

## [Farm Income and Financial Forecasts, February 2023 Update - YouTube](#)

Good afternoon, everyone. On behalf of USDA's Economic Research Service, welcome to our Farm Income and Financial Forecasts, February 2023 Update. My name is Ashley Murdie, your host for today. As a reminder, this webinar is being recorded and will be posted on the ERS website next week. If you have questions during the webinar, please enter them into the chat feature at the bottom, left-hand corner of the screen for our Questions & Answer session at the end of today's presentation. Today, our presenter is Carrie Litkowski. Carrie is a Senior Economist and Farm Income team leader in 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, Ashley. And thank you all for joining me today as I present the latest USDA forecasts for 2023 Farm Sector Income and Wealth for the U.S. At the start of every year there is always some uncertainty about what the year may hold. I recently came across a quotation from Paul Saffo, a technology forecaster at Stanford, which I think summarizes well the utility of forecasts: "The goal of forecasting is not to predict the future, but to tell you what you need to know to take meaningful action in the present." This year the U.S. Congress is expected to debate the Farm Bill and I think the USDA data on farm income and wealth can contribute to this discussion by providing valuable information on the health of America's farms and ranches and the households that operate them. USDA's Economic Research Service Farm Income and Finance program measures forecasts and explains indicators of economic performance for the U.S farm sector. We release forecasts three times a year with today's forecast and release. We're putting out our first calendar year forecast for 2023 and we're updating our forecasts for 2022 to include some new and updated information as it has become available since our last release on December 1<sup>st</sup>. The new and updated data from the Farm Income and Wealth Statistics program went live on the ERS website as of 11 A.M. eastern time this morning along with a written discussion of our main findings.

So, what does our forecast cover? First, it covers the farm sector as a whole, which is comprised of about 2 million farms who operate around 900 million acres of land. About half or a million of those farms are what we consider farm businesses. These are defined as larger farms and those where the principal occupation of the operator is farming and it's these farm businesses that account for about 90 percent of the total value of agricultural production in the U.S. And we have some additional data and projections on their finances for 2023. Lastly, we'll look at the well-being of the nearly 5 million people who live in households attached to a farm.

Here is an overview of what we're forecasting for 2023 and what I'll be covering in today's webinar. So, we're forecasting farm sector income to have reached record highs in 2022 and then decrease in 2023 as commodity prices fall and total expenses continue to rise. Note that on this slide all of the values are a nominal dollars, meaning not adjusted for inflation. But there are many charts later on where we'll make some adjustments to account for inflation. Go on to farm sector income...Net cash farm income for calendar year 2023 is forecast to increase about 21% relative to 2022 in nominal dollars. Net farm income is forecast to fall 16% in 2023. A major component of farm income are cash receipts or sales of agricultural commodities, which are forecast to decrease about 4% after a record high in 2022. And also contributing to the forecast

decline in net income in 2023, our government payments and production expenses. Government payments are forecast to decrease about five billion or 34% and total production expenses are forecast to increase about 4% in 2023. On the farm sector balance sheet assets debt and equity are forecast to all increase in 2023. Next, we're going to look at farm businesses and when we simulate how these changes in the income statement might affect farms on average. We're forecasting average net cash farm income for farm businesses to fall about 18% to about 92,400 in 2023. Lastly, we're going to look a little bit at households that operate a farm and median total farm household is forecast to increase 2% to just a little bit under 98/97 thousand dollars at the median in 2023.

