Statement by
Robert Johansson
Chief Economist, USDA
Rural Economic Outlook: Setting the Stage for the Next Farm Bill
Before the House Committee on Agriculture

February 15, 2017

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

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

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

However, many producers face difficulties with continued low commodity prices. Some producers may be able to rely on capital reserves, but for many, particularly those new to farming, that option may not be available. USDA Farm Service Agency (FSA) loan demand increased markedly last year, reaching record high obligations of $6.3 billion, including record

assistance to beginning and historically underserved farmers and ranchers. Demand for USDA loans continues to match last year's pace. However, as credit becomes tighter and producers cut back on costs, the number of new operating loans originating from commercial banks has begun to level off and even decline, although debt continues to increase in the first quarter of 2017 due to a slower rate of repayment. Interest rates, while low, are beginning to increase and credit availability is beginning to tighten.

Farm programs continue to operate as designed. While the recent Economic Research Service (ERS) farm income forecast expects combined payments under Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) to increase in 2017, not all producers have experienced the same level of support. ERS projects total direct government payments to decline by 4 percent in 2017. With off-farm income expected to increase, however, median farm household income is forecast to rise by 3 percent for all farms, to $79,733.

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

Farm income remains flat, while credit tightens.

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

The aggregate debt-to-asset ratio continues to rise, up from 12 percent in 2015 to 13 percent in 2016 and 14 percent in 2017 (see figure 1), but those levels remain low by historical standards

(well below the 1985 peak of 22 percent). The continuing strength of farmland values underlies that low debt-to-asset ratio. Assets buoyed by strong land values would have to drop by almost 50 percent to boost debt-to-asset ratios to levels seen in the 1980's. That said, we have seen land values and cash rents decline last year, and evidence suggests that it will fall again in 2017. Recent data from the Federal Reserve Bank of Kansas City, noted a 6 percent fourth quarter, year-over-year decline in 10th District agricultural land values. In addition, debt-to-asset ratios vary among farm businesses by commodity specialization with close to 20 percent or more of farm businesses specializing in wheat, cotton, poultry, and hogs showing debt-to-asset ratios above 40 percent (see figure 2). It is those producers that will be most vulnerable to a further downturn.

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

Looking at USDA's loan portfolio, demand for Farm Service Agency farm loans in fiscal year (FY) 2017 has remained steady, with no sign yet of increasing over last year's record levels and no sign of deterioration in the performance of outstanding loans --- delinquencies have risen less than 1 percent. With interest rates still low and farmland values declining relatively slowly, farm debt presents a lower risk to the sector than in the 1980s. Current data suggests interest payments on current debt relative to net farm income is about 20 percent; whereas in 1985 it exceeded 60 percent (see figure 4).

Farm budgets remain tight, however, with commodity prices expected to remain flat going into 2017 and beyond. We expect farm bill programs to continue to help farmers facing relatively low farm income. ARC, the largest program, began making payments for crop year 2015 in October and to date those payments have totaled $5.9 billion, with the largest shares going to corn, soybeans, and wheat base. PLC payments for crop year 2015, which also began going out in

October, have totaled $1.9 billion to date, with the largest shares going to rice, peanuts, and wheat base. Recent ERS and Congressional Budget Office (CBO) projections estimate payments for crop year 2016, which will be made beginning in October of this year, may be around $5 billion for ARC and $3.5 billion for PLC. CBO projects steady declines in ARC and PLC program payments for the final two years of the 2014 Farm Bill, since projected prices will remain close to present levels for many commodities, reducing ARC program guarantees.

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

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

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

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

Given favorable global harvests and ample stocks, we expect crop prices to remain mostly flat into 2017/18 (see figure 5). Historically, changes in prices have provided a signal of where area is likely to head in the coming year. Last year's planting time price rally, combined with open planting weather that reduced prevent planted area, boosted the 8-crop area planted. Conversely, prevent planted area was above average in 2015, which contributed to the appearance of rising acreage in 2016. For 2017, expectations are for a return to a larger prevent planted area more in line with historical averages and planting weather. With a flat price signal, what do producers plant in the new crop year? Has responsiveness changed, with land improvements, reduced production costs, and other factors that keep land in production? With a decline in winter wheat seedings, will that land be allocated to other crops or go fallow? Or are we seeing a slower response to price signals?

