

## Webinar Transcript: Farm Income and Financial Forecasts - November 2018 Update

**SLIDE 1:** Good afternoon everyone and welcome to our webinar: Farm Income and Financial Forecasts - November 2018 Update. My name is Kellie Burdette and I will be your host. This webinar is being recorded and will be posted on the ERS website next week. At any time during the webinar you may enter a question into the chat feature at the bottom left corner of your screen, and our speaker will answer questions at the end of her presentation. Our speaker today is Carrie Litkowski. Carrie is a senior economist and farm income team leader at USDA's Economic Research Service. She is responsible for developing sector-wide measures of farm income, value-added, and the aggregate farm sector balance sheet. Previously, Carrie served as an economist at the Bureau of Economic Analysis where she was responsible for the production of farm income and employment statistics nationwide. I think we're ready to start, so Carrie you may begin your presentation.

Thank You Kellie. Good afternoon, thank you everyone for joining us on this Friday afternoon, I'm pleased to present you with the Farm Income and Financial Forecast for calendar year 2018. These are the official USDA statistics on farm income and wealth. Since August, our last release, these forecasts and estimates have been updated to reflect some new and updated data as it has become available, including the latest forecast from the November World Agricultural Supply and Demand Estimates report, the WASDE report, as well as survey based data on crop plantings and production as it has become available. This forecast will be updated again in February of 2019, February 6 exactly, at which time we'll also present our first forecast for 2019.

**SLIDE 2:** So what does this forecast cover? First we'll start by looking at the farm sector as a whole, which is comprised of a little over two million farms who operate over 900 million acres of land. Next, I'll discuss the income and finances of the approximately 990,000 farm businesses that account for about 90 percent of the total value of agricultural production. Lastly, we'll look at the well-being of the over six million people who live in farm households.

**SLIDE 3:** First, a brief summary and overview of what I'll talk about today in the order in which I'll discuss them. Overall, farm sector profits are forecast to decline in 2018, this will be continuing the trend of below average farm incomes since 2016. Note in this summary the discussion will all be in nominal dollars and the values are not adjusted for inflation; later I will note the growth of certain components of income or the balance sheet is not keeping up with inflation. First, net cash farm income is forecast to decline about eight percent in 2018, while net farm income is forecast to decline 12 percent. The value of agricultural sector production, the goods and services produced by the Ag. sector, is forecast to be up slightly, one percent, following increases in farm related income and an expected increase in commodity cash receipts, in particular crop cash receipts. Government payments are forecast to rise \$2.1 billion or 18 percent, reflecting payments from the Market Facilitation Program which was a program that was part of a larger aid package to farmers to assist them in response to recent trade disruptions. We're also expecting large increases in payments for supplemental and ad hoc disaster assistance, together these are expected to more than offset declines in our ARC and PLC payments, and I'll talk a lot about more about this later. What is really driving the decline in farm income is our total production expenses, which are forecast to increase almost \$15 billion or four percent. Farm sector assets and debts are both forecast to increase with overall equity rising by one percent. Looking at median, or looking at farm household median farm income at alpha level is forecast to be largely unchanged from 2017.

**SLIDE 4:** We have two primary measures a farm sector income, net farm income and net cash farm income. Net cash farm income measures cash receipts from farming, as well as cash farm related income, government payments, and farm government payments minus cash expenses. Net farm income is a broader measure that incorporates non-cash items including changes and inventories, and non-cash expenses like economic depreciation. After increasing somewhat in 2017, both measures of income are forecast to decline in 2018. Net farm income is forecast to decline 14 percent, and net cash farm income was forecast to decline 11 percent. Now note these values in this chart are in inflation-adjusted dollars, specifically 2018 dollars, so we're adjusting the values for prior years to be consistent with 2018 dollars. 2018 net cash farm income is forecast to be at its lowest level since 2009. Net farm income is forecast to be slightly higher in 2018 than in 2016, which was its lowest level since 2002. Both measures remain below their average for 2000-2017.

