

Webinar: [Farm and Financial Forecasts for 2021, December Update](#)

Good afternoon, everyone, and welcome to our webinar *Farm Income and Financial Forecasts December 2021 Update*. My name is Jacqueline Michael-Midkiff and I will be your host today. As a reminder, this webinar is being recorded and will be posted on the ERS website next week. If at any time during the webinar you have questions, please enter them into the chat feature at the bottom left hand corner of the screen and our speaker will answer them at the end of today's presentation. Today, our presenter 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. Thanks for joining us today, Carrie, the floor is yours.

Thank you and thank you everyone for joining me today as I present to you the latest USDA data on U.S. farm sector income and wealth. And happy December. The ERS farm income and finance program measures forecast and explains indicators of economic performance for the U.S. farm sector. It can be used to gauge the financial health of the sector. We release data three times a year, and with today's release, we are releasing our updated U.S. level calendar year 2000 forecast- 2021 forecast to include some new and updated data as it has become available since our last release on September 2nd. This includes some additional survey-based data on 2021 production and prices and the latest forecasts from the November World Agricultural Supply and Demand Estimates report, the WASDE report.

So, what does our forecast cover? First, our data covers the farm sector as a whole, which is comprised of two million farms who operate about 900 million acres of land. Note that our data covers income earned from production agricultural- from the production of agricultural commodities. It does not include income from industries that are related to farming, such as agricultural services or food manufacturing. Of those two farms, half are what we would consider farm businesses, which are larger farms and knows where the principal occupation of the operator is farming. These farms account for about 90 percent of the total value of agricultural production in the U.S. and we have some additional data and forecasts on their finances. Lastly, we'll look at the well-being of the nearly 5 million people who live in households attached to a farm.

Overall, we're forecasting farm sector income to increase in 2021 after increasing in 2020, as well. This slide is a summary of our forecasts and also the order in which I'm going to be talking about things today. On this page, all of the values are in nominal dollars, meaning that I'm not adjusting them for inflation. But later on, in the presentation we'll have quite a few charts that do account for inflation. So, first both measures of farm income are forecast to continue increasing in 2021. Net cash farm income for 2021 is forecast to increase 17 billion dollars, or almost 15 percent relative to 2020. And net farm income is forecast to increase 22 billion or 23 percent.

This increase in net income is being driven by higher cash receipts from crop and animal- and animal product sales, which are expected to increase almost 65 billion dollars or 18 percent. But somewhat moderating income growth are direct government payments to farmers, which are forecast to decline about 18.5 billion or 40 percent, after record highs in 2020. Also, total production expenses are forecast to increase about 30 billion dollars or 8.3 percent in 2021. On the farm sector balance sheet, farm sector assets, debt, and equity, are forecast to increase slightly, almost 3 percent each. And average net cash farm income for these farm businesses, these larger farms or where the principal occupation is farming, is forecast to increase 3 percent to \$89,100 in 2021. And for those households that operate a farm, median total farm household income is forecast also to increase about 3 percent to \$82,315 for the median farm.

We have two primary measures of farm sector income, or profits, the yellow or top line on this chart is net cash farm income, which includes cash receipts from farming, it's like sales with farm commodities. As well as cash farm-related income and government payments to farm operators. Less cash expenses, or the expenses or costs that farmers incur to produce their agricultural commodities. By cash, that just means there's a market transaction. The blue line is net farm income, which is a broader measure of income that also incorporates non-cash items like economic depreciation, and it accounts for changes in inventories of commodities. Note this chart is in inflation adjusted dollars, specifically 2021 dollars, so I'm adjusting prior years to account for inflation, so we can better make- compare levels of income over time. For both measures we're forecasting net income to continue to increase in 2021. Our 2021 forecast put net cash farm income at its highest level since 2014. And net farm income at its highest level since 2013. Relative to 2020, net cash farm income is forecast to increase 10.5 percent, when inflation adjusted. And net farm income is forecast to increase 18.7 percent, inflation adjusted. Both measures in 2020 are forecast to be above their average across 2000 through 2020.

