

## 020916 Farm Income Transcription

Good afternoon everyone and welcome to our webinar Farm Income and Financial Forecasts for 2015 and 2016 my name is Nancy McNiff 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 in the bottom left corner of your screen and our speaker will answer at the end of the presentation. Our speaker today is Jeffrey Hopkins, Jeff is the Chief of the Farm Economy Branch in the Resource and Rural Economic Division at the Economic Research Service US Department of Agriculture. Jeff previously worked in that branch from 1999 to 2004 and recently re-joined the Economic Research Service after working for the Budget Committee and then in private industry. I think we're now ready to start so Jeff you can begin your presentation.

Thank you Nancy, and thank you and welcome to everyone whose joined this webinar. What I'm going to do in webinar is present some slides, the slides draw from our forecast which is now on the ERS website. I invite you all to go and view it there. We have a text write up with charts, we also have some tables that show our current forecast along with past history, we have 16 different views of the farm sector in a series of tables including income statement and balancesheet tables also some state level information that you might find useful and I'd also like to direct you to three data visualizations which we added for the first time in November. This is also available on our website and the data visualizations are highly interactive, there are three separate ones. One is called Know Your State which presents state level information, one is related to the Farm Income Statement so a series of graphs, graphics and maps that lay out different aspects of the farm income and a balancesheet write up called Digging into the Balancesheet and that will, that's a data visualization that looks at several aspects of assets and debt for the farm sector so I'd like to invite you to check those three out and what I'll be presenting today are some of the high level messages but there's much more available and we're also available to answer questions, email us at ERS Farm Income Team and I will get your questions as well as everybody else on the team so appreciate that.

Sorry of the pause.

I'm just trying to advance this presentation. Okay, the next chart just shows some summary points, they're laid out in the same order that I'll be covering them in the presentation. So the very top summary point is just that net cash farm income and net farm income are both down relative to 2015 but they're down by moderate amounts. Net cash farm income is down two and a half percent and net farm income is down three percent relative to 2015. Now these, 2015 relative to 2014 were down but 2016 relative to 2015 are down but by much more moderate amounts in terms of percentages in order of magnitude smaller than the previous year. Second point that I'll be talking about is that the value of production is forecast to fall for the third

straight year. One of the main components of value of production is crop cash receipts. Crop cash receipts are expected to decrease by .9 percent in 2016 relative to 2015 and animal and animal product receipts are forecast to fall by 4.3 percent or 7.9 billion in 2016. The next part that we'll be talking about are government payments. Government payments are forecast in 2016 to rise by 3.3 billion dollars or 31.4 percent over 2015. So that is compensating in some sense for the lower crop and the animal cash receipts. Another thing that is helping farm income is that farmers are paying lower for production expenses and for the sector as a whole we forecast total production expenses to fall by one percent, that's the second year in a row that production expenses are forecast to fall. Turning to the balancesheet we show that farm sector assets are down 1.6 percent and we also show that debt levels are higher by 2.3 percent and both of those affects are com, really in the same direction and they're combining to erode equity by 2.2 percent in 2016 relative to 2015 according to our forecast. In contrast to the impact on overall balancesheet and impact to farm income we showed that total household income which is inclusive of both the farm component and the off farm earnings or off farm component of farm households is going to increase by four and a half percent in 2016 to \$81,666. So I'm going to go through a series of slides that lay out in more detail some of these summary messages. And Nancy if you could advance the slide, thank you very much.

The next slide that I have is net cash income. Net cash income is a measure of farm income that represents the residual resources available to pay down debt and support household spending. Net cash income already nets out all the production expenses that the farm sector has to pay so what is left over is available to pay down debt and also available for the household. We show net cash farm income down two and a half percent after dropping by 27 percent in 2015 relative to 2014. The graphic here shows net cash farm income since 2006 and it shows two bars. The total of the two bars is net cash farm income and what we do in this, in this graphic is separate the part that is government payments and the part that is net cash farm income. So here you can see that net cash farm income is declining but the government payments are making up a bigger share of net cash farm income in 2016 and in part erasing the losses to cash farm income, we could go to the next slide, thank you.