Next, we have two primary measures of farm sector profits. And this is kind of, I mentioned before, you know... We had record highs or expect record highs in 2022, but we actually came into 2023 after three consecutive years of growth. And in 2023 we're forecasting income to fall. Note that this chart is in 2020 dollars or inflation adjusted dollars and this allows us to better compare levels of income over time. The two primary measures of farm sector income: our net farm cash farm income and net farm income. The yellow line on this chart is net cash farm income, which includes cash receipts from farming with sales of farm commodities as well as cash farm related income and government payments to farm operators less cash expenses, meaning the expenses that farmers incurred to produce their agricultural commodities. Net cash farm income is forecast to have increased 19% from 2001 to 2022 putting it at its highest level on record in the inflation adjusted series, which goes back to 1929. In 2023 net farm income is forecast to decrease nearly 23% or 45 billion dollars. Net farm income, the blue line, is a broader measure of income that also incorporates non-cash items like economic depreciation, and it accounts for changes in inventories. We saw back-to-back years of net farm growth uh growth in net farm income. It increased 43% in 2021 and is forecast to increase another 8% in 2022. This would put net farm income in 2022 at its highest level since 1973. In 2022, 2023 sorry... Net to farm income is forecast to fall 18% or about 30 billion dollars. Despite these expected declines in 2023 both measures are forecast to remain above their 2020 level and their average across the past 10 years, uh 20 years.

To forecast net farm income, we first forecast as component parts, and then we calculate or sum up from the bottom up to get at the net farm income. And this allows us to identify what is driving the change in income from 2022. So, in this chart I'm going back to nominal dollars and the decline that we're forecasting is coming from multiple factors. On this chart we have on the far left, the net farm income forecast for 2022 at 162.7 billion dollars and on the far right. we have the forecast for net farm income for 2023. The bars in red indicate items which are pulling down growth, and the bars in blue indicate what would be contributing to growth. So, if we start from the left, crop receipts are forecast to decrease 8.9 billion dollars. When combined with the change in inventory adjustment for crops, the value of crop production is forecast to increase 7.2 billion dollars. In the net farm income measure, we... we remove sales from inventories because we are trying to get at the value of current production only. Crop sales from inventories are expected to be very small in 2023 on net... much less than they were in 2022, which resulted in a negative inventory adjustment for 2022. In other words, in 2022 roughly 16/17 billion dollars of the crop receipts were actually from inventory and not from current production. Next livestock receipts are forecast to fall 14.7 billion dollars, with just a small adjustment for changes in inventories. Production expenses are forecast to increase 18 billion dollars. These are subtracted out in the calculation of net farm income so higher expenses with lower income, which is why I

have it here in red. And then government payments are forecast to fall about 5.4% in 2023. And overall, that gets us to a change, from year-to-year change in net farm income, of 25.9 billion or decline of about 16% in nominal dollars.

This chart shows that the primary factor behind the expected decline in cash receipts in 2023 is lower prices received by farmers for their commodity production. Through a simulation we can deconstruct the change in cash receipts into a price effect and a quantity effect. In other words, we can identify whether changes in prices or quantities sold are driving the change in cash receipts. There is a portion of the change in cash receipts for which we lack data to do this kind of price and quantity effect and that's the very small bars in black on this chart. So, starting from the left, in 2023 total cash receipts are forecast to fall 24 billion dollars due to lower prices. That's the orange bar. And very little change due to changes in quantities on net – that's the blue bar. In total, cash receipts are forecast to decrease nearly 24 billion dollars in 2023. As shown by the purple bar. For crops, both lower prices sorry lower prices are expected to outweigh higher quantities sold. And for livestock both lower prices and lower quantity sold are expected to lower cash receipts in 2023.

We can also look at cash receipts by commodity. Note that our cash receipt estimates and forecasts are for the calendar year. They're not marketing year or crop year forecast. And in this chart, I'm going back to inflation adjusted dollars. We forecast receipts for about 25 different commodity or commodity groupings, and this chart focuses on some of the major crops. After increasing about 11% in 2022, total crop cash receipts are forecast to decrease nearly 6% in 2023. Receipts for corn, soybeans, cotton, fruits and nuts, vegetables, melons are all forecast to fall in 2023 relative to 2022. For corn, soybean and vegetables, receipts are forecast to have increased in 2022, but then fall in 2023 largely due to changes in prices. Receipts for wheat are forecast to increase slightly due to higher quantities sold in 2023.