We would expect to see some response to the tepid price signals. Based on our recent long run baseline, U.S. planted area for the 8 major crops is expected to decline in 2017, falling to 248.9 million as narrowing crop production margins push some acres out of production and we return to a more normal prevented planting acreage. Even as total acres fall, prospects for better returns in some crops, notably cotton and soybeans, are expected to cause reallocation of acres to these crops and their area is expected to increase year-over-year.

For 2017/18, total corn supply in the United States is projected to be the second largest on record

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

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

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

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

Turning to the livestock, dairy, and poultry sectors, we project that total meat and poultry production will be at a record high of 100.6 billion pounds in 2017, as production of beef, pork, broilers, and turkeys all increase. Milk production is also projected to be at a record 217.4 billion pounds in 2017. Those increases top the record production levels set just last year. Although prices for livestock, poultry, and milk declined in the last two years from record highs in 2014,

lower feed costs and, in the case of beef and dairy, improved forage supplies, provided the impetus for continued expansion of flocks and herds. In the case of hogs and turkey, further support for growth reflects recovery from disease outbreaks, which affected hog production in 2014 and turkey production in 2015.

As a result of increased production in 2017, prices for cattle and hogs are expected to fall from 2016, but current strong demand has tempered those price declines (see figure 6). Milk prices are projected to rise along with supplies, as use expands more rapidly. Fed steer prices are forecast to decline to $112.00 per hundredweight, down $8.86 from the prior year as increased cattle supplies move through feedlots, with price declines limited by strong demand. Hog prices are expected to fall to $43.50 per hundredweight, down $2.66 from 2016 but supported by solid demand while supplies are expected to expand. Broiler prices are expected to average 84.8 cents per pound, up fractionally from 2016. With increased production but stronger exports, 2017 milk prices, as measured by the all milk price, are expected to gain $1.81 per hundred weight to $18.05, a strong rebound from the prior year.

The global trade environment

The year 2016 showed some improvement in the global economy and trade environment, and this improvement is expected to continue in 2017. USDA's 10-year baseline used assumptions that showed world GDP growth rising slowly and to plateau at 3 percent. A key component of the global slowdown is slowing economic growth in China. Baseline projections also assumed China's GDP growth of 6.2 percent in 2017, 5.9 percent in 2018, and gradually edging down towards 5.5 percent. The latest IMF projections now show Chinese growth improving slightly with growth at 6.5 percent and 6.0 percent in 2017 and 2018, respectively.

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

The United States is expected to be the growth leader among developed countries over the next decade. U.S. economic growth is expected to be 2.3 percent in 2017, compared to 1.8 percent in 2016, and then gradually move to a longer term growth rate of 2.1 percent. Canada's economic growth rates are forecast to improve in 2017, while Mexico's near term outlook has become less certain. Over the longer run, the USDA baseline projections assume Mexico's GDP growth rate at 2.9 percent.

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

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

The United States is projected to remain competitive in global agricultural markets and to grow export values over the next 10 years. U.S. agricultural exports were most recently forecast at $134 billion for FY2017. That is up 3.3 percent from last year, pushed up by larger volumes even as unit value declines for many bulk commodities. The top three customers of U.S. agricultural products remain China, Canada, and Mexico, which account for 46% of U.S. agricultural exports (see figure 7).

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

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

We expect exports of corn and corn substitutes to China will be limited in the near future as China's domestic agricultural policies attempt to reduce currently high stock levels. Conversely, for Brazil, we expect its producers to continue to expand production through a combination of yield increases and area expansion, including double cropping, over the next 10 years. That will translate into increased Brazilian exports and greater competition for the United States (see figure 8).

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

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

almost 52.0 percent of increased global meat imports through 2026/27.

