

Good afternoon everyone and welcome to our webinar, Farm Income and Financial Forecasts for 2017, November 2017 update. My name is Nancy McNiff and I will be your host. The 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-hand corner of your screen, and our speaker will answer you at the end of the 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, Nancy. Good afternoon. Yes, my name is Carrie Litkowski, and I'm pleased to present the results of our latest farm income forecast. With this release, we are updating our 2017 forecast with newly available and updated data on current year harvests, production, sales and inventory data. It also includes forecasts and data from the November World Agricultural Supply and Demand Estimates report.

A quick summary of the major points I will be covering today. After three years of decline, farm sector profits are expected to stabilize in 2017. Net cash farm income is forecast to increase 3.9 percent relative to 2016. Net farm income, a broader measure of profits, is forecast up 2.7 percent in nominal dollars. After two years of decline, the value of agricultural sector production is forecast to stabilize in 2017. This is being supported by increased animal and animal product cash receipts. And we're also expecting increased insurance indemnities, including federal commodity insurance indemnities. Tempering some of these income gains, expenses are forecast to rise slightly at 1.5 percent after falling for two straight years. Government payments are projected to fall 1.8 billion in 2017. Farm sector assets and debt are both forecast to increase with overall equity rising by 2.7 percent. And lastly, median farm household income is forecast to remain relatively unchanged in 2017.

We have two primary measures of farm income or profits. These are net cash farm income and net farm income. Note on this chart, and in several others in the presentation, we're looking at 2017 constant dollars. So, we're adjusting prior years to account for inflation in this chart. Net cash farm income is forecast to increase 2.1 percent, inflation adjusted. Net farm income is forecast to increase 0.8 percent, inflation adjusted. Note that the two horizontal lines are showing average farm income across 2000 through 2016. And, as you can see, both measures are still below their average for that period. The slightly larger increase in net cash farm income is due to an expected increase in sales from inventories. Net farm income adjusts to reflect any changes in inventories and measures production in the year in which it was produced.

We derive net farm income by measuring its component parts. This allows us to deconstruct the change in farm income from the prior year. Note, on this chart we're now in nominal dollars. On the left-hand side of the chart, we have net farm income for 2016, which is forecast at 61.5 billion. On the far right, we have the forecast for net farm income in 2017 at 63.2 billion. The bars in red show which components of farm income are expected to take away from growth, while the green bars show which components are expected to contribute to growth. As you can

see, the largest green bar the largest component contributing to growth is livestock or animal products receipts, which are expected to increase 12.4 billion in 2017. There is also a smaller increase in all other changes, which is primarily the result of higher expected commodity insurance indemnities. But these increases are largely offset by decreases and other components, in particular crop cash receipts and crop inventories are expected to decline in 2017 and production expenses are forecast to increase. This increase in expenses work to draw down farm income.

Focusing on just cash receipts, or sales, total cash receipts are forecast to increase two and a half percent in nominal dollars in 2017. Through a simulation, we can identify or isolate the price and quantity effects and how they're changing cash receipts. Sixty two percent of the forecast increase in cash receipts is due to higher quantities sold. There's a smaller increase is expected due to higher prices.

Looking just now at crop cash receipts, which are forecast down two percent in 2017, largely due to lower prices, but there are some exceptions, first soybeans. After increasing notably in 2016, they are expected to decline in 2017, largely due to lower quantity sold. Cotton is expected to continue to rise. Data shows that 2017 had the highest acres harvested and planted as well as the highest quantity produced since 2016. Vegetables and melons are forecast to have increased cash receipts due to higher prices, and we expect weak cash receipts to decline, largely due to less quantity sold despite the increase in price that's expected. Animal and animal product cash receipts are forecast to increase nearly 8 percent to nominal values with increases expected across all major commodity groupings. This is due to positive and reinforcing price and quantity effects bolstered by strong export performance. Broilers is anticipated to have the largest dollar and percent increase in cash receipts, largely due to expected increases in prices. Cattle and calves are forecast to increase driven more by higher quantity sold, but there also was a small price effect.

Another component of farm income is direct government payments, which are farm program payments made directly by the U.S. Government to farmers and ranchers with no intermediaries. Total farm program payments to farmers are expected to decline 1.8 billion in nominal dollars in 2017. This chart illustrates how the composition of payments has changed over time. Conservation payments (in the red bars) have remained steady over this period of 2008 to 2017, and account for about 30 percent of government payments. Fixed payments have largely been phased out, and in more recent years, we see them replaced by payments that are a function of crop prices. In particular, this includes USDA's Price Loss Coverage program and Agricultural Risk Coverage program. Together these two programs account for about 60 percent of total government payments in the last three years. The purple bar shows all other, and that includes disaster and ad hoc payments. This forecast does reflect disaster payments expected to be paid out in calendar year 2017 related to hurricanes Harvey, Irma, and the wildfires, but likely there will be additional payments in calendar year 2018. Focusing in on the decline in 2017 that's being forecast, this is largely due to expected increases in Price Loss Coverage program payments being more than offset by declines in Agricultural Risk Coverage payments.