We derive net farm income by first measuring its component parts, or from the bottom up. Which allows us to identify what is driving the change in income from 2020. Now this chart is in nominal dollars. And what we see is that for 2021, the forecast increase in income is primarily due to higher cash receipts from commodity sales. So, in this chart, we have on the far left the net farm income estimate for 2020 at 94.8 billion. And at the far right, we have net farm income, the forecast for 2021, at 116.8 billion. The bars in blue indicate which components of income are contributing to growth, while the red bars show which ones are taking away or subtracting from growth. So, if we start from the left and look at the major drivers here. Crop cash receipts are forecast to increase \$35.4 billion. Additionally, we make an adjustment to account for changes in inventories, and that's going to add another 5.3 billion. When you sum the crop receipt in inventory adjustment, it gives you a measure of the value of total crop production in a given calendar year. And that's forecast to increase 40.7 billion from the prior year, 2020. Livestock receipts are forecast to increase 29.3 billion dollars. But then we get to the red bars, and production expenses are forecast to increase 29.8 billion. So that- those are subtracted out in the calculation of net farm income, so that higher expenses is going to lower income. And addition

to that government payments are forecast to fall \$18.5 billion. On the whole, net farm income is forecast to increase \$22 billion or 23 percent, not adjusted for inflation.

In the previous chart, you know, I- we saw that cash receipts, both crop and livestock, are forecast to increase and significantly in 2021, relative to 2020. In this chart, we show why. Through a simulation, we can deconstruct the change in cash receipts into what we might call a price effect, changes due to changes in prices, and a quantity effect- where the changes due to quantities sold. So, in other words, we can identify whether changes in prices or quantities are driving the change in cash receipts. So, if we start from the left. Total cash receipts are forecast to increase 63.3 billion dollars due to higher prices, that's the orange bar. And higher quantities sold are expected to contribute only 0.2 billion dollars to the increase in the blue bar, so really essentially all of the increase is coming from higher prices. The gray bar represents change in commodities for which we can't isolate changes in price and quantity. On net total cash receipts are forecast to increase \$64.7 billion, so that's the purple bar for total cash receipts. It's interesting to note that this increase of 64 or almost 65 billion, in 2021, would be the single largest year increase since 2007, when you do inflation adjust prior years. When you do the same analysis for crop receipts, separate from animal and animal product receipts, which I often call livestock receipts, it's pretty much the same story in that the increase in total receipts is coming from higher prices rather than changes in quantity sold. But this is on net, because certainly there are some commodities for which quantity sold increase, but when you net them for all crops- or all livestock, it is primarily a price story.

We can also look at cash receipts by commodity. Now note, we're doing calendar year forecasts, not crop year or marketing year forecast. And this chart is in inflation-adjusted dollars. We forecast receipts for about 25 different crop commodities, or major groupings of crops. And then this chart focuses on some of the major ones. After increasing 2 percent in 2020, total crop cash receipts are forecast to increase 14 percent, or 28 billion, in 2021 in inflation-adjusted dollars. Corn receipts are expected to increase 47 percent, or 22.8 billion, accounting for 81 percent of the increase in total crop cash receipts in 2021. This is mostly due to higher prices, but there are also higher quantities sold in 2021 for corn. Soybean receipts are also forecast to increase, about 16 percent. And wheat receipts are forecast to increase 20 percent. Receipts for fruits, nuts, vegetables, and melons, are forecast to continue to decline in 2020, largely because of lower prices for those commodities.

Let's take a closer look at corn and soybean receipts because they are quite high in 2021. Corn receipts, which are the top brown line, would be at their highest since their peak in 2012. Well, that's what our forecast for 2021 would put them at. We derive our forecast by looking at the price and production forecast from the November WASDE report. And in that report, the production for crop year 2021, or the 2021 marketing year, is forecast to be at its highest level since 2016. And the average marketing year price forecast, if realized, would be the highest since 2012. Our forecast for soybean receipts, the green line, would put them at their highest level since 2013. Crop year 2021 production is forecast to be the second highest on record. And the

price forecast would be the highest since 2013. Now note the calendar year forecast for these commodities includes a mix of sales from both the 20 crop year, or marketing year, and the 21-2021 crop- or marketing year.