For additional historical perspective, this chart looks at corn and soybean cash receipts since 2002. Our forecast for corn and soybean receipts put them at record or near record highs in 2022. In 2023 they are expected to decline yet remain well above their 20-year average. And perhaps that's understating it a bit. The 2023 forecast for soybeans would be the second highest level on record after 2022, and for corn if the 2023 forecast would be the third highest level on record. Keep in mind that, again our forecasts are for the calendar year, so receipts in any calendar year are usually a combination of sales from both the current year's harvest and the prior year's harvest. To derive our forecasts, we use price and production forecasts from the January 23 World Agricultural Supply and Demand Estimate reports, the WASDE reports. For the 2023 crop, sorry '22 crop for the '23 crop, we're using projections from ERS analysts on production and prices.

Total animal and animal product cash receipts are forecast to decrease 8% in 2023 after increasing 23% the year before. In this chart, 2022 receipts for every commodity category are forecast to be at or near their highest level over the past five years and then fall in 2023. The largest dollar decline is forecast for milk at about 10 billion dollars or 17% due to an expected drop in milk prices in 2023. Receipt for eggs our projected to fall 26% as price received by farmers spiked in 2022 and are projected to moderate or fall some in 2023.

Government payments are another source of income to farmers. We define government payments as payments made directly to farm operations by the federal government without any intermediaries. And they're generally from farm programs. We record them in the year in which

they were received by farmers. This chart is in nominal dollars. Government payments reached a record high in 2020 at about 46 billion dollars and have declined each year since. In 2023 direct government payments are forecast to be at their lowest level since 2014 in the nominal series, so not adjusted for inflation. Much of the decline since 2020 follows lower amounts of COVID related aid to farm operations. On the chart, COVID-related aid is shown at the top of the bars in purple, and they represent USDA and non-USDA pandemic aid. The USDA pandemic aid includes payments from the Corona Food Assistance programs and other USDA pandemic assistance paid directly to farm operators adversely affected by the COVID pandemic. Pandemic assistance, USDA pandemic assistance received in calendar year 2023 is forecast at about 1 billion dollars. We're assuming no new loans from the Paycheck Protection Program, which is what we have as non-USDA pandemic assistance. So, the forecast for 2022-23 non-USDA pandemic assistances are zero.

So, what becomes really interesting, I think in 2022 and 23 is this gray bar for all other. And largely this is representing uh other supplement what we call other supplemental and ad hoc disaster assistance on the tables on our website, which include a more detailed breakdown of government payments than you see on this chart. So, on the gray bar, this other supplement... this other assistance or payments is forecast to have increased about eight billion dollars in 2022 and then to decrease about six billion dollars in 2023. This supplemental and ad hoc disaster assistance includes payments from programs such as the Emergency Relief Program, the Emergency Livestock Relief Program, USDA assistance to distressed borrowers and the Livestock Forage Program, among other programs. Next, we can look at payments that are a function of commodity prices as represented by the orange bar segment, and these are expected to be minimal in 2022 and 23. In recent years this category largely represents payments from the agriculture risk coverage, price loss coverage and dairy margin coverage programs. And that in the sense, that they have payments that are triggered among perhaps other factors, by changes in commodity prices received. The gray line in this chart shows inflation-adjusted total direct government payments. Payments across 2002 to 2021, so the past 20 years, averaged nearly 21 billion dollars in inflation adjusted dollars. In 2023 government payments would be low...would be below that average, but near the levels we saw before 2019.

This chart looks at government payments rest...relative to the rest of net farm income. It also includes another source of income to farmers, commodity insurance indemnities which are payments to farmers for losses covered by insurance. This chart is inflation adjusted. The top peach bar shows indemnity payments paid to farmers – federal indemnity payments less premiums paid by the farmer for commodity insurance). For shorthand, I'm going to call these net insurance payments. Net insurance payments are forecast to continue to increase in 2023 to their highest level since 2013. The darker orange bar segment shows direct government payments, which we talked about in the previous slide, and they of course are forecast to fall in 2023. The gray bar represents net farm income excluding net insurance and direct government payments. In 2023 net farm income less net insurance and government payments is forecast to fall about 18%, yet it will remain near its 2021 level and be higher than most years shown on this chart, which goes back to 2009.