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

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

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

Summary

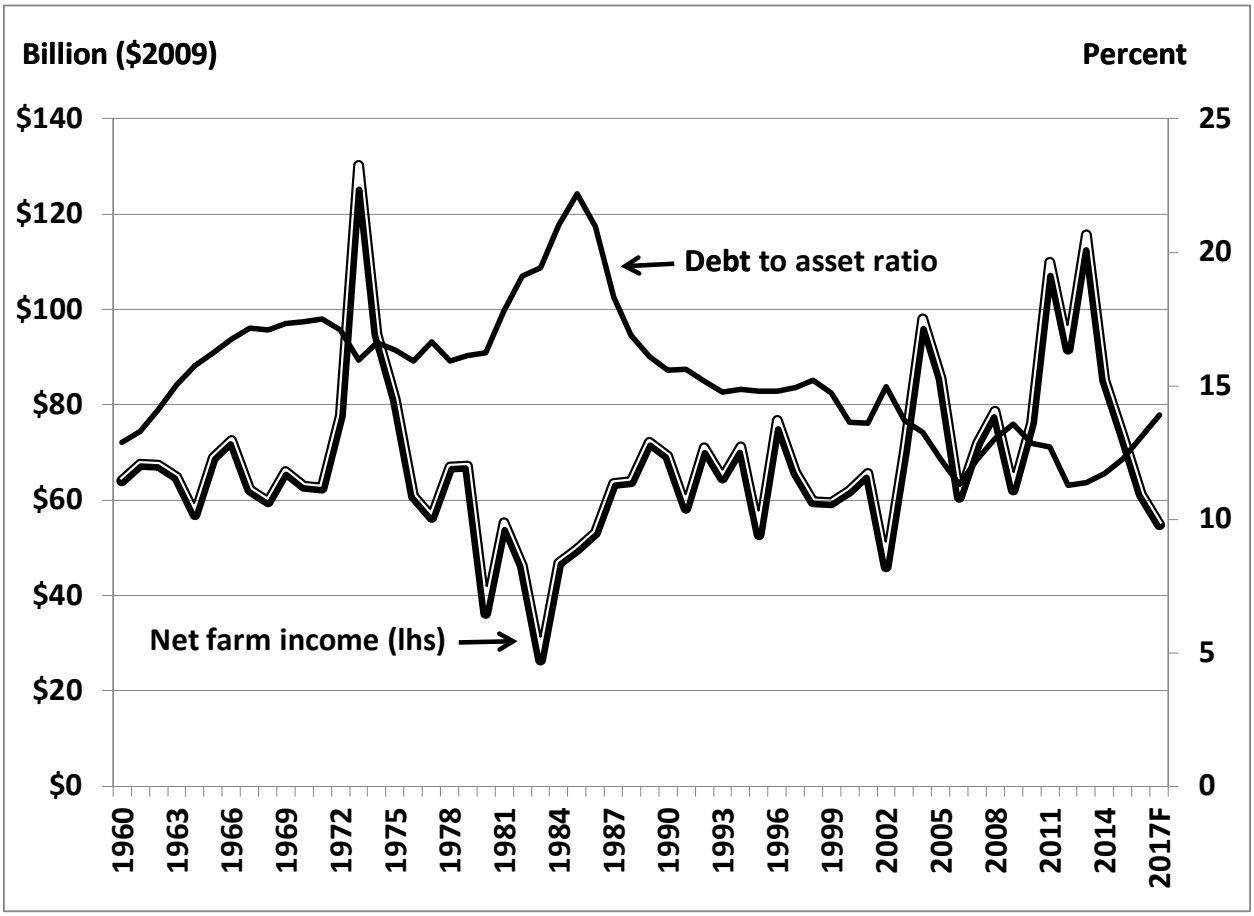
Our long-run expectations for global agriculture reflect an assumption of steady world economic growth and continued global demand for biofuel feedstocks, factors that combine to support longer run increases in consumption, trade, and prices of agricultural products. However, over the next several years,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

In addition, many of the cost-saving farm strategies we have observed over the past few years will likely continue, such as reduced purchases of machinery and more aggressive restructuring of debt and rental agreements. We would still expect to see demand for operating loans to rise accompanied by tightening availability, which should start to put upward pressure on interest rates. Currently, interest rates on loans remain very low, so that new debt is still not expected to result in a significant increase in operating costs for most producers. We would expect land value and cash rent levels to realign to the lower price environment. Payments under the ARC program are expected to decrease in FY 2018 and FY 2019 (for crop years 2016 and 2017) after peaking in FY 2017 (for crop year 2015), since projected prices will remain close to present levels for many commodities, reducing ARC guarantees. The MPP-Dairy program is not expected to provide significant outlays in 2017 due to rising milk prices and continuing low feed costs. In addition, demand to enroll acreage in the CRP is expected to remain strong in 2017 and far exceed the available acres. Crop insurance net indemnities were negative in 2016, but would be expected to increase in 2017 with more normal weather patterns.