Looking at animal and animal product cash receipts, these are forecast to increase 13 percent, relative to 2020. Which would be the first increase in total animal and animal product receipts since 2017, or in three years. Broilers are forecast to see the largest increase at 43 percent, or almost 10 billion dollars. This follows the large decrease for- for the receipts in 2020. And most of the increase in 2021 is due to higher prices. We're also expecting receipts for cattle and calves to increase. And receipts for hogs are forecast to increase 35 percent or almost or 7 billion dollars, to their highest level since 2014. For dairy, we're forecasting receipts to be relatively stable uh in 2020. They're increasing slightly in nominal dollars, but declining after you adjust for inflation, which is what this chart is looking at.

Government payments are another source of income to farmers. We define government payments as direct payments made directly to farm operations by the federal government, without any intermediaries. Generally, they come from farm programs or other supplemental and ad hoc assistance programs. We record them in the year in which they were received by the farmers. Government payments more than doubled in 2020 to a record level 45.7 billion dollars. This increase was due, in large part, to supplemental and ad-hoc disaster assistance payments to farmers for COVID-19 relief. In 2021, government payments are forecast to decline 40 percent, or about 18 billion dollars, in nominal dollars, to 27 billion dollars. With COVID related aid forecasts to decline based on authorized spending to date. On this chart, supplemental and ad-hoc disaster assistance including COVID related aid is recorded under all other payments. So that's the purple bar. And this is forecast at 19.9 billion in 2021. It includes payments from the Coronavirus Food Assistance Program and other USDA pandemic assistance paid directly to operators who have been affected by COVID-19. And that's the- what we're labeling us pandemic assistance because we're able to separate in our tables, we separate out USDA pandemic assistance from non-USDA pandemic assistance. In 2021, this USDA pandemic related assistance is forecast at 8 billion dollars compared to about 23.5 billion in these CFAP payments received in 2020. Additionally, this purple bar- or the shaded part of the purple bar, includes loans from the Paycheck Protection Program administered by the Small Business Administration. Although administered as a loan, these loans will be forgiven if the program's requirements are met. We're treating these loans as direct payment to farmers and forecast farmers to receive about 8.7 billion in loans in 2021, based on data that's available from the SBB, and this amount may be revised later with any unforgiven amounts ending up as farm debt rather than a direct payment. The remainder of all other payments, so the solid purple area, includes other programs- other supplemental and ad-hoc disaster assistance, like the Wildfire Hurricane and Demoli program the WHIP Plus and plus program. And it also includes other programs not listed elsewhere on this chart. But it's not just this COVID related assistance that is forecast to fall in 2021. We're not expecting, in 2021, any significant MFP payments, as that program has

largely been phased out with no new payments authorized for 2021. The orange bar, which are payments that are a function of commodity prices, those are forecast to decline in 2021, largely because of expected lower payments under the Agricultural Risk Coverage Program, the ARC, and the Price Loss Coverage, PLC, programs both of those are forecast to decline. But the orange bar does include dairy payments and we are forecasting an increase in dairy margin coverage payments in 2021. But still, not enough to offset the declines that we're forecasting for ARC and PLC. The blue line on this chart shows inflation adjusted total direct government payments. You know from 2000 to 2020, you know, average payments have been about 19.8 billion and government payments in 2021 would still be above this average.