The other measure of farm income that we have is we simply call it net farm income and that includes everything that we talked about in terms of cash farm income and also some other costs that we feel are very important to incorporate into an overall measure of sector profitability. So a couple of things that stand out are inventory changes. We don't want to count as cash income this year for things that were produced in the old crop year. So I'm not talking about the harvest that we just had in the fall we're counting those, those receipts if they are incurred if we received them in 2016 I'm talking about sale of crops and livestock that is from prior years, 2014 or before. So that's, we want to adjust for that because those cash receipts are already reflected in prior years' income. So we want to compensate for that net farm income does that, this measure does that for us and we also want to account for costs such as capital consumption. So something like a machine that you use every year part of that gets used up year after year it becomes less valuable so we want to account for capital consumption that's what net farm income shows. It's more of a long term measure than long term representation of the cost faced by the sector. We likewise show net farm income to be lower, to be declining relative to 2015 a

slightly larger decline of three percent to leave us at 54.8 billion. As you can see in the chart that goes from 1990 net farm income tends to be more variable than net cash farm income, thanks next chart please.

Okay, this is what we call a waterfall chart and it's showing how you get from net farm income in 2015 with our 2015 forecast to where we are today net farm income in 2016. So on the left hand side we have 2015 on the right hand side 2016 and the in between bars are showing the components of everything that changed, the major categories that changed. The bars that are in red are things that became, that, that took away from net farm income relative to 2015, the blue bars are things that added to net farm income. So major category that pops out just at the beginning is livestock receipts. Livestock receipts are a big driver of our 2016 forecast because we project them to decrease by 7.9 billion relative to 2015. We also show a drop in crop receipts, for crop receipts for 2016 and that is contributing to the, to, to the decline that we see or that we're forecasting for 2016. Small changes in inventories but then things that added to net farm income relative to 2015 the biggest one is production expenses. Production expenses declined and because we're spending less we're, or the AG sector is spending less on production expenses they have more left over to contribute to net farm income 3.8 billion dollars less on production expenses forecast in 2016 relative to 2015. I mentioned government payments before up by 3.3 billion dollars relative to 2015 and all other changes increasing by 1.4 billion. So you can see that the, the overall change, three percent decline in net farm income actually consists of some categories that are moving quite a bit more than three percent livestock receipts in particular, next slide.

Okay, so we do a forecast three times a year and the last forecast that we, so it's in February, August and November so we did a forecast in November 2015 of what net farm income was going to be for 2015 and at that point we predicted, or our forecast was 55.9 billion dollars in net farm income so if you go back to materials that were prepared in November our numbers were 55.9. We have revised our forecast so the, for 2015 in light of additional information that we've gathered from NASS and elsewhere on 2015 outcomes and our February 2016 forecast is 56.4 billion dollars. So the biggest driver of that change was a further reduction in production expenses. In 2015 production expenses dropped relative to 2014 and when we went back and re-ran the 2015 numbers again as part of our forecast with, this time it was actually 3.4 billion, I'm sorry, 2.4 billion dollars less in production expenses. So we revised net farm income forecast for 2015 upward and most of that was due to this production expenses effect. People always ask what has changed on 2015 relative to past on, this is our, our chart that explains, next chart.

Okay, focusing even more closely on cash receipts which is an important component of net cash farm income and net farm income. You, a measure of receipts is a combination of a price and a quantity and you multiply them both together and you get revenues. For our forecast we separately in our forecasting a price and a quantity. So we can look at, we can look at what changed, what we forecast to change in cash receipts between 2015 and 2016 by looking at separate effects of a change in prices and a change in quantity. Overall cash receipts declined by 9.6 billion so this chart is answering the question of was it a decrease in prices that caused that

reduction in cash receipts or was it a change in quantities let's say due to a production shock or something like that. So this chart shows this decomposition into a price affect and a quantity affect and the way to read it is to look at the red bar, the price change and the way to interpret that is if we had 2016 prices but held production constant at 2015 levels how much lower would cash receipts have been in 2016? Well, 17.7 billion dollars lower than we're actually seeing them in 2016. So what that tells you is that the 2016 forecast has lower prices than 2015. The next bar is showing you the quantity change, I'm sorry not the next bar, not the next chart Nancy, okay, not, so the quantity change this bar is showing you that we actually have a production increase in 2016 relative to 2015. So part of this is due to the Fall 2015 harvest which will be marketed throughout the year as well as the Fall 2016 harvest just giving as an example for, for corn and soybeans the Fall 2016 harvest those quantities are forecast to be higher. So we have offsetting effects here of lower prices and higher production that combine to an overall reduction of in our forecast of 9.6 billion, next slide please.