Direct government payments do not include insurance payments or indemnities to farmers for covered losses, which is another component of farm income. This chart shows how federal

indemnities and government payments are a relatively small share of net farm income for the ag sector as a whole. Note that this chart is in inflation-adjusted dollars, and the top light orange bar reflects federal commodity insurance indemnities less premiums paid by the farmer, so it doesn't include the premium subsidies. Next, federal commodity insurance indemnities is forecast to increase 0.5 billion dollars in 2017 in nominal values. This is after a significant decrease in 2016. The 2017 forecast includes indemnities expected to be paid out in calendar year 2017 for the hurricanes and the wildfires. And, like with government payments, there will likely be additional indemnity payments to farmers in calendar year 2018.

Up to now, we've been discussing the sources of revenues to farms. Now, let's take a look at production expenses. This chart shows total expenses in both nominal and inflation-adjusted dollars. After falling two years in a row in 2015 and 16, as prices paid fell and overall farm income declined, farm expenses are forecast to increase 1.5 percent in nominal terms or to decrease 0.3 percent in inflation-adjusted dollars. So, overall expenses are stabilizing like farm income as a whole.

Although this stability underlies some differences when we look at expenses by type of expense. Price pressures for certain inputs are driving up some expenses in 2017. Note this chart is in nominal dollars. In particular, interest expenses are forecast to continue to increase in 2017 due to higher debt levels and interest rates. Fuels and oils are forecast to increase after a two-year decline partially influenced by higher prices for diesel. Livestock and poultry purchases are up for the first time since 2014. On the flip side, the largest expense category, feed, is expected to decrease for the third straight year due to lower feed prices.

Moving on to the balance sheet, this provides information on the value of physical and financial assets and debt in U.S. ag sector over time. In 2017, the balance sheet forecast is relatively unchanged from 2016. This chart shows debt in the blue, equity in the green. The total of the two, the top, will give you a measure of farm assets. Note this chart is in inflation-adjusted dollars. Overall debt is forecast to rise 1.1 percent, inflation adjusted, led by an increase in real estate debt, which accounts for about 60 percent of all debt. Non-real estate debt is relatively flat since 2014. Total debt and inflation adjusted totals would be at its highest level since 1984. The value of farm sector assets is forecast to rise by just under one percent following a 1.6 percent increase in farm real estate values, which includes the value of land and buildings. This accounts for about 83 percent of total assets. Despite the increase in debt, overall farm equity is expected to increase slightly, matching the asset growth.

Another way to look at assets, debt, and equity is by looking at the solvency ratios. They compare the amount of debt relative to equity or assets invested in the farm sector. It provides a measure of the sector's ability to repay debt and loans through the sale of assets. Both the debt-to-asset and debt-to-equity ratios have been gradually increasing since 2013 and are expected to be relatively unchanged in 2017. The rates are slightly above the average for the prior 10 years, which is shown in the dotted line. While some individual farms may be at financial risk, the likelihood of default across the sector as a whole remains relatively low due to the sizable amounts of equity within the sector. Additional financial ratios are available on our website.

Up to this point we've been discussing the sector as a whole. Now let's shift our discussion to farm businesses. A farm business is all farms where the primary occupation of the operator is farming, also called intermediate farms, plus those that had 350,000 dollars or more in gross cash farm income before expenses, these are commercial farms. In the chart, the gray bar shows residence farms, and although they account for the largest share of farms, intermediate and commercial farms account for most farm sector production, assets, and debt.

In the next few slides, I'll be talking solely about the farm businesses. So, the commercial and intermediate farms shown in the red and blue bars. These types of farms account for approximately 820,000 of the roughly 2 million farms in the U.S. In order to do this analysis of farm businesses, I'm using data from the Agricultural Resource Management Survey or ARMS. Using this data, we're able to break out farm business information by commodity specialization and geographic region and look at how sector-level forecasts can be expected to affect farm businesses based on what we know about them from the 2016 ARMS.