This chart kind of takes another perspective to look at government payments. What's not included in the previous chart are payments to farmers from insurance programs, or commodity insurance indemnities, which are what farmers receive for losses that are covered by insurance. Now this chart is in inflation adjusted dollars. The top peach bar shows indemnity payments paid to farmers less the premiums paid by the farmer for federal commodity insurance programs, or what I'm going to call net insurance payments. In 2021, net indemnities are forecast to decrease about 1 billion dollars, when adjusted for inflation, or 16 percent. The darker orange bar segment shows direct government payments, which we talked about in the previous slide. And so the gray bar represents net farm income excluding net insurance and direct government payments. In 2020, net farm income would have declined without these federal payments. In 2021, net farm income is forecast to rise, despite lower net insurance and government payments. When we combined direct government payments and net insurance, they're forecast to account for about 28 percent of net farm income in 2021, which is less than their share in 2020, which was about 54 percent. On average, prior to 2019, these payments usually accounted for about 18 percent of net farm income. But note, it may not be appropriate or- it may be misleading to look at these payments as a share of net income rather than gross. When you look at these shares as a gross- these payments as a share of gross income, which is before we subtract out expenses, they were about 10 percent of gross income in 2020 and 5 percent in 2021.

Next, let's look at production expenses, which are the costs incurred by farmers to produce their agricultural output. This includes things like feed, fertilizer, hired labor. This chart shows total expenditures, both in nominal and inflation-adjusted dollars. In 2020, production expenses increased about one percent in real, or inflation-adjusted dollars. This marked the first increase in total production expenses after five consecutive years of declining expenses. In 2021, total production expenses are forecast to increase about 8 percent nominally, or 4 percent when adjusted for inflation. This would put them at their highest level since 2016, but still below their peak in 2014.

When we look at expenses by category, we forecast spending for nearly all categories to increase in 2021 relative to 2020. Now this chart I'm not adjusting for inflation because I'm just comparing two years. The prices- the prices paid for many production inputs has been trending upward in 2021 based on monthly indexes of prices paid through September from the National

Agricultural Statistics Service of USDA. The largest dollar increases are expected for feed and livestock purchased. Feed is forecast to increase about 13 percent and through September, the feed prices paid indexes up about 12 percent relative to 2020 average prices paid. Similar for livestock and poultry purchases, the prices paid for animals is- has been rising. Spending on fuels and oils is forecast to increase 32 percent following the forecast for higher diesel prices from the Energy Information Agency. And on this chart, only pesticide expenses are forecast to not increase in 2021. Their forecasts pretty much remain unchanged. So despite planted acres being up slightly, about two percent, for the top 14 crops in the U.S. We're seeing slightly lower prices in 2021 relative to 2020, at least so far. So, we're forecasting spending on pesticides to be relatively unchanged in 2021.

In addition, to farm income the balance sheet is another tool we can use to measure, or gauge, the health of the farm sector. It provides information on the value of physical and financial assets and the level of debt in the U.S. agricultural sector over time. Looking historically, the balance sheet is strong and remains strong. First, the amount of debt held by the farm sector is shown by this blue area at the bottom of the chart. Since around the mid-1990s, debt has generally been growing, I mean it doubled from 1994 to 2020. Most of this growth, or about 80 percent, of it has been in real estate debt, which is forecast to continue to increase, but just slightly in 2021. Non-real estate has been declining since 2018 and is forecast to continue to decline in 2021. Driving the slight decline in overall debt levels. So here we see overall debt is forecast to decline when adjusted for inflation, 0.8 percent. The value of farm sector assets is represented by the top line of this chart and farm equity is the green area and both have remained relatively stable since about 2014. Essentially just keeping up with inflation. In 2021, both are forecast to decrease one percent from 2020 in inflation-adjusted dollars. About 80 percent of farm sector assets are real estate assets, and that's the value of land and buildings, which are expected to decrease slightly, or less than two percent once adjusted for inflation, but it's about a two percent increase nominally, or not adjusted.

Changes in the balance sheet have implications for farm sector solvency and other measures of financial performance and stress. This chart looks at the same information as the previous one but in a bit of a different way. And looks at the amount of debt relative to assets and relative to equity and they're shown as a percentage. These are solvency ratios, which provide a measure of the sector's ability to repay financial liabilities, or debts, or loans, through the sale of assets. Both ratios have increased every year for the past eight years, or since 2012. But with assets and debt forecasted to decline at nearly the same rate in 2021, which is one percent. These ratios are expected to remain unchanged in 2020 compared to 2021- I'm sorry in 2020 and 2021. It's important to note that these solvency ratios are for the sector as a whole, there's a lot of variation in the amount of debt held by individual farms. Additional financial ratios, including liquidity measures, are available on our website.

