector. For certain subsectors, it is far more important.

Senator MORAN. How would you describe that gap being filled? I supposed it is not with traditional crop insurance but with revenue protection. That would be even a smaller number than the farm program payments, I assume?

Dr. WESTHOFF. Right. In fact, in terms of crop insurance, it is going to depend on the yield obviously in a given year what sort of payments will be occurring.

One important aspect of crop insurance, it is not actually countercyclical in terms of pricing prices. It is actually procyclical in

terms of prices. The higher the value of the crop insured, the more the premiums and the more the premium subsidies. So the actual benefit of the crop insurance program tends to be higher in dollar terms when prices are high than when prices are low.

Dr. JOHANSSON. And the way we would count that, certainly we count expenditures that the producer puts out-of-pocket toward purchasing crop insurance, but we do not count the government subsidy as a receipt to him, since we are essentially just covering the rest of that premium for the U.S. Government to provide the crop insurance subsidy.

This figure, for example, gives you an indication of how farm cash income has changed over time, and the light green is the percentage provided by government payments.

AGRICULTURAL EXPORTS

Senator MORAN. Thank you.

Similarly, in determining the crop prices, what percentage of crop prices in the aggregate—I realize it would be different from commodity to commodity—are determined by exports? So when a farmer tells me, why don't we just take care of our own selves, take care the United States, kind of my standard reaction sometimes is, what 40 percent of acres in Kansas do we no longer want to farm?

But I am not sure that those numbers are really realistic. What percentage of the commodity prices in the overall agricultural economy is driven by exports as compared to domestic consumption?

Dr. JOHANSSON. We have a ballpark figure of about 20 percent to 80 percent.

Senator MORAN. Twenty percent to 80 percent?

Dr. JOHANSSON. So 80 percent—

Senator MORAN. And you describe that as a ballpark figure?

Dr. JOHANSSON. No, no, no. Meaning that 20 percent of the ag economy is exported, so our value-added ends up being exported to other countries, versus 80 percent sold within the United States.

Senator MORAN. Oh, I am sorry. I may end up apologizing to another USDA ag economist again for rudeness. I have done it before.

Dr. JOHANSSON. No, what I mean to say is that has been moving around a little bit in terms of whether or not it is 20 percent or 19 percent or 21 percent.

Senator MORAN. Is that the same thing as saying that exports account for 20 percent of on-the-farm income?

Dr. JOHANSSON. I would defer to Pat on this, but I would say prices are sort of a nonlinear function, which is determined somewhat by how many stocks you have out there. So if you are in a very tight situation, a very small movement could translate into a relatively large movement in prices, versus the place we are at right now, we have a lot of stocks out there. So we can see a big movement. Whether we see disruption in, for example, European corn production or U.S. wheat production, that is not going to move prices by all that much right now just because we do have a lot of reserves out there.

If you guys want to add to that?

Dr. WESTHOFF. If you think about the corn market as an example, the amount of corn we feed to livestock in this country does vary from year to year, but it is not likely to change by 20 percent

from 1 year to the next very often, where export numbers can go up and down a lot from 1 year to the next.

Seeing exports are relatively small share of the overall market, that may help account for a large variability in prices.

Senator MORAN. Because of the margins.

Dr. WESTHOFF. Right.

Senator MORAN. The last sale becomes more important.

Dr. WESTHOFF. The last sale is the one that matters. And if that sale tends to vary more, it will be more important in the grand scheme of things.

Mr. SELL. Mr. Chairman, I think it does vary a lot by commodity. Reece can talk about cotton, but I think we mill about 3 million bales a year in the United States. That means we have to export about 10 to 12 million. So you could say cotton is very export-dependent. The same with rice. The same with some other commodities. So it probably varies a lot by commodity.

Mr. WOODALL. Mr. Chairman, one thing I would add from the cattle perspective is, even though we export roughly about 15 percent to 17 percent, the value is tremendous on what we get from just trying to maximize the value of the carcass. We all know that beef is what's for dinner. Beef tongue is not what's for dinner in the United States.

So we take something that is worth a few cents a pound and would otherwise be used as dog food here, we can put it on a container and send it to Japan and create a premium product that the Japanese consumer is willing to pay a premium for.