In 2017, average net cash farm income for all farm businesses is expected to be relatively unchanged from 2016, but there are some notable changes amongst the different types of crop and livestock farm businesses. Using ARMS data, we can categorize farms by commodity specialization, which is determined by having at least 50 percent of the value of production from a particular crop or commodity. Starting with crops, most farm businesses are forecast to have lower net cash farm income on average in 2017. The notable exception is cotton. After a large drop in 2014, cotton farm businesses are expected to have continued growth in 2017. This is largely due to expected higher cash receipts for cotton, which I discussed earlier. Note the net average net cash farm income for cotton might seem relatively high compared to the other types of farm businesses, but keep in mind that the number of cotton farms is relatively small compared to say the number of corn or soybean farms. And, cotton farms do tend to be larger due to their capital expenditure needs. Also on the chart, we note declines for corn, soybeans, and wheat farm businesses. This is being driven by lower or steady cash receipts and expected lower government payments. Specialty crops, these include fruits, nuts, vegetables, and nursery, these types of farm businesses are expected to decline after reaching a high in 2016 due to lower fruit and nut cash receipts in 2017.

For livestock farm businesses, average net cash farm income is forecast to increase in 2017. The largest growth is expected for dairy and hog farm businesses as they benefit from increases in prices, production, and export demand. Cattle and calf farm businesses, average net cash farm income is forecast to rebound somewhat from decline in 2016. Here you may note the cattle and calf average net cash income seems really small, but that's because there's a large number of small cattle operations, which are driving down the mean in this case. Because as we saw in the cash receipts discussion, cattle and calves do account for a large share of total cash receipts for the sector as a whole.

By looking at how ag production and farm businesses are distributed geographically, we can forecast how average net cash farm income can be expected to change in 2017 by resource region. The outlook by region is mixed. Four regions are expected to see growth or to remain flat, while five regions are expected to see declines in average net cash farm income. The largest increase is for the Northern Crescent. This is largely due to expected higher cash receipts for

dairy. The second largest increase is expected in the Prairie Gateway. This is largely reflecting increased cattle cash receipts and cotton cash receipts. The largest decrease is in the Fruitful Rim. This is where you have a lot of your specialty crops: fruits and nuts and vegetables and such and nursery, and the expectation for lower net cash income is largely based - being driven by - the declining fruits and nuts cash receipts. The second largest drop is for the Mississippi Portal. And this reflects higher production expenses and lower crop cash receipts in general that are expected for 2017.

The ARMS data also allows us to look at debts and assets for farm businesses. As discussed earlier, the debt-to-asset ratio for the sector as a whole is very low at 0.13, but there is a small share of farms that hold a larger share of debt relative to assets. On these charts, we're graphing the debt-to-asset ratio for highly leveraged farms and very highly leveraged farms. A highly leveraged farm is considered to be one with a debt-to-asset ratio of 0.41 to 0.70. A very highly leveraged farm has a debt-to-asset ratio of 0.71 or greater. The share of farms with high and very high leveraged levels has increased his net farming comes have fallen from 2014 to 2016. In 2017, we're forecasting about 9 percent of crop farm businesses to be highly or very highly leveraged. This compares to 7 percent of livestock farm businesses. Now, that leaves more than 90 percent of farm businesses not being highly leveraged. The ratios are relatively unchanged in 2017 compared to 2016, but there is a slight uptick in the percentage of highly leveraged crop farms in 2017.

The measures of sector-wide farm income or financial performance of farm businesses do not give a complete picture of the well-being of farm households. This is due to the influence of other stakeholders such as landlords and contractors, who often clear a share of farm income, and the well-being a farm operator households is determined by a combination of on-farm and off-farm activities.

Now, we're no longer looking at just farm businesses, but we're looking at all farm operator households. Median income of farm households is expected to remain relatively level in 2017. So, typically it's increasing just under two percent in 2017. And, as the chart shows, most farm households get the majority of their income from off-farm sources. Particularly looking at farm income, at the median it remains negative for farm operator households, thus most of the income is coming from off-farm sources. Note that these are medians, so if you try to sum on-farm income and off-farm income, you will not get the total.

All of the data, and more, is currently available on our website, and much of the discussion I presented today is available in text on the farm sector income and finances topic page. Our next release will be Wednesday, February 7<sup>th</sup>. At that point, we will have revised or updated forecasts for 2017, as well as our first forecast for 2018. So, I hope you'll tune in for that. Now I'll open it up to questions.

Thank you so much Carrie. This is Nancy again. If anyone has any questions, I'll remind you to please enter them into the left-hand-side chat feature at the bottom left-hand corner of your screen, and I will relay your questions to Carrie. We have a few questions. The first one is, what is behind the decline in fruit and nut cash receipts?

Yes, excellent question. This is largely due to expected lower prices for fruit and nuts cash receipts. A follow-up question to be that, you know, what are the effects of the hurricane on that? Especially, we hear about the losses in citrus in Florida, but we're not, but that was really only just kind of a small part of a bigger story that affects all of the U.S. and all of fruits and nuts in aggregate, but primarily we're relying on the ERS outlook reports, and they're telling us that prices should be lower in 2017.