So, let's just go into that just a little bit further though. While farm sector solvency looks to be relatively stable in 2021 other financial indicators are pointing to lessening financial stress in

2021. Including bankruptcy rates and the debt service ratio. First, the bankruptcy rate, the red bars. From 2015 to 2019 the farm bankruptcy rate trended upward reaching its highest level since 2010. In 2020, Chapter 12 Bankruptcy fell four percent based on data from the U.S. Courts. And in 2021 we're projecting bankruptcies to fall further based upon filings through September. The line on this chart is the debt service ratio, which is also expected to continue to decline in 2021. The debt service ratio describes the share of production income, or gross income, used for debt payments and is one of measure of liquidity, or the amount of capital readily available as cash to the farm operation. The forecast decline in the debt service ratio is because of higher production income, you know particularly this higher cash receipt, meaning they have more money from which to pay their debts because of this increase in receipts.

Up to this point we've been discussing the forecast for the farm sector as a whole. Now let's look at an important subset of all farms, what we call farm businesses. We define farm businesses as farms where the primary occupation of the operator is farming, plus those farms that have \$350,000 or more in gross cash farm income, so that's income before expenses. There are roughly a million farms that meet this definition, or half of all farms, and they're represented by the orange and blue bars here for commercial and intermediate farms. According to the 2020 ARMS, residence farms, those are farms where the operator is retired or whose primary occupation is not farming, account for the other half of all farms. But it's commercial and intermediate farms that account for over 90 percent of agriculture- agricultural production and hold most of the sector's assets and debt. So, using data from the 2020 ARMS, the Agricultural Resource Management Survey, we're able to project how farm businesses will fare in 2021 based on the sector level forecast. So, we kind of apply a shock to the 2020 ARMS data. And we can break out break out the forecast by commodity specialization and geographic region.

So, let's start by looking only at farm businesses, that's where we're going to go from this point on, and look at those that specialize in crop production. Note that this chart is in inflation-adjusted dollars. Using ARMS, we can categorize farms by commodity specialization, meaning that at least 50 percent of the value of production comes from a particular commodity. The 2021 outlook for crop farm businesses is mixed. All farm businesses, regardless of their specialization or geographic region, are expected to see government payments decline and production expenses rise in 2021. So, that's the sector level shock you know that's what by sector estimates forecasts are telling us, so we apply that to all farms. But for some types of farms businesses cash receipts are forecast to increase enough to offset these other changes and result in higher net farm income in 2021, on average. So, in particular, average net cash farm income for corn, soybean, and wheat, farm businesses is forecast to increase in 2021. Due to higher forecasts for receipts for those commodities, corn, wheat, and soybeans. Average net cash farm income for cotton and specialty crop farm businesses is projected to decline as cash receipts for those commodities are forecast to remain stable or fall in 2021.

For farm businesses specializing in livestock, most are expected to see average net cash farm income decline in 2021. Dairy farm businesses are forecast to see the largest decline, in 2021 at