Senator MORAN. What you all are trying to point out to me is that I cannot simplify it into this phrase that I am looking for.

Mr. MOORE. It is way important.

Senator MORAN. Way important, that I can say.

I remember, Colin, in the days of trying to open the Japanese market to all meat products that the argument, the explanation, the insistence for getting that accomplished was that our highest quality is in great demand to Japan.

Mr. WOODALL. Those are good tongues, you know?

But it is not just that, Senator. We are sending a lot of our high-quality beef around the world as well, because there is a demand for our beef. As we see the increasing middle class, we see people who have more disposable income. They want to eat better. They want protein. And we want to make sure we have the opportunity to put U.S. beef in front of them as an option.

That is one of the reasons why we have spent so much time pushing TPP, the Trans-Pacific Partnership. For the cattle industry, it is an extremely good deal.

Right now, all the product that we are sending into Japan is subject to a 38.5 percent tariff. TPP takes that down to 9 percent on most cuts. And on cuts like tongue, it takes it down to zero.

So when you look at the issue we have right now with the strong dollar, that all three of our economist friends talked about, we are seeing a hidden value. But if we can take that tariff down, that helps recover some of that cost.

That is why we are really pushing to get TPP done sooner than later because Australians currently have a 10-percent tariff advantage over us. So we had a high of \$1.6 billion in 2014. That has

eroded by about \$300 million just because the Australian product is cheaper. When TPP is put in place, we will be on the same level playing field as they are, and we can regain some of that market access.

ETHANOL AND COMMODITY PRICES

Senator MORAN. Thank you.

It was Tom who indicated that ethanol, and he is seated next to Colin, so I understand what circumstance I now found myself in, but, again, going back to commodity prices, is there a ballpark number that tells me what percentage of commodity prices—I suppose, in this case, it is grain, sorghum, and corn—is determined by ethanol production, is a significant component in determining the price of corn and grain sorghum?

Dr. JOHANSSON. Well, the grind right now for corn going into ethanol is about 5 billion bushels, give or take a couple 100 million bushels on that. That translates into roughly 14 billion gallons of ethanol right now.

If we increase that by a couple 100 million gallons here or there, it is going to move prices of corn around by a nickel or less. It is not moving around by anything more than what you would see in a regular market fluctuation based on some report of dry weather in part of Brazil right now.

So that does not move prices around all that much at this point, because it is a relatively mature market. You go back 5 years ago when we were really ramping up production, and that was again leading to a situation where we were pulling corn out of stocks. Stocks-to-use was relatively tight at that point time.

It goes to my point about, at certain times, you see a small change in demand that is going to have a big impact on prices. Right now, I would not characterize us as being in that situation.

Mr. MOORE. Mr. Chairman, I would also point out, coming back to something—Senator Merkley mentioned how things change. I am glad I am sitting all the way down from Colin.

When corn prices shot up when they had the drought in 2012, soybean prices followed. We were talking with livestock producers. And given everyone we represent, how do we address this and how we keep peace within the family? We had a number of our producers in poultry, beef, and pork, all indicate to us that we would like you to get those prices down, but do not get carried away to the point that you screw up how we have changed—“we” depending on what part of the country, but the dried distillers’ grains (DDGs). The byproducts from the distilling process had essentially become an important part of their feeding infrastructure, their component in their feed sources.

So as these things change, farmers and ranchers adapt. If the weather changes, Mother Nature changes, demand for labor changes, they are going to figure out a way to solve it. They get kind of cranky when you start turning around and saying we are going to fix this, this, and this, and throw another wrench into something that they sort of figured out how to deal with one way or the other.

But back to what the doc was saying, when you look at these numbers, you are moving prices up and down a nickel or a dime in markets where we have lost dollars.

COTTON SURPLUS IN CHINA

Senator MORAN. Okay.

Reece, in cotton, a significant part of the challenge that we face in cotton is a significant amount of surplus stocks in China, in particular, true?

Mr. LANGLEY. Yes.

Senator MORAN. And is there any policy decisions made by the United States that contributed to that circumstance? Or is this totally a Chinese issue?