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

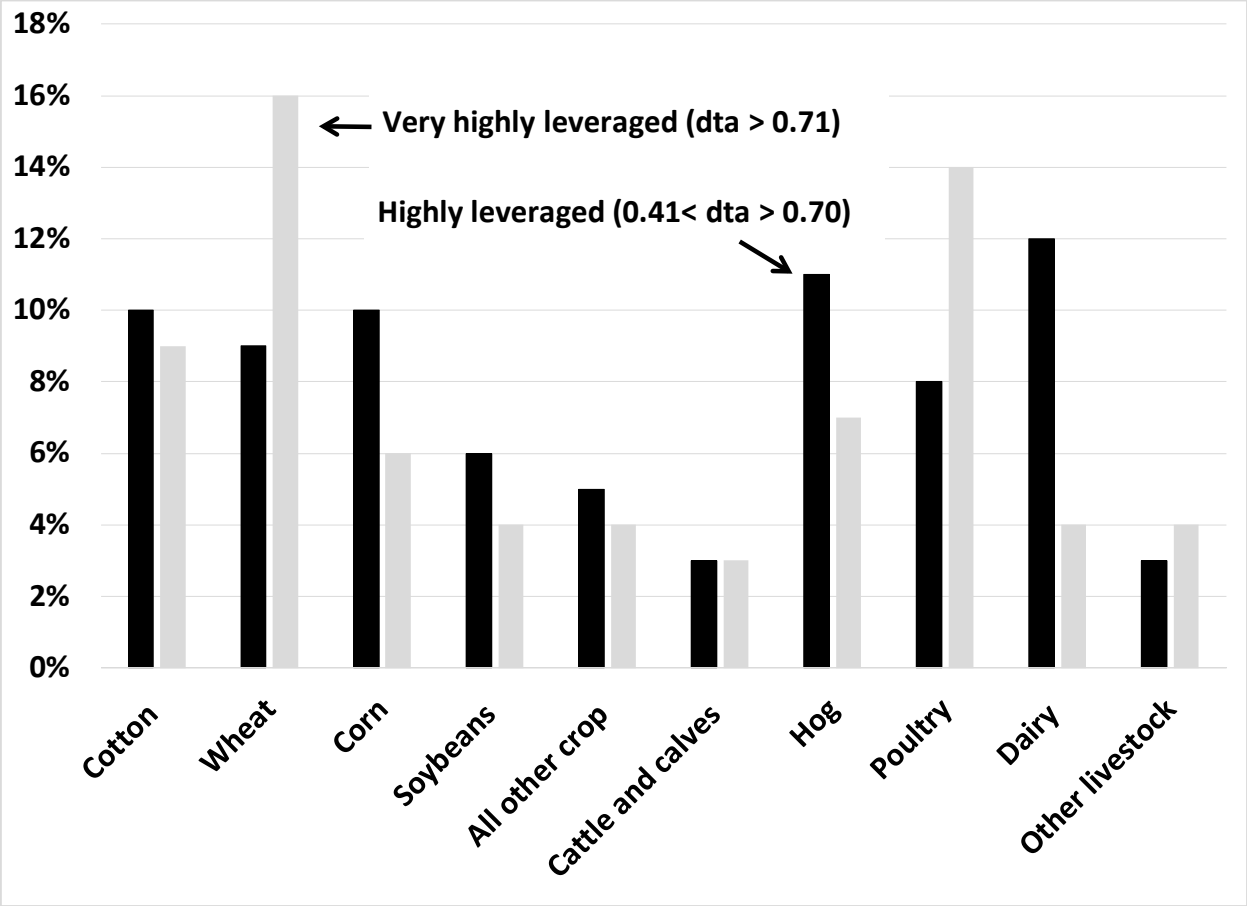
Mr. Chairman, that concludes my opening statement and I am happy to answer any follow up questions you might have now or later for the record.