They say you have to spend money to make money, so let's next look at the production expenses, which are the costs incurred by farmers to produce their agricultural output. These include items such as feed, fertilizer, higher labor, taxes... This chart shows total expenditures: cash and non-cash in both nominal and inflation-adjusted dollars. For 2022 we're forecasting expenses

increased a record 69 billion dollars or 19% relative to 2021 in nominal terms. In 2023 we're projecting that total expenses will increase another 4% or about 18 billion dollars. When adjusted for inflation, expenses are forecast to increase 1% or six billion dollars, which would still put them below the record high in 2014.

Not all categories of spending are forecast to increase in 2023. This chart is not inflation adjusted, so it's in nominal dollars and it compares expenditures by category in 2021, 22 and 23, with those categories where spending is expected to increase in 2023 above the dotted line and those that are expected to decrease in 2023 below the line. At the very top, interest expenses are projected to see the largest dollar increase in 2023 at about six billion dollars as interest rates and debt levels are expected to continue to grow in 2023. Livestock and poultry purchases and labor expenses are also projected to increase across both 2022 and 23. In nominal dollars, spending on feed and fertilizer is forecast to decline relative to 2022, yet remain high in 2023. Net rent and spending on fuels and oils are also forecast to fall in 2023.

Despite lower expected income in 2023, the farm sector balance sheet is forecast to improve or strengthen at least when you know if you focus on the equity measure, which is forecast to grow in 2023. The balance sheet provides information on the value of assets, both physical and financial, and the level of debt in the U.S agricultural sector over time. And it's another tool that we can use to evaluate or measure the health of the farm sector. Farm sector equity, the difference between assets and debt, is shown by the green area and has increased every year after 2019. And it's forecast to increase 2% from 2022 to 2023, which would put it about 14% above its 2019 level in inflation-adjusted dollars. This increase in equity largely reflects increases in the value of farm sector assets, in particular the value of real estate assets which represent about 80% of total farm sector assets and is forecast to increase 3% in 2023. However, the amount of debt held by the sector, which is shown by the blue area at the bottom of the chart, is forecast to increase 3% in 2023 with real estate debt forecast to increase about 5% while non-real estate debt is expected to be largely unchanged from 2022.

Changes in the balance sheet have implications for farm sector solvency and other measures of financial performance and stress. This chart takes the same data from the previous chart, but shows it a different way. It looks at the amount of debt relative to assets and relative to equity, and they're shown as percentages. These are what we call solvency ratios, which provide a measure of the sector's ability to repay financial liabilities, that would be like loans and debts, through the sale of assets. After some improvement, as indicated by declining values in 2021 and 22, the ratios are forecast to worsen slightly in 2023, yet remain very near the average for the past 10 years. It is important to note that these solvency ratios are for the sector as a whole and there's a lot of variation in the amount of debt that are held by individual farms. Additional financial ratios including liquidity measures, other profitability measures are also available on our website.

But here's an example of one more or two uh indicators of financial stress in the sector: the bankruptcy rate and the debt service ratio. After 2019, the bankruptcy rate has trended down. In 2021, bankruptcies...chapter 12 bankruptcies fell about 50% across 2021 from 2019 levels. In 2022 we're projecting bankruptcies to fall further based on filings through September to less than one farm bankruptcy per 10,000 farms. The debt service ratio as shown by the line on this chart describes the share of production income or gross income needed for debt payments and it's one measure of liquidity that we can look at. This ratio has been trending down and lower is better

for this ratio suggesting improved liquidity. But it is forecast to rise in 2023 as the value of agricultural sector production or production income is forecast to decline in 2023 and interest expenses to rise, which means that more production income is expected to be needed to make debt payments.

Up to this point, I've been discussing the forecast for the farm sector as a whole - so all the farms. Now let's look at farm businesses, which are an important subset of all farms. We define farm businesses as including both commercial and intermediate farms. So, on this chart it's the blue and orange areas. Commercial farms are those farms that have 350,000 or more in gross cash farm income. That's income before expenses. And the intermediate farms, the blue, are those farms that have less than 350,000 in gross cash income, but the primary occupation of the operator was farming. There are roughly 965,000 farms that meet this definition of a farm business and according to the 2021 Agricultural Resource Management Survey, residence farms - so these are small farms where their primary occupation is not farming - account for about half of all farms. But commercial and intermediate farms account for over 90% of all agricultural production and hold most of the sector's assets and debt. Using farm level data from the 2021 ARMS survey, we're able to do a micro simulation and project how average income levels in 2022 and 2023 might change based on the forecast for the sector as a whole. And we can break down the forecast for farm business income by commodity specialization and geographic region.