Mr. LANGLEY. It is largely a result of policies that China has put in place over the last 5 or 6 years. We go back and look, and 5 years ago, China was importing 25 million bales of cotton globally, and they were the largest export market for U.S. cotton. Today, they are importing only about 5 million bales, and they are about our sixth largest market.

So we have lost a huge market share there, and that is because they basically pulled out of the market and are importing only what they are required to under their WTO agreement. The reason for that is the 60 million bales of cotton stocks that are sitting in warehouses in China, which is the result of their own policies that they put in place when we saw global prices spike for all commodities a few years ago.

So for several years now, China has been supporting their cotton producers, or a big portion of them, at about \$1.40 a pound, which is more than twice the global price.

Senator MORAN. The way you describe it, is it true then that China is interested—they only get out of the circumstance that they are in. This is not a desirable place for them to be?

Mr. LANGLEY. That is true. They are trying to figure out now how to unwind this stock situation that they are in. But it this going to take several years to do that.

EXPORT INFRASTRUCTURE

Senator MORAN. In a broader sense of exports, what evidence do we have that we have sufficient infrastructure in place that allows us to export efficiently? Again, the way we started this conversation was about the bright future that comes with opportunity to feed a growing population in a hungry world.

My view is that, in order to do that, we have to be very efficient in our ability to export. I think you translate efficiency in a number of ways, but one of the significant ones is transportation. Therefore, what economically do we need to be doing to be in a position to compete in a global economy when better days return, exports increase? Where are we on our infrastructure investment?

I do not know whether that is an economist question or not.

Dr. JOHANSSON. Certainly, we looked at the railcar situation about a year and half ago when in the upper Midwest, there were a lot of capacity issues caused by a variety of factors. It was very cold that winter, if you recall. So a lot of producers in the upper Midwest were having a difficult time getting their commodities to

either the Pacific Northwest ports or down to the Gulf of Mexico. So that raised some red flags that year.

We saw a lot of basis effect for corn, soybeans, and wheat in those areas. Railcar companies, BNSF and others, have invested heavily in improving that condition, and I think that has helped a lot.

We also obviously have the benefit in the United States of a very good river system for transporting our commodities down to the Gulf of Mexico and, of course, through the Great Lakes.

I think there are infrastructure issues. And certainly, in a drought year, we will hear about the pinnacle rocks. And then certainly in a high-rain year, we will hear about the locks closing as well due to the level of the river being too high in certain parts of the Mississippi.

Other than that, I know there are investments that often need to be made on the barge system. I know they have been occurring on the rail system. There is another issue on the West coast ports as well. There needs to be some investment made in some of those port facilities on the West Coast, but I do not have any specifics in terms of numbers.

Senator MORAN. A potential competitor today, a competitor today and a potential competitor in the future, is Brazil. What is the consequence of the expansion of the Panama Canal? Does that benefit us or them?

Dr. WESTHOFF. Brazil is a country that obviously has transportation issues internally, and getting things from the interior of Brazil to a port has been a huge challenge over the last several decades. They are still moving incredible amounts of grain a very long distance by truck in Brazil, not the most efficient way of doing things. So as they are able to evolve their internal transportation system, that is hugely important.

I do not think the Panama Canal is going to be where we move huge amounts of grain. I do not think. There will be some other higher value products.

CONSERVATION RESERVE PROGRAM

Senator MORAN. Okay. Perhaps more to the economic report, one of the things that caught my attention, Dr. Johansson, was you indicated there were falling CRP acres.

That caught my attention because one would think, with declining commodity prices, that the Conservation Reserve Program (CRP) might be an alternative, but that is not what your statistics indicate.

Dr. JOHANSSON. I think the demand for enrolling in CRP is up. It is just that I believe the farm bill restricted the number of acres.

Senator MORAN. So it is not that there is not demand for CRP acres. It is that they were capped.

Dr. JOHANSSON. That is correct.

Senator MORAN. Okay.

Dr. JOHANSSON. So I think in a prior farm bill sort of programmatic sense, you would see increased enrollment in CRP taking up those acres.