**SLIDE 5:** We derive our measure a farm income, specifically net farm income, by measuring its component parts - so by going from the bottom up. This allows us to further analyze the forecast changes from 2017, now we're back to nominal dollars. The forecasted decline in income is largely due to higher production expenses. In this chart we have on the far left net farm income for 2017, and on the far right the forecasts for 2018. The bars in blue indicate those components of income which are which would be accept that expected to increase farm income, and the bars in red are those that would expect to detract or cause farm income to decline. Looking for right-to-left, crop receipts or crop sales are forecast to increase \$3 billion, however about half of that increase is from receipts that were from sales of inventories. Net farm income represents income from current production only, so we make an adjustment to account for changes in inventories because they represent sales from the prior year's production. Continuing on, livestock or animal and animal product receipts are forecast to be largely unchanged from 2017, as well as the inventory adjustment is unchanged so you can see by far production expenses, the big red bar here, are forecasts to contribute the most to the decline in net farm income. Forecast increase almost \$15 billion, or four percent, now shown as a negative here because they'd fire expenses drawdown income. Next government payments are expected to increase \$2.1 billion or 18 percent, and lastly the other changes growth largely reflects growth in insurance indemnities.

**SLIDE 6:** Now as you saw in the previous chart, crop cash receipts are forecast to increase about \$3 billion, and livestock cash receipts are forecast to decline \$0.4 billion. In this chart, we look at why cash receipts are forecast to change like that. Through a simulation we can deconstruct the change in cash receipts into a price effects and a quantity effect, in other words we can identify whether prices or quantity sold are driving the change in cash receipts. We also have a section here for other changes, and those include commodities for which data does not exist to allow us to separate price and quantity effects. Overall, prices are expected to decline in 2018, especially for livestock, while quantity sold for both crops and livestock are expected to increase. The net result for crops is that the increase in quantity sold is expected to more than offset the decline in prices resulting from higher cash receipts, resulting in higher cash receipts in 2018. For livestock, lower prices are expected to lead to lower cash receipts. In total, cash receipts are expected to increase \$2.5 billion or just under one percent. Now this increase is not enough to keep up with inflation so when adjusted for inflation cash receipts are forecast to decline 1.6 percent, or about \$6 billion.

**SLIDE 7:** We can dive even deeper into cash receipts by looking at cash receipts by commodity. Note in this chart we're looking at calendar year forecast, not crop your marketing your forecast,

and the data is in nominal dollars. Total crop cash receipts is forecast to increase 1.5 percent of total crop cash receipts, 1.5 percent from 2017 in nominal dollars, but we're expecting receipts for some commodities to decline and some to increase. Cash receipts seeds for corn, soybeans, and wheat are forecast to increase; the increases for corn and wheat are due to expected higher prices; soybean receipts are forecast to increase as higher quantities sold are expected to more than offset declining prices. Among those crops for which we're forecasting declines in 2018, most notable is vegetables where receipts are forecast to decline 1.7 billion, or almost nine percent.

**SLIDE 8:** Looking at animal, and animal products cash receipts, which I'll also refer to as livestock, our forecast can be largely unchanged from 2017 after increasing in 2017. Receipts for cattle, calves, dairy, and hogs are forecast to decline with the largest dollar declines expected for dairy, a \$2.7 billion or seven percent, due to lower expected milk prices. Receipts for broilers are forecast to continue to increase in 2018 due to both higher prices and quantity sold.

**SLIDE 9:** Another component of farm income, or a source of income to farmers, are direct government payments. These are farm program payments made directly by the U.S. government to farmers and ranchers without any intermediaries. After declining 11 percent in 2017, government payments are forecast to increase 18 percent in 2018. Most of this increase is due to payments to farmers under the Market Facilitation Program, which as I said before, it's part of an aid package to assist farmers in response to recent trade disruptions. We're forecasting about a \$4.6 billion increase in payments under this program in calendar year 2018. These payments are included in the top purple bar of this chart, that bar also includes supplemental and ad hoc disaster assistance that is forecast to more than double in 2018 reflecting payments in calendar year 2018 from losses related to hurricanes and wildfires in 2017 and 2018. These increases are expected to only be partially offset by declines and payments under the USDA's Agricultural Risk Coverage, ARC, and Price Loss Coverage, PLC, programs which are represented by the orange bar segments here, because which larger category being programs that are a function of crop prices. Combined ARC and PLC payments are forecast to decline 57 percent or \$4 billion. In 2018, they are forecast to account for 22 percent of total direct government payments compared to about 60 percent in 2016 and 2017, so on the chart you can really see a shrinking of those payments that are a function of crop prices. Conservation payments are shown in the green bar, and they have remained relatively stable over time. In nominal dollars, total government payments are now at their highest level since 2005, or an inflation adjusted dollars at the highest level since 2010, while this is a significant increase in government payments, it is not really changing the story of declining farm income.