FIGURE 1. Debt-to-asset ratio rising as net farm income falls, but remains historically low



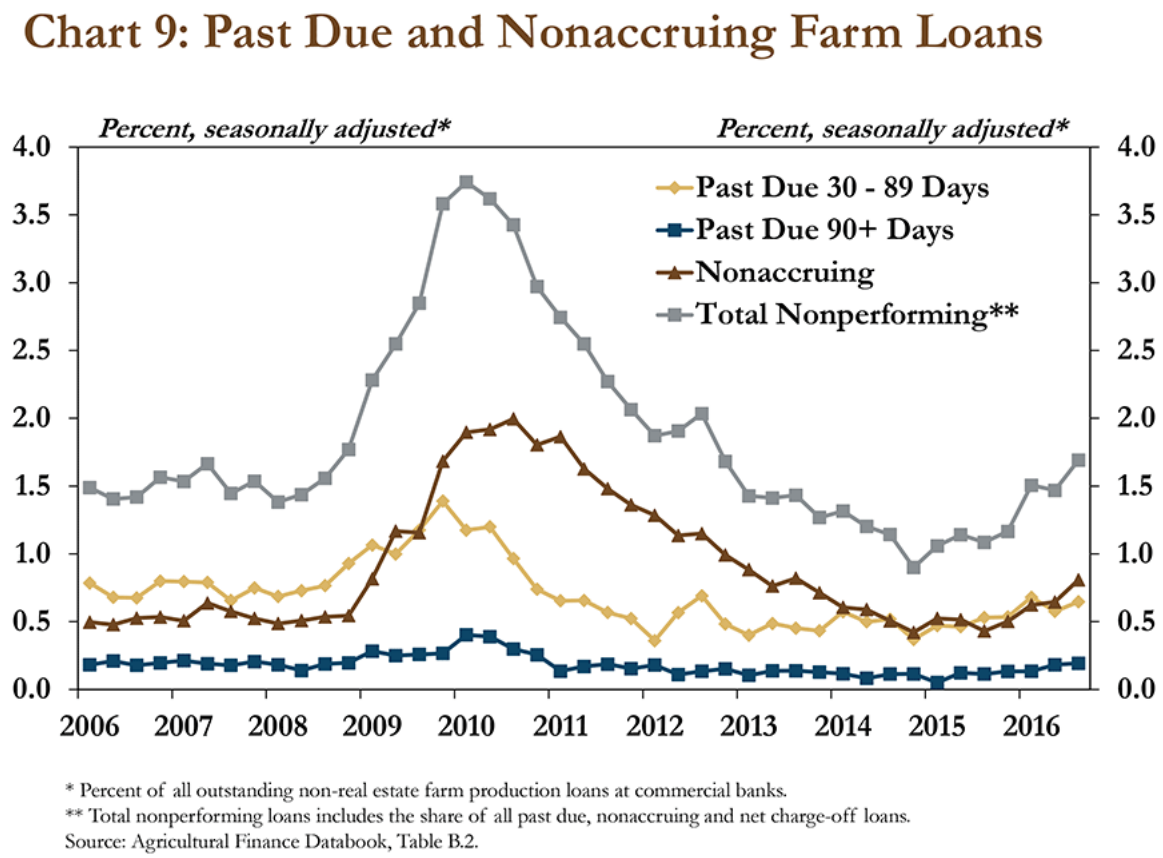
Data: USDA-ERS.