Okay, another question about the last slide, so let's go to the last slide. Is this just for farm households, not including farm businesses?

It's for all farm households, so it includes farm businesses as well as residential farm operations.

Okay, if net farm income is a broader measure of farm income as you say, then why is it lower than net cash income?

Good question. Yes, net farm income is broader because it includes both more types of revenue; such as, you know, the value of livestock and crops that are consumed on the farm, or an imputed rental value of farm dwellings; but it also includes a broader measure of expenses. In particular, net farm income includes the measure of depreciation or capital consumption. So that does increased or more comprehensive measure of expenses that exist in net farm income are what make the total aggregate of net farm income lower than net cash income.

Okay. What regions, what geographic regions, are driving the improvement in equity positions?

Wow, that's a really good question. And I have not decomposed the data to be able to answer it, unfortunately. I would suggest, we will have coming out in early December, we have an ARMS data tool that will be updated with data through 2016, and that's, the 2016 is what is helping us to tell the story for the forecast in 17. So, I would encourage you to, if you have, for that particular type of question, to check out the ARMS tool when it becomes updated, or the 2015 data is there now, but I don't have the answer to that right now.

Okay this is a question on chemical expenditures, do you know if they're expected to increase, and if so, what they're supposed to increase by in 2017?

Sure. One of my charts dealt with this and trying to get here, there we go. Now, chemicals largely fall under there's two categories they can fall under fertilizers and pesticides, depending on how you're defining agricultural chemicals. Both of those types of expenses are expected to decline in 2017. For fertilizer, so far through 2017 we're seeing lower prices paid, and pesticides is pretty much slightly decreasing or remain expected to remain fairly stable from 2016.

Okay, and also what are seed purchases expected to rise or decline to?

Yeah, seed purchases are also on this, and they're in the decreased spending section of the chart, although it's a very slight decrease that is expected for 2017.

Okay, and we have a question about the Northern Crescent area, is the increase in Northern Crescent receipts due to prices or quantity?

The wait let's go to that, yeah, the Northern Crescent is largely expected to increase, or average net cash farm income for the business, due to higher dairy and dairy receipts are expected to have higher prices and higher quantities, so I think the answer the question is both quantities and prices.

And can you expand on the reasoning behind expecting an increase in livestock receipts?

Sure yeah because that's really probably the biggest mover that we're seeing in the net farm income account. And overall it is, this is not the right one sorry, overall it's a combination, like I said, with dairy of reinforcing price and quantity effects. They're both pushing cash receipts up in 2017. Another interesting to note is that for all the major commodity groupings shown on this chart, they had declines in 2016. So, we're expecting a bit of a rebound in 2017, or even more than a bit of a rebound in the case of say dairy and broilers.

Okay, another question, is there any liquidity information regarding a crop sector in particular, for example working capital information?

We do have liquidity measures for the sector as a whole that are released as part of this data release that we're doing today, but they're not broken out there by crops and livestock farm businesses. For that kind of breakdown, I would suggest looking at the ARMS data tool. The tailored reports in particular that are on our website that can allow you to look at more detailed balance sheet information by type of farm at least to 2015 and soon through 2016, so I don't have that information with this release right now.

Okay, do you have the exact figure somewhere on the website of things like purchases of seeds or other commodities?

Certainly, all we have tables of all the data I presented and more on the website if you go to the ERS website, and I asked them, I provided seeds out here right, this link here will take you to the farming farm sector income and finances topics page, which will then have a link to our data product page. And our data product page for farm sector income and wealth, you can download tables on expenses by state or for the U.S. what the forecast goes just for the U.S., and that will give you exact dollar values for expenses such as seed, but also all the other major expense categories

Okay, another question, would you call the livestock where you bound a market correction, or is there a new factor driving demand?

That's a good question, but I don't feel like I have the answer to that. Certainly there was some rebuilding after the drought, which caused some liquidation of herds, but I don't know if I could characterize it as a market correction or not. And we do have, we are seeing in added export growth, so that is potentially another factor that's helping with this increase in livestock cash receipts.

Okay, we have another question. Why soybean cash receipts are forecast to be down in 2017 when production was strong?

That's an excellent question. We are forecasting cash receipts to go down, and that is largely based on lower expectations for quantity sold. Now we do recognize that soybean production was up in 2017 and our estimates reflect that, but cash receipts is only part of the story, with crops like soybeans that can be stored or have inventories. So what we're expecting to happen with the increased production, is that a larger share of that production is going to go into inventories, and not all of it is going to be sold in 2017.

Okay, that is all the questions that we have for this afternoon. Carrie, I want to thank you for this presentation, and I wanted to thank everyone for joining us today, and have a great afternoon everyone!