**SLIDE 10:** Direct government payments do not include commodity insurance indemnities, which are payments to farmers for covered loss which is also contributes to farm income. This chart looks at net insurance and government payments for the agricultural sector as a whole, relative to the rest of net farm income. Note this chart is an inflation-adjusted dollars. The top or the top bar, peach, shows indemnity payments to farmers less premiums paid by the farmer, or what I'll refer to as net indemnities, these are forecast to increase \$1 billion or 73 percent in 2018. Net indemnities and government payments account now account for about 24 percent of net farm income, or if that's the forecast for 2018, which is the highest share since 2009 and is above the average for the time period shown on this chart, 2008 to 2017. This chart also shows that the amount of direct payments has always exceeded net indemnities.

**SLIDE 11:** Up until now we've been discussing the sources of income or farm revenue, now let's look at the costs of goods and services used to produce agricultural output or production expenses which are forecast to increase in 2018 driving the overall decline in net income. This chart shows total expenditures in nominal and an inflation adjusted dollars. Expenses peaked in 2014 following the peak in net farm income in 2013, then in inflation adjusted dollars declined in the next couple of years and flattened out. For 2018, we're forecasting expenses to increase in nominal dollars four percent, which because expenses are so large and the aggregate amounts to a nearly \$15 billion increase. In inflation adjusted dollars the increase is 1.8 percent or 6.6 billion; still production expenses remained below the peak in 2014.

**SLIDE 12:** This expected increase reflects increases across most categories of expenses, this chart is comparing expenses in 2017 to the forecast for 2018 in nominal dollars. Those expenses above the dotted line are expected to increase, while those below it are expected to decrease. Interest expenses are forecast to increase for the fifth consecutive year due to expected increases in interest rates and debt levels. For the second year in a row, spending on fuels and oils is forecast to increase due in part to forecast higher prices for diesel fuel for 2018, for this we're using forecasts from the Energy Information Agency which is forecasting a 53 cent per gallon increase on average in diesel costs. The largest category of expenses, feed purchased, is expected to increase following higher feed prices. Among the major categories of expenses only seed and fertilizer are expected to decline in 2018, and those declines are slight. Fertilizer expenses are forecast to decline due to declining prices.

**SLIDE 13:** In addition to farm income, the balance sheet is another indicator of the health of the farm sector, it provides information on the value of physical and financial assets, and level of debt in the U.S. agricultural sector over time. Looking historically, the balance sheet remains strong with farm equity near the record high in 2014. In nominal dollars farm equity, which is assets minus debt, is forecast to rise slightly or one percent, but when adjusted for inflation farm equity is forecast to decline 1.3 percent. This is following an expected decrease in farm assets and an increase in farm debt. Farm real estate assets, land and buildings, account for about 80 percent of farm sector assets. When adjusted for inflation, real estate assets are expected to decline slightly for the second year in a row. Farm sector debt is forecast to increase 1.8 percent in inflation-adjusted dollars. In 2018 debt is at highest level in inflation-adjusted terms since 1982, this increase in 2018 is being driven by a forecast increase in real estate debt which accounts for about 60 percent of total debt.

**SLIDE 14:** Another way to evaluate the farm sector balance sheet is by looking at solvency ratios, which compared the amount of debts relative to equity or assets invested in the farm sector. The ratios provide a measure of their sectors ability to repay financial liabilities, debts, or loans through the sale of assets. This chart shows both the debt to asset ratio, and the debt to equity ratio along with their ten-year moving average. Both ratios have been gradually increasing since 2012 and are expected to continue to increase in 2018. The ratios are now above the average for the prior 10 years, suggesting that the sector's risk of insolvency is now at its highest level since 2009. However, insolvency ratios for the sector remained historically low, but this is a fairly long period of increasing solvency ratios that we have seen, we haven't seen this long of a period for some time of continuing increases.

**SLIDE 15:** Up into this point we have been discussing the forecast for the farm sector as a whole, so for all two million farms. Now let's look at farm businesses, an important subset of

farms. A farm business is defined as all farms where the primary occupation of the operator is farming, plus those farms that had \$350,000 or more in gross cash farm income, that's income before expenses. There are roughly 990,000 farms that meet this definition, represented by the blue and red segments of this bar chart for commercial and intermediate farms. Residence farms account for the majority of all farms, but commercial and intermediate farms account for the largest share of farm production at about 90 percent, and also the largest share of assets is debts for the sector. Using data from the 2017 Agricultural Resource Management Survey, we're able to estimate how the sector level forecasts can be expected to affect farm businesses, and we can break down the forecast of farm business income by commodity, specialization, and geographic region.