LAND VALUES

Senator MORAN. Okay. The conversation about land values, which maybe this is Dr. Kauffman, but land values matter greatly, as far as the consequences to a credit worthiness of a farmer. I think the indication, at least by one or more of you, was that we have seen a modest decrease in land values. I would describe it as a much more dramatic decrease in commodities or farm income, commodity prices or farm income.

How do you explain the modest decrease in farm values, in land values? And what would your prediction be for that in the future?

Dr. KAUFFMAN. So land values, to your point, account for a very large portion of the balance sheet. I think it is something like 85 percent of farm assets. So in terms of the asset side, it is important. In terms of lending, it is important, for bankers who are looking for collateral and other things. In terms of being able to provide credit, that is obviously an important factor.

There are a lot of I think drivers behind why we have seen only a modest decline in land values. When we have talked to lenders and when we have done surveys and other things to look at this, some of those are simply the fact that the wealth that was generated in agriculture during those 5 years or during that time period was significant. So in terms of the number of producers that were able to deleverage, and many of them using cash to be able to purchase land, we definitely saw some of that.

Clearly, interest rates, in terms of the amount that producers or their investors would need to spend on mortgage payments, is a different number when interest rates are at the level that they are.

There are other factors I think involved in that. But I think those are a couple of them that we hear the most. I think we do hear going forward that there is likely to be additional modest pressure, but because of the interest that has been in farmland, there have not been as many sales as what we seen in previous years. So I think there have been a lot of folks sitting on the sidelines waiting to see what might happen before really moving back in.

So in terms of the volume, it has been a little bit lower. So we have not seen the kind of pressure.

There have not been a lot of forced asset sales. It has not gotten to that point, as I noted with the delinquency rates being low. So we have not seen the kind of forced asset sales that you might have seen in the 1980s that would have perpetuated this cycle back downward.

Senator MORAN. Is the same analysis true for cash rent?

Dr. KAUFFMAN. So on the cash rent side, I would also say that we have seen only modest reductions. There, too, there are a number of reasons why I think that you have seen only some modest changes there. I think part of that has simply been, again, the fact that there has been the kind of wealth that has been generated, so it has taken some time to get to a point where producers maybe have to think more carefully about their operation going forward.

They have had the ability and they would be reluctant, many farmers would be reluctant, to give up the ability to farm that land, for fear of not getting it back. If they were to do that, so far there

have been other others who have been willing to step in and take on that land, so it continues to be farmed.

I think that is one of the reasons there has been a significant run-up on working capital, and a lot of farmers had the cash to be able to pay some of those things. Now the concern, I think, going through 2015 and into 2016, is some of that working capital has deteriorated. So as we go forward, that is why I think there is some of that expectation that you would need to see some of the reduction in cash rent simply because of the working capital.

Senator MORAN. That answer reminds me of the question about consolidation, fewer farmers farming greater acres. I assume that downturns exacerbate consolidation?

Dr. KAUFFMAN. That is what we have heard, that there could be some pressure on consolidation from the fact that there are some producers who put themselves in a very good financial position during these very good years. They maybe have been careful in taking on new debt and maybe careful in terms of expenditures. So their breakeven costs may be lower than some others that had a different set of circumstances.

So I think when you have some producers that face a disproportionate amount of financial stress, it is clear that there are others that may be looking at some of these other long-term opportunities that have been discussed in terms of profitability for agriculture and recognizing that, the saying is you buy low and sell high. So I think there are some who are looking at that as a potential opportunity, which obviously points to the possibility of consolidation.

AGRICULTURE ECONOMY

Senator MORAN. The comparison between now and the 1980s, the days that we all remember with such disdain, such fear, it is different. I do not know what it was like going into the 1980s with what you described as the built-up reserves, the cash income, the income that preceded that fall. Was that present then?

Dr. KAUFFMAN. Debt measures were certainly higher going in through the 1980s than where we are sitting right now when we look at things like debt-to-asset ratios. That is certainly true.

I think part of it, when you look at why things are different though, that is a significant part of it. Certainly, the leverage is not the same. Clearly, interest rates, that environment is different going into the 1980s and what inflation had looked like leading up to that. So the expectation, then, of what might happen with high inflation I think is part of that.