Going a little bit deeper into the crop receipts these are the last five years of crop receipt values including the 2015 forecast crop receipts and the 2016 forecast crop receipts and we had already said that at a very high level that crop cash receipts were down 0.9 percent in total and which is a very small reduction and perhaps not surprisingly those reductions are not very apparent in the graphics that's shown here. Corn is showing to be slightly lower, soybeans showing to be slightly higher, soybean prices are forecast to be lower but soybean production marketings are forecast to be high, cotton slightly higher, cash receipts, fruits and nuts relatively unchanged, the vegetables and melons is one area where we see reduction and will be talking about a little bit later, a big component of the reduction in vegetables and melons is processed vegetables, the largest processed vegetable is processed tomatoes. So a component of the reduction in vegetables and melons is, is a forecast reduction in crop receipts, in cash receipts for processed tomatoes also a reduction in wheat cash receipts, next slide please.

The livestock overall cash receipts are down and we saw that they were down by 7.9 billion in the earlier waterfall chart that's a percentage reduction of 4.3 percent and across the board we're seeing a reduction in all major categories mostly driven by a reduction in prices in fact the production levels we believe are going to be quite strong in 2016 but the, they're overwhelmed by the price effect for cattle and calves, dairy, broilers and hogs, next slide please.

This slide shows total government payments since 2006 and there are different categories of government payments that we classify here. The lowest bar across all of these are price related payments these are payments, direct government payments that are based in whole or in part on the price of particular commodity, commodity on which a producer has base acres. So those have increased since 2014 the reason for that is because of the 2014 Farm Bill which brought two new programs. One is called the Price Loss Coverage Program and that's solely based on a price trigger when prices go below a certain level and the Agricultural Risk Coverage Program which isn't directly based on price as it's, it's related to revenues at the county level. So the ARC or Agricultural Risk Coverage payments and the PLC payments are reflected in the 2016 value, the PLC payments there's a note here about most of them going to compensate producers for low prices relative to threshold on peanuts, wheat and long grain rice whereas most of the ARC

payments are expected to be for corn, soybeans and wheat. There are other categories of payments that are shown in the chart most of the fixed payments went away with the 2014 Farm Bill. Conservation payments we show as being pretty much constant in 2016 and all other including ADHOC and disaster payments we show as being a reduction relative to 2015. Some people are asking about the HPAI payments and most of those are, well all of them that were paid out were in 2015 so they appear in the 2015 numbers. The government payments do not include crop insurance indemnity payments which some farmers receive from crop insurance companies. We report that information but we don't report it as part of direct government payments but just for perspective the total amount of, of, in gross insurance indemnity payments was about the same amount as the price related payments... in 2016 about 9.8 billion dollars, next slide please. Turning to production expenses this is a chart that shows production expenses since 1970 and I mentioned that we're expecting a one percent decrease in nominal production expenses in 2016. That's the second year of decline and only since 1985 and 1986 have we had two years of successive production declines. This chart goes all the way back into 1970 and shows that for a number of years we actually had pretty flat production expenditure levels but in nominal terms particularly from the early part of this decade 2010 through 2014 expenditures were growing quite, quite rapidly, faster than inflation and that also contributed to the rise in... (Indistinct)... expenses. Even with two years, two successive years of decline production expenses are near their historic highs, next slide please.