**SLIDE 16:** Now looking only at farm businesses, average net cash farm income for farm businesses is expected to continue to decline in 2018, this would be the fourth consecutive year of decline. Using ARMS, we can categorize farms by commodity specialization that means that at least 50 percent of the value of production comes from a particular commodity. Average net cash farm income for some types of farm businesses is expected to increase in 2018. Note these values are in inflation-adjusted on this chart. Farm businesses specializing in wheat, corn, and soybeans are expected to see net cash farm income increase on average in 2018 following the expected increases in cash receipts for those commodities like we discussed earlier. Farm businesses specializing in cotton, specialty crops, and other crops are expected to see net cash farm income decline on average. We're forecasting the largest decline in average net cash farm income for specialty crop farm businesses, these include fruits, nuts, and vegetable farms, due largely to higher production expenses and lower cash receipts.

**SLIDE 17:** Looking at livestock farm businesses, average net cash farm income for all types of businesses specializing in livestock, or animal, and animal products is forecast to decrease in 2018. We forecast farm businesses specializing in dairy to see the largest drops in net cash flow income on average due largely to lower forecast cash receipts which reflect declining prices for milk. And although poultry cash receipts are forecast to increase in 2018, average net cash farm income for poultry farm businesses is forecast to decline due to higher production expenses in particularly fuel, feed, and interest.

**SLIDE 18:** By looking at how production is distributed geographically, we can forecast how average net cash farm income for farm businesses is expected to change in 2018 by resource region. Overall, average net cash farm income is forecast at \$69,800 per farm in 2018, this is about \$14,000 per farm, or 16 percent, from 2017 in nominal dollars. This reflects the drop in net cash farm income for the farm sector as a whole. We're forecasting that across all regions average net cash farm income will decline in 2018. Dairies weak forecast performance and lower cash receipts for 2018 are expected affect many regions contributing to the 23 percent decrease in average net cash farm income for the Northern Crescent, and also contributing to the decline in the Fruitful Rim. Farm businesses in the Eastern Uplands, and Basin and Range are forecast to see the largest declines an average cash farm income due to higher production expenses. In the middle of the country we have the Heartland, Northern Great Plains, and Prairies Gateway which are expected to see the smallest declines due to higher cash receipts for corn wheat soybeans as discussed earlier.

**SLIDE 19:** Using ARMS data we can also forecast debt and asset for farm businesses. As discussed earlier, debt to asset ratio for the farm sector is relatively low historically at 13.5

percent, but there are some farm businesses that hold a higher share of debt relative to assets, or are highly leveraged, indicating that they may be at higher risk or more vulnerable financially. Over 90 percent of all farm businesses are not highly leveraged, this chart though is looking at highly leveraged farms, those are farms that have a debt to asset ratio of 41 percent to 70 percent, or very highly leveraged a debt to asset ratio of 71 percent or greater. For both crop and livestock farm businesses the share of farms highly or very highly leveraged is forecast to increase in 2018. For crop farm businesses the data suggests that some farms might be moving from highly leveraged to very highly leveraged. For livestock farm businesses the share of highly leveraged farms is forecast to increase in 2018, but the share of their very highly leveraged farms is unchanged. Although increasing, the shares of highly and very highly leveraged farms remain below the peak in 2002.

**SLIDE 20:** Up until this point we've discussed the financial performance of the farm sector as a whole and farm businesses, but this may not give an accurate or complete picture of the well-being of households associated with farms. Farm profits are often shared with other stakeholders such as landlord, contractors, and the well-being a farm operator household is determined by a combination of on-farm and off-farm activities, with the majority of farm household income coming from off the farm. Now we're going to look at the two million farms as a whole, not just farm businesses, we're looking at the households that are attached to a farm. With this release we are, with today's release we are releasing additional information and new estimates of household incomes and financial indicators for 2017, so I encourage you to see that information on our website.

**SLIDE 21:** We're looking at the majority, looking at the farm household income, the majority of farm household income is coming from off-farm sources such as off-farm jobs. 2018 median household income from farm income is negative, and expected to decrease in 2018. Recall that most farms are residential farms, which are usually small farms, this results in a very low median farm income, median on-farm income is forecast to increase slightly in 2018, essentially offsetting the decline in farm income. Off-farm income sources include wage income, non-farm business earnings, dividends, and transfers. Overall, median household income is forecast at about 76,600, a slight increase, one percent, from 2017, or when adjusted for inflation at one percent 1.5 percent decline.

**SLIDE 22:** We can go a little deeper into looking at farm household income by looking at it by type of farm. For residential and intermediate farms, median household income has been steady across 2012-2018, and accounts for essentially all of the households' income at the median. For commercial farms, on-farm income is more important and is driving the downward trend in median household income. This table also shows that off-farm income is important for all types of farm perhaps due to its stability.