So we are in a different environment as it relates to those sorts of things and coming off of the kind of years that we had. And a lot of producers remember the 1980s, so as to not want to repeat it.

Senator MORAN. In your analysis, did you determine that the president of your bank is going to prevail on increasing interest rates or is she going to be on the losing side of that debate?

Dr. KAUFFMAN. I appreciate that question.

Senator MORAN. You're welcome.

Dr. KAUFFMAN. I certainly cannot speculate as to where future interest rates may be.

Mr. RUSSELL. You know, Senator Moran, just to put it in a little perspective, during the 1980s, I was at USDA. I was Deputy Assistant Secretary for Economics and chief of staff. We lost 30 percent of the equity value in agriculture in a very short period of time, 30 percent. I mean, it was an enormous amount.

We had double-digit unemployment. We had double-digit inflation. The prime rate went over 20 percent. It was probably the most difficult period we have had, and I was not there during the Depression, but clearly, it was a very difficult.

As you may recall, the farm credit system needed bail out. It was an extremely, extremely tough period.

I am not trying to say what we are going through now is not a difficult one, but, again, relatively speaking, it is one of these periods that it is a downturn and it will turn around.

Senator MORAN. Randy, you described the broader economy in those days, and that is reminder to me. As policymakers, one of the things that we can do that would benefit everyone, including agriculture, is to have a growing economy generally. I am often asked to visit with an industry sector and speak in front of a group of folks who are in the particular business, and I think about, well, what are their issues? What do they want to hear about? What do they request of Congress?

I often take a step back to say, I think the best thing we can do to help your industry is to have growth of GDP, which is true of agriculture as well.

Mr. RUSSELL. To your point, Mr. Chairman, I totally agree. We are now entering the 10th consecutive year of sub-3 percent growth. We have never had a 10-year period like this since 1929. So, I mean, that is an amazing thing.

As I cited earlier, the difference between 2 percent GDP growth and 3 percent GDP growth over the next 10 years is \$4 trillion to the economy. So it is an enormous compounded economic benefit.

OIL AND INPUT COSTS

Senator MORAN. Thanks, Randy.

Again, Dr. Kauffman, in our part of the country, the price of oil is an important component on both sides of the equation. Many of our communities in Kansas, their prosperity certainly rests with agriculture, but it is a different world when we are producing oil and gas at prices different than they are today.

But a common question of me as a Member of Congress is, why has the input cost not diminished as rapidly as the underlying price of oil? I am looking for that two-sentence answer that I can provide folks who ask me that question. Does that exist?

Dr. KAUFFMAN. I am trying to think of how I might put that into two sentences. I mean, I think that, in general, you do tend to see prices can be sticky. That is what we see in agriculture, in general, to the question about cash rents and some other things, that we do tend to see that prices can be sticky coming back down.

I am probably not the best person to speak to gasoline prices, as it relates to oil prices, but certainly there has been a pretty significant drop in gasoline prices as well.

Senator MORAN. I think maybe it was you, Dr. Johansson, said that the input costs have not diminished in a comparable way—

these are my words, not yours—in a comparable way to the reduction in commodity prices or farm income.

Dr. JOHANSSON. Yes, typically you see, for a variety of reasons, the cost side lags a little bit. We are seeing today's prices for gasoline, for example, or for corn cash in the Midwest, and what we are seeing in terms of input prices, we are certainly seeing what those are in the newspaper or through the Agricultural Marketing Service (AMS) reports. But producers have those inputs on hand and they paid a higher price for those several months ago, or maybe over the winter. So it takes a while for them to go back out repurchase those inputs at the lower prices that are going to be available.

So when you try to add those into a farm income statement, you are going to see they are selling their commodity, whether they forward-contracted or not, they are selling it at more contemporary prices relative to cash inputs that they are using to produce those, right? So there is a certain lag in that in farming in general, because you incur the costs much prior to the time you are getting your revenues. So I would say that.

But there is also this phenomenon that we see across all sectors. Most sectors in terms of prices go up a lot faster than they come back down, sort of the rocket and feather phenomenon that you see a lot of times.