This slide takes a deeper dive into particular classes of production expenditures and we've arranged it so that on the left hand side we have the sorts of expenses that decreased on the right hand side, the sorts of expenses that increased and the two types of expenses that had the biggest declines in 2016 relative to 2015 are feed expenses and livestock purchases and this is indicating that the sorts of expenses that farms themselves produce so feed is inexpensive, includes feed grains obviously and livestock purchases which are feed or cattle and burrows and gilts for, to feed, and to hogs those expenses their level decreased in 2016 relative to 2015 and that is consistent with the farm income decreasing and cash receipts decreasing for those farms that produced those expenses. So livestock farms did benefit from decreased production expenses perhaps disproportionately relative to crop farms. We also saw a decrease or we're forecasting a decrease in total energy costs including fuels and oils and fertilizer which is often an energy derived input both expenditure levels forecast for 2016 are expected to decline. Expenses that increased talk about in particular labor. Labor costs are, are very important for many types of farming operations and we show labor increasing based on higher forecast wage rates. Interest expenses are also forecast to increase and that has to do with increased levels of debt as well as an increase in interest rates in the 2016 forecast, next slide please.

Turning to the balancesheet this graphic shows debt and equity since 1970. The combination of debt and equity so the combination of both of these components is equal to total assets. It's stated in inflation adjusted terms in order to make comparisons with other periods of history. Some people are interested in comparing assets and debt and debt to, debt to assets and, and those sorts measures relative to previous periods. It is the case that debt levels are at or near their historic highs. We show the inflation adjusted real estate debt to increase overall. The, the real estate debt will actually fall by 0.9 percent in real terms it will increase in, in nominal terms and

we show that non-real estate debt which is growing slightly faster than real estate debt will actually increase by 1.8 percent in real terms. On the assets side, so the combination of debt and equity in terms of the inflation adjusted value we forecast a 3.5 percent decline relative to 2015 and that's composed of a decline in real estate values and a shift in financial assets in the inventories that are held on farms or held by farm businesses and that could, that could be a cash management reaction on behalf of farms to generate additional cash. So one thing to point out is that relative to the early 80's we do have asset levels that are quite a bit higher today relative to the 80's and even allowing for similar levels of debt in real terms over the time period and in especially relative to their early 1980's typical measures of, of financial stress such as the debt to asset ratio are quite a bit lower than they were in 1980. So we still see debt to asset, debt equity, many of those financial ratios below the historical range even though they've been creeping upward the last couple of years, next slide please.

The next few slides that we'll be showing will be talking about a particular part of the farm sector and that's a class of farms we call farm businesses. Farm businesses are those operations that have more than \$350,000 in gross cash farm income plus those operations even if they have less than \$350,000 in sales have a full time operator meaning that the operator's fulltime occupation is farming. So when you combine those who have a fulltime occupation of farming plus those who have more than \$350,000 in sales you've got about 850 out of the roughly two million farms in the US and that grouping of operations accounts for the lion's share of the production, assets and debt in the sector but it does not account for the majority of the farms. Obviously if we're only looking at 850,000 farms the majority of them are outside of farm businesses but you can look at the categorization of commercial farms, intermediate farms and residence farms, those who don't earn much at all from their, from the AG sources of income and later on will use these three classes again when we talk about farm households, residence, intermediate and commercial farms, so the next slide.

The next slide shows 2016 net farm cash income relative to 2015 net cash farm income with a regional breakdown. So this is only including the 850,000 farm businesses but what it allows us to do is to distribute the overall impact on net cash farm income which as we said was down two and a half percent among the different regions. The reddish regions are the ones where there are losses and the bluish regions are the ones where there are increases in net cash farming income. So what the figure shows is that the Northern Crescent has the lowest declines relative to 2015 at 10 percent decline in net cash farm income also Fruitful Rim down 4.7 percent. One of the biggest contributors to both of these outcomes is dairy. We do show dairy decreasing for farm businesses in 2016 and there are lots of dairies both in the Fruitful Rim as well as the Northern Crescent. Another contributing factor to the decline in net cash farm income in the Fruitful Rim are processed vegetables, processed tomatoes, that is a big driver of the results you see here as well as losses associated with citrus greening in Florida so that reduction in, is reflected in, in this 2016 forecast. Particular areas of strengths are in the parts of the US where we're seeing strong performance from rice, cotton, peanuts and soybeans. In the Mississippi Portal a lot of those crops can substitute for each other as well as the Prairie Gateway so that is part of the reason that we're seeing a greater increase in those particular areas compared to the Heartland where net cash farm income is relatively unchanged and if you remember back to the, what we

saw earlier in terms of cash receipts for crop commodities being relatively unchanged that's a, a contributor to the outcome in the Heartland. Okay, let's move to the next slide.