**SLIDE 23:** All of the information I presented today is available on our website along with estimates for the prior year, including state-level estimates of farm income. Our next release is going to be February 6, and with that I will open it up to questions.

Thank you Carrie. We do have a few questions for you today. The first one is, do you have a figure for farm business average net farm income, not the net cash farm income which is forecasted \$69,800?

Some average net farm income, is that the question?

Farm business average net farm income?

No, we do not have that measure as part of this data product. We just have the net cash income if that's the distinction being asked in the question.

That's right.

Okay.

Okay. We have another question, considering net farm income of \$61.5 billion in 2016, \$75.4 billion in 2017, and \$66 billion in 2018, has farm income reached a new normal after the collapse of the commodity boom?

**SLIDE (Farm sector profits expected to decline in 2018):** Wow, that's an interesting question. Let me just; there's easier way to get here let me just get back to the chart. A new normal or a new level, I'm not sure that I can really say if that's true or not. We are below the average is shown in this chart for 2000 to 2017, but yeah I couldn't say for sure that we might not or we might see an increase in farm income in the future. I'm not sure, I mean if you, for the longer-term projections I encourage you to check out USDA's baseline projections, they're not forecasts but they're projections, and they take you out, you know, further along, and they largely build off of these forecasts that were presented here today. That's a good question, I think it's yet to be determined whether this is a new normal.

Okay, why are agricultural risk coverage and price loss coverage payments forecast to decline?

Great. Yeah, we talked about relevant, a pretty large decline in payments for ARC and PLC. These are programs that have payments that are a function of crop prices, and particularly with these payments that are being made in calendar year 2018, we're looking at crop prices for account, for the crop marketing year of 2017 and 2018. And what we're seeing is that for the crops that get the majority of these ARC and PLC payments, like corn, wheat, and others, that prices actually increased over marketing year 2017-2018 resulting in lower payments under these two programs.

All right, here's another question: why is median total household income higher than median off farm income, if farm income is negative?

**SLIDE (Median income of farm households expected to remain unchanged in 2018):** Sure. I know what chart is being referred to here; the reason that these don't some farm income and off-farm income don't sum to total income, and in fact that total income is higher than the sum of those two is that because we're looking at the medians for each of these income measures. And income within these categories of off-farm and on-farm income, and total income, is not distributed evenly, so the midpoint is not the same for each group so they're not going to add up. And that's why at the total level you have all farms and as we talked about within the prior chart, prior to this a lot of our farm income is coming, a lot of total income, sorry, is coming from off-farm income whereas when you look at the median farm income you have a lot of really small farms that are weighing down that median.

All right, here's another question: what is happening with farm liquidity?

Yeah, we talked about solvency, but I didn't talk about liquidity. On our website we listened to the solvency measures that I talked about, the debt to asset, we have a bunch of liquidity

measures such as working capital, the debt service, ratio, the times interest earned, and by working capital we're looking at current assets minus current liabilities. So we're kind of looking at the amount of cash that would be available to fund operating expenses, you know, in the short run or the farm sectors ability to make scheduled financial payments as they come due. And looking at the data on our website we can see that working capital, which is kind of the amount of money that would be left over after paying your short-term debts, is forecast to decline pretty notably in 2018, and the ratios also show that more of production is going to pay off debt and interest than in previous years. Also reflecting the increases in overall debt so the liquidity of the sector is weakening a bit.

All right. Here's a question, what impact has the trade war had on farm income?

Yeah that's a hot topic. I think the issues around trade can affect farm income in a number of ways. They feed into the estimates and forecasts for cash receipts, because a lot of what is produced in the United States, especially for some crops, is sold and these forecasts I presented today reflect the latest production and price forecasts from the November World Agricultural and Supply Demand Estimates, the WASDE reports, I talked about at the very beginning. So these are taking into account what, how we think production and prices are being affected by the trade wars and then that gets reflected in our forecasts for cash receipts. With the trade wars and USDA's response to having this aid package that includes the Market Facilitation Programs that is also affecting farm income because direct government payments are included in both farm income and net cash farm income. And as I showed on that slide, we're forecasting about a 4.6 billion increase, or 4.6 billion of these Market Facilitation Program payments to be paid out to farmers in this calendar year. So it's having effect, I can't like look at it all and together, and because other things are happening as well at the same time, but it is playing a role in our forecast for this year.

Thanks Carrie. Well, that's all the questions we have. So everybody, thank you all for joining us and have a great day.