We see this, for example, if we look at farm income from last year, our farm income estimate that we put out in February relative to what we put out in November, our final one, cost did decline over that time period. So we had higher costs at the beginning in February, when we initially estimated, compared to November, when we finally had a much clearer picture of what the tally was going to be.

I would expect, so long as prices stay low, I mean, oil prices have continued to come down since November, I would imagine that if they stay low through the summer into the fall that we will see a lot of those other chemical input prices coming down over time over the summer as well. And by the time we get to November, we will likely see lower input costs on the balance sheet.

So the farm income number, it is always going to lag just a little bit. We do not really know what final prices are going to be for the commodities, nor do we know what costs are going to be.

But typically, over the space of the year, so long as input commodity prices are coming down for oil, for chemical fertilizer, for pesticides, that type of thing, we will see that come down over the summer as well, and it will be reflected in our November numbers.

INTEREST RATES AND FARMLAND

Senator MORAN. I am going to bring this to end in just a moment, otherwise it will just become an ego trip for me to sit here and ask you all questions.

In regard to interest rates, how sensitive is farm income to interest rates? Are most farmers leveraged in a significant way?

Dr. KAUFFMAN. So leverage is certainly lower, and Rob may be able to speak to the exact number. But it has been on the order of 15 percent or less, as it relates to a debt-to-asset ratio, for the

last number of years. So I think you have seen a lot of producers take that opportunity to deleverage.

When we look at our lending data, certainly producers have been advised over the last number of years to take advantage of low interest rates, so they have sought to lock in some of those lower fixed-rate loans. So I think to some extent, that has limited their exposure.

As I noted, I obviously cannot speculate on the future path of interest rates, but I think it has been well-known that the path so far has been a fairly gradual process. We have been in this low environment for some time. So I think that has limited the interest expense payment of that, as it relates to producers.

It is a relatively small number. We did a calculation, and I presented this last week at the forum, in looking nationally for a corn producer, as an example, if you put the interest expense payment in cents per bushel on corn, it is somewhere in the vicinity of \$0.12 to \$0.13 per bushel. When you compare that with just the average fluctuations in the price of corn over any given timeframe, those average fluctuations swamp the interest payment that is there. Again, part of that is because of the deleveraging but it is also because of the low interest rate.

So I think in terms of what producers may stay awake at night thinking about, it has not necessarily been the interest rate side of things, partly because they are so low.

So I think you can obviously envision an impact, but because the path of interest rates out there, private forecasters and others are looking at where we might be in a couple of years, I think that no one is looking at something that would be on the order of what we saw in the 1980s, so I think that has given people——

CROP REVENUE

Senator MORAN. In regard to the 1980s, I was thinking as we talked about input costs as well as commodity prices, I assume that our farmers today are much more—they are hedging. Their risks are reduced as a result of using hedging and other financial techniques, more than they would have been, certainly, in the 1930s, but I guess in the 1980s as well. Is that true? We are better protected for ups and downs in both input costs and commodity prices?

Dr. KAUFFMAN. There certainly is a lot, and there have been a lot of services that have come onboard to help offer farmers the tools they need for marketing. And marketing certainly has become a more important part I think of a producer's toolkit.

I think one area there to think about is, as we have come off very good times, the 5 years of crop prices, when prices were only ever going up, it was in the farmer's best interest to wait and not hedge. So they may have learned that rather than hedge the crop in advance, let's say in the spring, that they get a better price by waiting in the fall.

So some of what we have seen now has been, to some extent, less hedging, simply because in past years, it has been better to wait.

So that is some of the concern. When we talk to lenders, certainly from a lender's perspective, cash is king, so they are talking about wanting to see, as it relates to working capital, may be more cash, as it relates to the financials. So there has been maybe more

of a tendency more recently to wait and hold onto some of that grain.

Mr. MOORE. Mr. Chairman, if I could, one of the things that we keep an eye on, talking about the commodities that have a futures market product and the commodities that have the crop insurance product, we have a number of commodities out there that do not have a revenue product or any kind of crop insurance beyond the gap type coverage or the noninsured type coverage, and certainly do not have a pit in Chicago that is setting a price for them.