Okay, so these are net cash farm income averages for farm businesses. So the, the vertical axis here, the numbers 50, 100, 150, those, that's in thousand dollars so what this is, is an estimate of net cash farm income for farms that have these specialties. We do show that for farm businesses specializing in mixed grain, wheat, corn, soybeans and peanuts, cotton and rice, an increase in average net cash farm income relative to 2015. So across all those commodities although not recovering to the previous levels we're showing an increase in their net farm cash income. Specialty crops is the exception it's forecast down 4.6 percent and that would be reflecting the processed tomatoes and other impacts, next slide. So that was the crop commodities now showing the livestock commodities. We're showing a, a, a forecast for 2016 we'll just draw your attention to dairy, the net farm cash income for dairy is down 31 percent for 2016 in our forecast 2015 was down from a very high level recorded in 2014 it was down 70 percent so dairy farms, farm businesses showed the biggest impact in 2016. The cattle and calves, hogs and poultry they're obviously benefiting from lower livestock purchase costs, what the cost for them, a purchase of a feeder calf, cattle or a purchase of burrows and gilts so that's feeding through to lower expenses for them also lower energy costs and we're showing their net cash farm income to be fairly constant, next slide.

Switching now to farm households, most farms in the US are family farms and families have a number of ways in which they can earn income. We gather information on off farm earnings of farm households as well as tracking the finances of their farm operations. So we in addition to forecasting net cash farm income we forecast household income by allocating the net farm income that goes to the household as well as any off farm earnings. So the next chart shows our forecast in 2016 of a slight increase in total household income, maybe not so slight a 4.1 percent increase. The 4.1 percent increase is a measured at the median for total household income of \$81,666 this is mostly driven by off farm income increases as opposed to anything happening at the, at the farm level. Median farm income earnings increased slightly but the real driver was the off farm income forecast, next slide.

This next slide has, has four panels that are arranged left to right and the first three categories are the three types of farms that we talked about earlier, residential, intermediate and commercial farms the last one is all farms and the mo, the main thing that I want to point out with this slide is that the red lines in the slides they're showing 2014, 2015 and 2016 levels of farm income and I just wanted to draw your attention to the, sorry I'm getting my computer up again, the commercial farm income. Median farm income for commercial farms showed the biggest decline in 2015 relative to 2014 and they show a slight increase in 2016 forecast relative to 2015 so in the other components, the residential, the intermediate and the all you don't really see much movement in farm income across the years it's really only when you get to the commercial farms that you're picking up this impact these are farms with more than \$350,000 in sales. The other things I'd point out is the gold bars in each of these that the residential and intermediate households are supported by their off farm earnings more than they are by their farm earnings that's not the case for commercial farm households. They do have strong off farm earnings 50

percent, \$50,000 on average over the period but their farm earnings are a much more important source of income to them.

So I just have one final slide here that just shows some key reference data but I don't need to talk about that because everything has already been introduced. I'm happy to turn it over for questions.

Okay, again if anyone wants to ask a question please type it into the chat feature on the left bottom corner of your screen. We have a couple of questions already queued up. The first one is on your slide number 14.

Yes.

I'm going to try and bring that up. There were, the question had to do with the left axis, what does that represent?

That, yeah, thank you very much, that's percentage. So it's showing percentage of farms, percentage of production percentage of assets and percentage of debt.

Okay, the next question is related to oil prices. Oil prices have collapsed 70 percent in the past two years not unlike some of the income drops for dairy and hogs. How do you think the AG sector can handle this abrupt shift compared to the oil industry?

Could, could I, I missed the first part of that question could you, could I ask you to repeat it?

Just saying that the oil prices have collapsed in the past two years a lot like the drops for dairy and hogs...