27 percent. And milk receipts are forecast to fall slightly in real dollars. So that, in addition to lower government payments and higher expenses, would result in lower average net cash farm income. Farm businesses specializing in poultry are expected to see average net cash farm income very nearly unchanged from 2021- I'm sorry 2020. We are forecasting higher poultry receipts, but we think they will pretty much exactly offset the lower government payments and higher expenses in 2021, at least on average. Hog farms are the only category of livestock farm businesses where average net cash farm income is forecast to increase in 2021. As we talked about earlier, for the sector receipts for hogs are forecast to increase 35 percent, you know a much larger increase than we're forecasting for, say, cattle. Our forecast puts average net cash farm income for hog farm businesses at their highest level since 2013. By looking at how agricultural production is distributed geographically, we can project how average net cash farm income for farm businesses can be expected to change in 2021 by resource region. Five out of the nine resource regions are expected to see higher average net cash farm income in 2021. On the bottom, you can see that across all farm businesses average net cash farm income is forecast to increase three percent, not adjusted for inflation, or that's about a decline of \$3,000 on average. This reflects the forecast- sorry increase, sorry an increase of three percent or about \$3,000. This reflects the forecasted increase in net cash farm income for the farm sector as a whole. Farm businesses in the heartland are projected to see a 35 percent increase, as farms in that region are expected to see higher receipts for corn, soybeans, and hogs. The Northern Great Plains leads the region in- or the country in wheat production. Higher wheat and corn receipts are forecast to lead to a 13 percent increase in average income for this region than the Northern Great Plains. Farm businesses in the Fruitful Rim are expected to see the largest decrease at 26 percent due to forecasts for lower receipts for fruits, nuts, vegetables, and melons, as well as lower government payments and higher expenses.

Up to this point we've discussed the financial performance of the farm sector as a whole and farm businesses. But this does not really give us a complete or accurate picture of the well-being of households that own and operator a farm- operate farms. Farm profits are often shared with other stakeholders, like landlords and contractors, and the well-being of farm operator households is determined by a combination of on-farm and off-farm activities, with the majority of household income coming from off the farm for many farm households. So now we're going to look at all family farms, which account for 98 percent of the 2 million farms in the U.S., and the households that operates those farms. About 5 million people live in households attached to a farm.

One measure of their well-being is household income which declined in 2020 and is forecast to remain relatively unchanged, or flat, in 2021. at the median. This chart looks at income earned on the farm and off-farm income and total household income at the median. By the median, that just represents the income level at which half of all households have lower incomes and half have higher incomes. This chart is an inflation-adjusted dollars. Median income from farming, so that's on the far left this first section of lines, is forecast to decline in 2020 and then decline

further in 2021 to about negative 1,550 at the median. Meaning they're losing money with- with from farming. At least that's how we measure it by net cash income. Recall that half of all farms are residential farms, which by definition are small farms and it's not the principal source of income for those households. So this results in this very low median, or in this case, a loss of at the median. Therefore many farm households rely on off-farm income. All farm income sources include off-farm wage income, so like off-farm jobs, non-farm business earnings, dividends, and transfers. Median off-farm income decreased in 2020 and is forecast to increase in 2021, in inflation-adjusted dollars.

That's the median- I'm sorry the middle section of bars. Total farm household income, the far left, at the median decreased almost five percent in 2020 and is forecast to decline just under one percent in 2021, at the median, after adjusting for inflation. Now because off-farm and on-farm income are not distributed identically for every farm, median total income will generally not equal the sum of median off-farm and medium farm income.

We could go a little deeper into this in looking at the sources of income, at the median, by type of farm using the same categories we looked at earlier. And at the median, or really, it's only the median household, attached to a commercial farm that is forecast to see an increase in total household income in 2021. So, these first two squares, or areas on the left for residential and media- and intermediate farms, you can see that median household income, total household income, as shown by the blue line, tracks very closely with off farm income, the red line. And off farm income accounts for essentially all of the household's income at the median. For these farms, the residential and intermediate the income from the farm is nearly zero. And also, for these farms, median total household income is expected to be pretty stable in 2021. For commercial farms, on-farm income is more important, and it is driving the trends in median household income. Following the sector level forecast for farm income, on-farm income for commercial farms is expected to increase in 2021 and drive most the increase in total household income for households that are attached to a commercial farm.

The information I presented today is available on our website along with estimates and state level data for prior years. We have some data visualizations, some reports, and even a CSV file you can download with all of our data. Our next release is scheduled for February 4th, 2022, at which time we're going to update our 2021 forecast again and have our first forecast for 2022.

Also, I'd like to bring to your attention a report that we put out just last week on farm income and finances. In these webinars, we usually focus on the latest forecasts and just on the forecast, but this report provides an in-depth analysis in some of our historical data. And, you know, of issues that we think are of high interest. So, this version of the report, that was just released, has chapters on trends in farm income over the last 10 years, changing distribution of direct government payments, and the trends on Chapter 12 bankruptcy filings at both the state and national level. So, if you're interested, I encourage you to check it out. With that, I will open it up to questions and thank you for- you for listening.