So here we're going to shift perspectives a bit and look only at farm business businesses and at average net cash farm income levels. So, let's start by looking at farm businesses that specialize in crops. Now these are in inflation-adjusted dollars. Using ARMS, the Agricultural Resource Management Survey, we can categorize farms by commodity specialization, which means that at least 50% of the value of production comes from a particular commodity. On average farm businesses, regardless of specialization or geographic region, are expected to see cash receipts and government payments fall in 2023 and production expenses to rise. So, these are the shocks that we're giving this farm level data from the forecast I talked about earlier. And this is expected to result in lower average net cash farm income in 2023 for all types of farm businesses specializing in crops. The largest dollar decline is forecast for farm businesses specializing in cotton and farm businesses specializing in specialty crops - that would be like fruits nuts vegetables and nursery crops and wheat - are forecast to see the largest percentage declines in 2023. For farm businesses specializing in livestock or animal products, we also project that farm businesses across all specializations will see average net cash farm income drop in 2023. Dairy farm businesses are forecast to see the largest decrease in average net cash farm income in 2023 at about 40% and this is after a large forecast increase in 2022. This reflects expectations that after increasing in 2022, milk prices or milk receipts will fall in 2023 because of lower milk prices. Average net cash farm income for hog farm businesses is forecast to continue to fall in 2023 as hog prices are expected to decline in 2023.

We can project how average net cash farm income for farm businesses can be expected to change in 2023 by resource region. By looking at how Ag production is distributed geographically and, you know, the concentration of different types of crops in the different regions. Across all farm businesses average net cash farm income is forecast to decrease 18% from 2022 in nominal dollars. Again, this is fairly consistent with the forecasted decrease in net cash farm income for the farm sector as a whole. All nine resource regions are projected to see lower average net cash farm income in 2023 in nominal dollars. Farm businesses in the Northern Crescent and Fruitful Rim are projected to see the largest percent decline this follows the forecast decline in milk

receipts. And for the Fruitful Rim, it also includes the forecast decline in vegetable and melon receipts in 2023. Our businesses in the Northern Great Plains are projected to see the smallest decrease in average net cash farm income due in part to the expected effect of higher cattle and calves and cash receipts in 2023 in nominal dollars. I wanted to point that out earlier. Nominal dollars...Cattle and calf receipts are forecast to increase, but when inflation adjusted, they're forecast to decrease slightly.

Up to this point we have discussed the financial performance of farm operations, but this may not give an accurate or complete picture of the well-being of farm households that own and operate farms. Farm profits for example are often shared with other stakeholders, maybe landlords or contractors, and the well-being of farm operator household is determined by a combination of on-farm and off-farm activities with the majority of farm household income for many households coming from off the farm. So now we're going to look at all family farms, which are about 98% of the 2 million farms in the U.S. and the households of the farm operators of those farms. Nearly 5 million people live in households attached to a farm. One measure of their well-being is household income. Farm households typically receive income from both farm and off-farm sources like I said. And this chart looks at median farm income, farm income and total household income. The median represents the income level at which half of all households have lower incomes and half have higher incomes. This chart is in inflation-adjusted dollars. At the median, income earned on the farm is low and it's forecast to fall to a negative 1,125 in 2023, meaning at the median, farm income is negative. But recall that half of all farms are what we call residential farms, which are by definition smaller farms and where the primary occupation of the operator is not farming. So, this results in a low and usually negative farm income at the median. Therefore, many households rely on, or primarily on, off farm income. Off farm income sources include off-farm wage income, non-farm business earnings, dividends, and transfers. Median off-farm income is estimated to have increased in 2021 and is forecast to remain relatively stable when inflation adjusted in 2022 and '23. Total farm household income, that's the median - so the last set of columns on the right, is forecast to increase in 2022 and 23 in nominal dollars but decrease when the data is inflation adjusted as the nominal growth, is forecast to be less than the rate of inflation. Specifically, median total farm household income is forecast to decrease 3.6% in 2022 at just under 1% in 2023 in inflation or real dollars.