So there is some volatility in specialty crops.

Senator MORAN. Thank you for reminding me that you are with the American Farm Bureau and not the Kansas Farm Bureau. Message received, Dale.

Mr. MOORE. I love my home State, but I have lots of—

LENDER EXPERIENCE

Senator MORAN. We work hard at caring about all of agriculture. But you did remind me I was stereotyping.

Really, bringing this to conclusion, I read several months ago about reduction—that is not the way to say it. A number of bankers with experience are retiring. We are at that age in which people with experience in lending are not as prevalent as they used to be.

Do you see that in your region and farmers now dealing with less experienced loan officers, credit specialists?

Dr. KAUFFMAN. We certainly do see that. In fact, there is a program at the University of Nebraska that tries to bring in young, aspiring ag lenders to be involved in the industry. So I do think that you see programs out there to try to get people involved. Some of this may go back to the earlier discussion surrounding some of the urban migration where some of the kids are looking at jobs outside of rural areas.

I think as you see in agriculture, yes, some of those same trends are there. As you see aging farmers, you also see ag lenders. Where there is maybe some concern, just as you noted, as it relates to the experience, as it relates to this maybe being a time when they are experiencing a downturn and how do you lend in that environment, and what is the best way to do that. So I think there are people actively looking at that, but I think it is something that we have heard.

FEED LOT MARKET VOLATILITY

Senator MORAN. Colin, last question. I was mentioning about the \$500 reduction in the feed yards. What about the cow-calf operation? Is there something similar going on there?

Mr. WOODALL. They have seen a reduction, but they are still profitable. We expect them to remain profitable.

When you look at the feed lots, one thing that concerns us more than anything right now is the volatility in the futures market because, as we have seen this reduction, it makes risk management that much more important for us. When you look at the CNB groups, live cattle and feeder cattle futures, the volatility has been unbelievable.

When you look at the fact we have transitioned away from open outcry trading in the pits, it is all automated trading now, we saw several runs in the fall where we went limit up and limit down without any fundamentals to drive that. So that means the computers are doing that.

It has actually been a good thing for us because we have been able to get the attention of the CME. Terry Duffy, the Executive Chairman himself, came to our annual meeting to talk about this. We have formed National Cattlemen's Beef Associations (NCBA)–CME working group to look at ways we can address this volatility, knowing if we can bring that volatility down, make it more manageable, restore the faith in futures as an actual risk-management tool, it is going to go a long way in helping our feeders trying to manage through these next couple of years.

Senator MORAN. Do any of you have something you want us to know, the record to reflect, before we conclude the afternoon?

Mr. MOORE. I think it has been said, but I just want to thank you. I cannot remember the last time this has occurred. I have been in town for 30 years, and I just want to tell you I very much appreciate your taking this leadership and giving us a chance to share this with you. Tell Judd to holler at us when you have more questions.

Senator MORAN. Thank you very much.

Mr. RUSSELL. I just want to add one comment, just that this is as close as you are ever going to get to seeing a white shirt out of Dale, so thank you for having us.

Mr. SELL. I just want to echo what Dale said in his yellow shirt.

Senator MORAN. He described that to me as Fort Hays colors.

Mr. SELL. What you said earlier about the cyclical nature of agriculture and the goal of kind of preserving our infrastructure so that we can take advantage of the next good time is key, from my perspective. We have a unique farm sector. It is dynamic. It is made up of family farms. There is a lot of disagreement as to what that looks like, but there are not many of them, and they do tremendous good for this Nation.

We have always had a policy of standing by those family farms through the bad times, so that we could take advantage of the good. It has worked to this country's great benefit.

So I just greatly appreciate your care.

CONCLUSION OF ROUNDTABLE

Senator MORAN. Thanks.

Anyone else? I think they are ready to leave, too.

Thank you all very much for joining us this afternoon. Thank you for your testimony, especially for those of you who came from out of town. We are pleased that you did, and thanks for sharing your expertise. Thank you.

[Whereupon, at 4:33 p.m., Tuesday, March 1, the roundtable was concluded, and the subcommittee was recessed, to reconvene subject to the call of the Chair.]