Thanks, Carrie. We'll go ahead and open the floor for questions, as you stated. As a reminder, questions can be submitted through the chat feature located at the bottom left hand corner of your screen. And Carrie, I know you just mentioned when the forecast for 2022 would be available, can you tell us that again in case anyone missed it?

Sure, yeah, the first time we're going to have any forecast for 2021- I'm sorry 2022 is our next release, which is going to be on Friday, February 4th, of 2022. We're also, at that release, are going to update our 2021 forecast again, as needed.

Perfect, thank you. All right, let's start with a question: what is included in your 8 billion dollars forecast for USDA pandemic assistance?

Yes, it includes quite a few things. Largely, it includes payments that were authorized by the Consolidated Appropriations Act of 2021 that was passed in December 2020. But we're only counting payments that were paid directly to U.S.- to producers from USDA. So, USDA put out this initiative after the consolidation- Consolidated Appropriations Act which are calling USDA pandemic assistance, and that's a lot of what we're getting here but only the payments that are going directly to farmers. So, it includes, for instance, the Supplemental Dairy Margin Coverage Payments that were authorized for related to COVID. Additional CFAP the Corona Food Assistance Program payments that were made in 2021 and are being made. And that includes, what you may have heard of, as the top-up payments that were authorized also includes like the Pandemic Livestock Indemnity Program, the Pandemic Market Volatility Assistance Program assistance that was paid to contract producers and some that went to organic producers. That's largely what's included in that assistance, and it's what we expect to be paid out by the end of the calendar year.

Thanks for sharing those details. And that's- the next question we have: is do you have data on farm bankruptcies by state?

We do not have it as part of, what we call, our data product. So, you won't find a data file on it on our website, but I mentioned that report, the *Agricultural Income and Finance Situation and Outlook Report*, that just came out. That has a chapter that includes data, some state level data on farm bankruptcy rates, and a lot of good analysis on it. And all of that data is publicly available on bankruptcies from the U.S. Courts. But it is not like a file you can download from us.

Okay, thanks. You mentioned the change in crop insurance indemnities, but what is the figure for crop insurance payments to farmers this year?

Yeah, indemnities are the payments that they received for their covered losses and that is- um I can switch to a chart real quick because I don't know the number off the top my head. So, on this chart, that's farm-related income... I don't have the number, but the identities did increase so the payments to farmers well- actually I shouldn't say increase I'm sorry. They're actually, they are increasing, I'm sorry, that's on the summary slide. So, the indemnities are the payments and

they're forecast to increase 0.2 billion dollars, but that's not net of the premiums paid, so that's just the amount they received. Was about- was an increase relative to 2.2 billion dollars.

Okay, thanks. um next question: what drove the 10 percent decline in the farm-related income forecast for 2021, between the September and December release?

Yeah, that's what we were talking about. Indemnities, yeah, we had according to our, you know, we had about a 3 billion dollar revision to indemnities. So both federal and non-federal indemnity payments, and that's just where- mostly it's federal though, we have data from the Risk Management Association, RMA, on indemnity payments that comes out like weekly, and that's where the revision was coming from. We were looking at payments to date and they were just coming, they were lower than we had anticipated back in September. So, but that that revision is showing up, if you're looking at revisions by category, that revision is in our farm related income section that's where it's included.

We also have another question about the change between September and December. It is: can you discuss what led to corn cash receipt increases between the September and December release despite following WASDE prices and stable off-farm use for the 2021 CMY?