Yes, yeah, so one of the things I would point out is, you know, part of what's happening in the, in the extractive sector as a whole is a decrease in international demand. Agriculture is a traded good. Exports are very important for agriculture so income sensitive and price sensitive commodities are going to be impacted in much the same way across oil, across agricultural commodities just because trade is so important. The one thing that I would point out is that there's also a, there's a counter balancing effect in that prices, if, if, if they do decline then there are supported by increased consumption so we are showing I think what's happening here with the fall in prices of major commodities we're showing that continuing into 2016 so in that respect their fates are, are somewhat shared but one of the things that agricultural markets have going for them is that they also use agricultural products as an input. Many livestock farms are actually benefiting from lower feed costs, they're benefiting from lower costs for feeder cattle so markets are transmitting that even within the agricultural sector, transactions that go on there and it's also benefiting them in terms of the, the very commodity that you bring up. Lower energy prices are good for agriculture in the sense that it is a costly input and they can save but I agree that many of the same drivers of oil and gas consumption are affecting agriculture as well.

Okay, here's another question, you showed that rents are increasing in or projecting rents increasing in fiscal year 2016 or the 2016 forecast could you talk more about how you made that prediction?

So in the, for all of these expenditures there is a price component and there is a quantity component that is driving our forecast. The, and most of what we use for prices not in the case of energy but in the case of some of the traditional agricultural inputs like land we're using NASS price indices so the, the I guess anticipated from the question there's an anticipation that rental contracts will be revised in the face of lower commodity prices and, you know, from our perspective it's not being reflected in the data that we're using to come up with our overall rental costs.

I have another question, the income forecast for the underlying 2016 commodity prices from the baseline released in December. That's a follow up question to that.

I'm not sure if I, if I, no, no, no I, I actually see it thanks. I'm not sure that I understand the question. So we're using NASS prices so you will find that data as, as NASS publishes it.

And it says also will the income figures be updated with the release of the USDA 2016 Crop Price Forecast... (Indistinct).

Yeah, yeah, so that's a really good question, where do we get our prices? We use our, we use the most recently available World AG Outlook Board Prices that's what's driving our forecast. So for this forecast we used the January World AG Outlook Board Price Forecast. There will be another price forecast by the World AG Outlook Board that will be released either, either today or tomorrow I'm not sure which date it is but these forecasts don't reflect that. Our next forecast will be in August and we'll at that time be using the most recent price data that we have available and can use for that so we won't in, we won't update this forecast with respect to the February number, any February release, we won't be updating until August.

We have another question, when do you anticipate a grain price recovery?

So, we don't anticipate it in 2016, we're using the World AG Outlook Board Forecast Prices which don't include a grain price discovery so as, as that forecast gets updated we'll, our forecast will reflect that.

Here's one about the crop sector, how would the crop sector have suffered in your 2016 projections without the 13.9 billion dollars in government payments?

So the crop sector it was the beneficiary of all of the PLC and ARC based government payments. There are other conservation based payments and certainly the, the, what we put as another category which included indemnity payments for the HPAI outbreak but most of them do go to crop farmers that, that, that point is, is true. So what would they have been? Well you would adjust the net cash farm, one thing you could do is adjust the net cash, average net cash farm income for average payments.

Okay, what are, I don't know if you have these but what are the estimates for government payments by program, for example ARC and PLC or versus PLC in 2016 versus 20... (Indistinct)?

Yeah, so that's, so that's in our tables. We actually have forecasted price, PLC payments at 1.9 for six billion dollars that's an increase of 1.2 billion relative to the 2015 of, of, so a large increase, over 100 percent. In terms of the ARC payment, the Agricultural Risk Coverage Payments we have an increase of 2.9 billion dollars relative to 2015 so going from 4.2 billion to 7.2 billion or up almost 70 percent for those two components.

And the last question has to do with can you give a broad summary of how things look this year for AG and farm income, challenging, a change from what producers had been used to?

Yeah, so, and I would just repeat that the, the main takeaway is that we're forecasting net cash and net farm income to both be down but by moderate amounts, 2.5 and 3 percent respectively as opposed to 29.1 percent and 40 percent in 2015 relative to 2014 so the sector has had very sharp declines in 2014 and 2015 and the moderation, the moderate drop in income I think it, you could characterize it as a change from, from the norm.

Okay, I think that's all the questions that we have. Thank you very much Jeff for your presentation and thank you all for joining us and have a great rest of your afternoon.

Thank you everyone.