FIGURE 2. Financial stress varies by commodity specialization



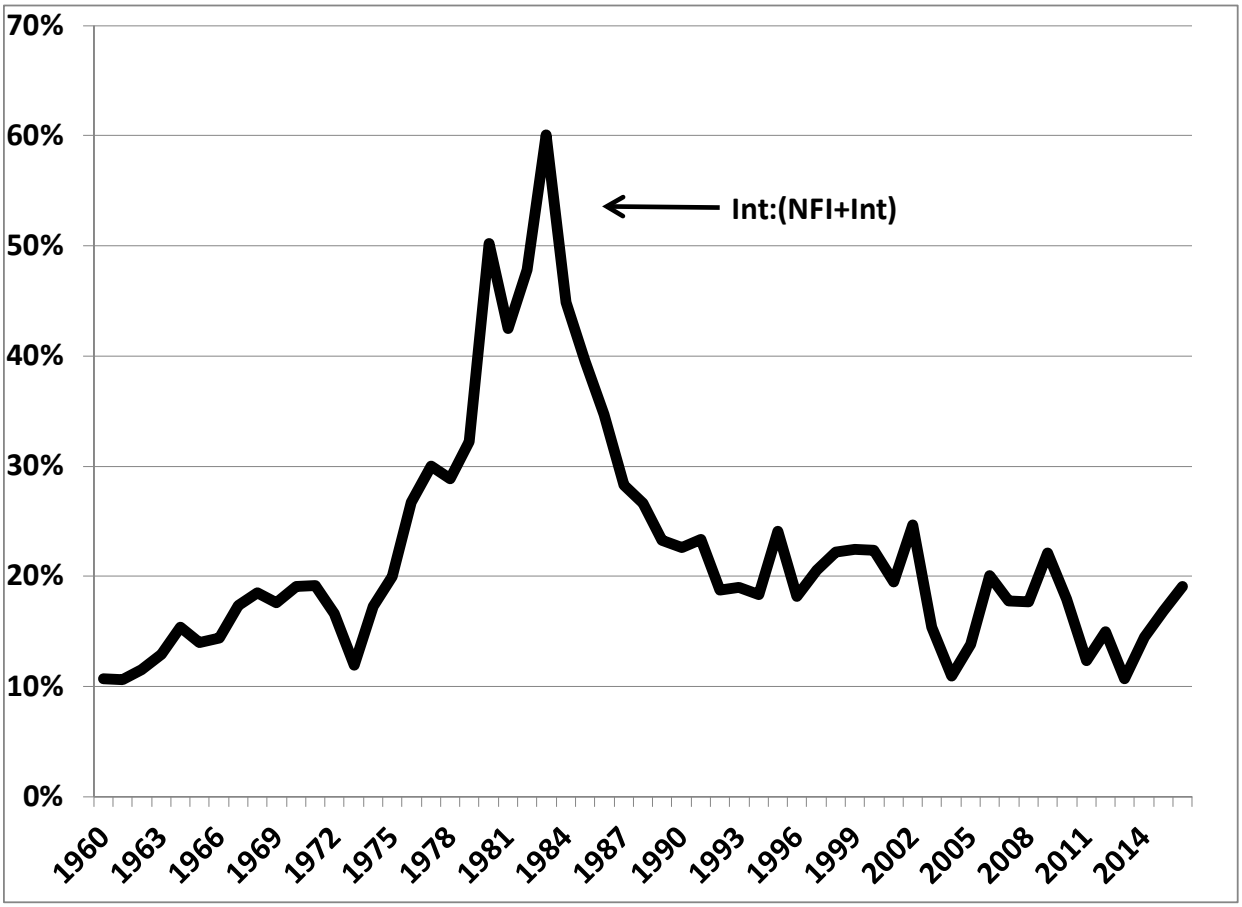
Data: USDA-ERS (November 2016).

FIGURE 3. Delinquency rates on farm loans up slightly



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

FIGURE 4. Interest payments remain modest relative to income



Data: USDA-ERS.

FIGURE 5. Corn, cotton, and soybean prices soften, but wheat and rice to turn up

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

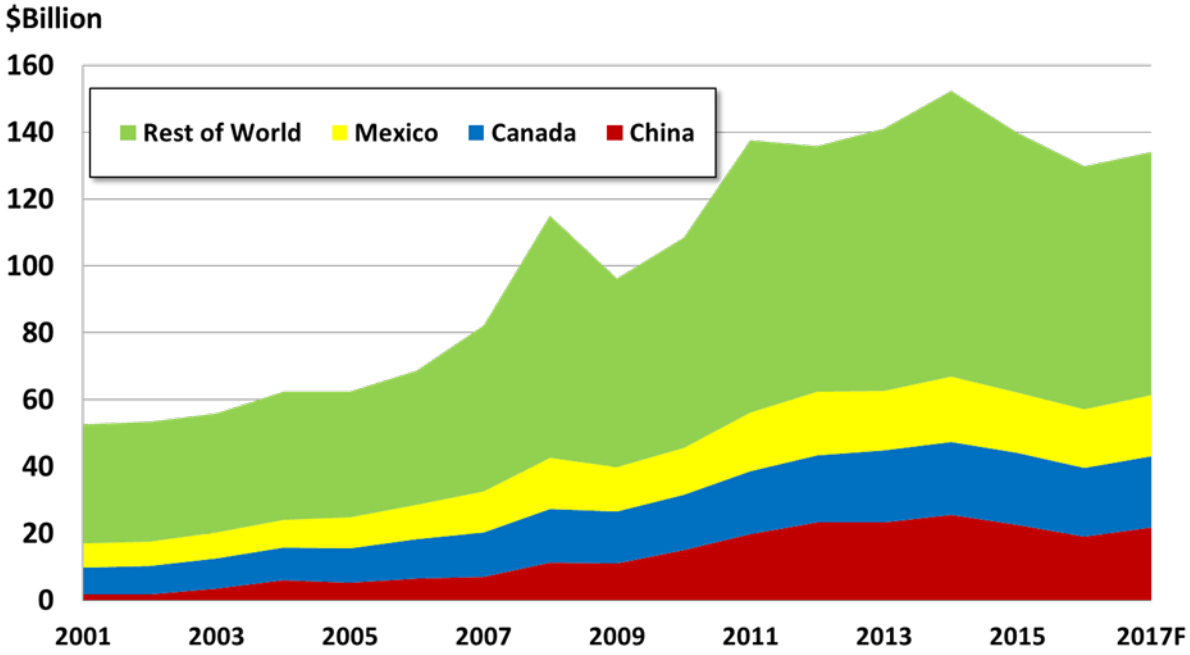
Source: USDA-OCE World Agricultural Supply and Demand Estimates, February 9, 2017.
*USDA-OCE, USDA Agricultural Projections to 2026
Red denotes record high