Yeah, we did- there was a slight revision to the WASDE projections for the 2021-22 crop year for corn. I mean, production was revised up a little bit, season average prices were revised down a little bit. Which actually, on the whole, revised down the value of production for that for the 2021-22 crop. So, largely what happened here, well there was a kind of a couple of things. One is that we got data from NASS after the last release on monthly marketing patterns. So that data tells us how much, or what percentage, of the quantity that was harvested in 2020, was sold in the 2020 calendar year versus the 2021 calendar year. So that data influenced the result. And we actually- we also had additional data from NASS on the monthly prices received by farmers throughout 2021, so far. And so with the incorporation of those two pieces of data, when they work together resulted in about a four billion dollar upward revision to corn receipts for 2021.

Okay, thank you, Carrie. Next question: if a corn farmer is buying fertilizer for 2022 now, does that go on your 2021 or 2022 expenses?

Yes, good question. We record expenses in the year in which the expense was made. So, when they made the purchase. So, if they buy the fertilizer in 2021 even if it is for the 2022 crop, it gets recorded in 2021. So, expenses are recorded in the year in which the cost is incurred, so not necessarily related to when the crop might be sold.

All right, now we have a calculation question for you. How do you calculate the change in input costs, year over year, specifically what is in the numerator and the denominator? Is it daily rates? Monthly?

Yeah, it varies by the item that we're trying to forecast. So, when we estimate it we- it's a survey-based number, so when we talk about like feed or fuel expenses for 2020 and earlier years, it's

based on a survey where we asked farmers how much did you spend? For the forecast year, we're using indicators to try to tell us whether we think spending on those categories are increasing or decreasing. Now the major price indicator that we have for most expense items is the prices paid index, that NASS puts out. And they put it out by a lot of commodity breakdown, so they have it for like feed, and seed, and labor. So, we heavily use that, we had that data through September, and at this point we're only having to forecast out the final three months of the year. So, we almost have a complete year of data on prices paid. But then we also take into consideration, where we can, indicators of quantity change, where we think farmers might- to indicate how much of the good the farmers might be producing. So, for something like seed fertilizer and maybe pesticides, one item that we look at to help- to forecast out for 2021 is planted acres, because we think that you know there would be a relationship between how much farmers plant and how much seed they might need, for example. For other expense items, sometimes we look at a production index, or a production quantity index, so the farmers are producing more of a given commodity, it might increase their need for certain inputs, like labor. Sometimes it's often related to how much is being produced, particularly for like fruits and vegetables. So, I hope that answers it, so we do- can't quite get to the calculation, because it varies by component, but we are looking at prices and indicators of quantity change.

Okay, thanks for that information Carrie. Can you define again the difference between residential, intermediate, and commercial farms, and what fraction of farms are commercial farms?

Yes, that is this chart. So, we'll start with the gray. The gray is residence farms. So, a resident farm is where the operator is retired, or the primary occupation is not farming, and they don't have sales or gross cash income of \$350,000 or more. And then, intermediate farms are farms where the off- where the occupation- the principal occupation of the operator is farming, so it's regardless of how much sales or income they bring in, if they say farming is my primary occupation then they're an intermediate farm. But as long as they're less than \$350,000, because once gross cash income is above \$350,000, we're calling them commercial farms. So, on this chart, 50 percent, almost 50 percent exactly of all farms are residence farms. And then commercial farms look to be just slightly above 10 percent of all farms.

Great, thanks. Can you tell us how ERS calculates 2021 real estate asset values which show a 2 percent nominal increase over 2020?

Yeah, that is a- that's always an interesting question. What we're doing is we start with the data NASS puts out on the value of land and buildings, that they put out every year. And so that data is available for 2020. So, we start with that and we look at the- we're looking at a couple of different things when we try to forecast out 2021. So, we're looking at the trends in the- in a series historically. And historically, it doesn't increase it- usually doesn't increase a lot in any single year. So, the trends influence it and then we also- that's primary- that's the primary factor

is looking at the trends in that mass data, the trends in our series, as well, to get at what we think the value of land and buildings assets will be in 2021.

All right, that's all we have time for today. Thanks for sharing your report with us, Carrie, and thank you to our listeners for taking time out of your day to join us. As a reminder, a recording and transcript of this webinar will be available on the ERS webpage next week thanks again everyone this concludes our webinar.