FIGURE 6. Cattle and hog prices to come down, broiler prices up slightly in 2017

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

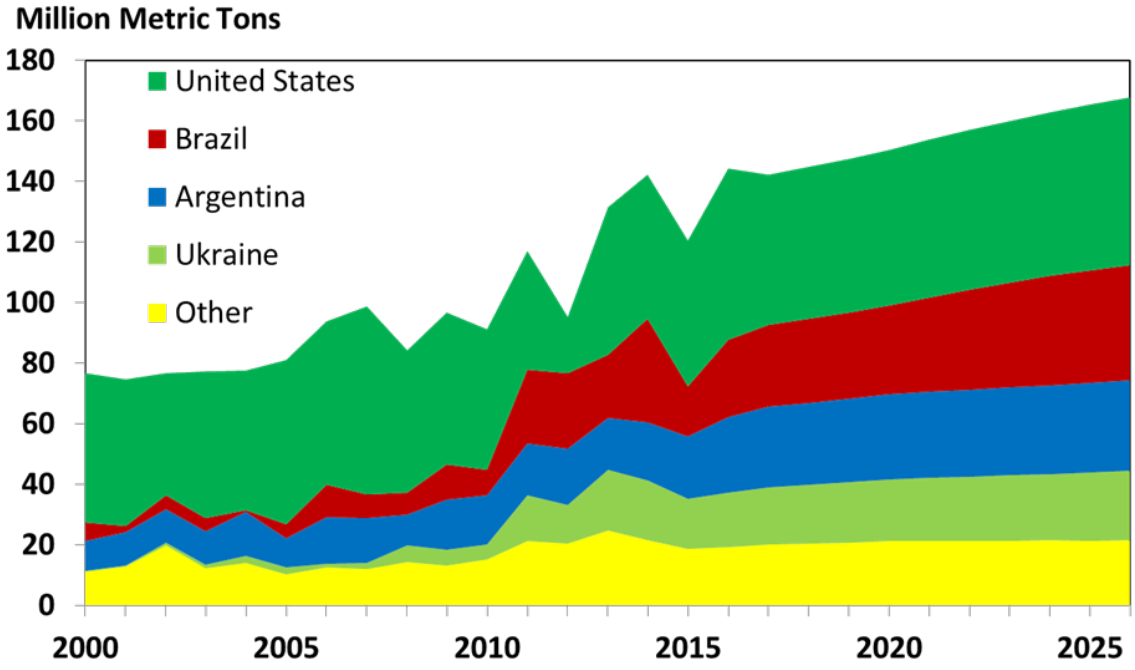
Source: USDA-OCE World Agricultural Supply and Demand Estimates, February 9, 2017.
*USDA-OCE, USDA Agricultural Projections to 2026
Red denotes record high

FIGURE 7. U.S. agricultural exports dominated by China, Canada, and Mexico



Source: USDA. Data are fiscal year.

FIGURE 8. Brazil expected to capture much of the increase in global corn exports



Source: USDA