This chart looks at farm household income by type of farm, the same categories that we talked about earlier: resident, intermediate and commercial farms. For households attached to residential and intermediate farms, median household income shown by the red line tracks very closely with off-farm income. The blue line an off-farm income accounts for essentially all of the household's income at the median. For households attached to a commercial farm, on-farm income is more important, and it drives the trends in medium household income. On-farm income or the gray line for commercial farms is expected to decrease 23% in 2023 and decline the forecast 16% in total household income - for households that operate a commercial farm.

All of the information I presented today, and more is available on our website. We have data tables charts maps and a written summary of our findings. Our next release is scheduled for August 31st at which time we will update our 2023 forecast and have our first estimates including by state for 2022.

I'd also like to make a quick plug for the Agricultural Outlook Forum, which will take place February 23<sup>rd</sup> and 24<sup>th</sup>. The agenda is currently online and includes more than 30 sessions

covering key issues impacting the sector. The forum is being held both in person and virtually and to attend virtually, it's free, but you just have...you do have to register. So, there is, here's our contact information. Feel free to reach out to me or the team at any point. And at this time, I am going to open it up to questions, Ashley.

Thanks Carrie, we've had several roll in so let's go ahead and open the floor for those questions. Now just a reminder, questions can be submitted through the chat feature located at the bottom left-hand corner of your screen. Alright, so let's see here...For our first question, um in the farm business map, that red map, are you including forecasts for Alaska and Hawaii?

Thank you for the question. Yes, um well the answer is...No, sorry I didn't mean to say yes. The farm business forecasts in particular do not include Alaska and Hawaii. That is because they are based on the Agricultural Resource Management Survey. The ARMS survey. And ARMS does not cover Alaska and Hawaii, unfortunately. But our sector forecast, so like our net cash income net farm income and cash receipts for the entire farm sector, they do include Alaska and Hawaii. It's just not in these farm business projections or estimates that they're not included.

Thanks Carrie. For this next question, could you explain the decrease in the forecast for the cash receipts for eggs?

Yes, I can do that. For eggs, oops this is the wrong chart, um here we go...In 2022, egg prices received by farmers just soared. They increased dramatically in part or perhaps primarily due to the Avian Flu that kind of went through the sector...the, the egg sector in 2022. For 2023, uh we think the farm the egg sector or sub-sector will start to recover and that prices will start to come down. So, the average price expected, that the farmers are expected to receive in 2023, is lower than what we saw in '22. And this price projection is one of those projections that we're pulling from the World Agricultural Supply and Demand Estimates report, particularly the January report had these production and price forecasts for eggs and in fact for all of these commodities, livestock, or animal product commodities. But still, as you can see on the chart, egg cash receipts are expected to be a bit elevated still in 2023. but below um years prior to 2022.

Thanks Carrie, Let's see here...For our next question, they've asked what is driving the increase in crop inventory change in 2023?

Crop inventory change.... It's actually, yeah it is an increase that's a good point um and we have it here at 16 billion for crops so like I said in, I tried to say in my presentation, the inventory adjustment is to account for sales from inventories or additions to inventories. So, a farmer's sale from inventories, that we're going to reduce cash receipts by that amount, because we're trying to just get at what they produced in that year. If they add to inventories, it's going to be a positive uh adjustment because we want to count that as production that occurred in that year even if it wasn't sold. So, in 2022, we had about, about a 16- or 17-billion-dollar negative inventory adjustment, meaning that in 2022 we're forecasting that farmers sold about 16 or 17 billion dollars um or about from their inventories. In 2023 with this inventory adjustment, it's pretty close to zero. It's very, it's relatively small as farmers are not expected to sell nearly as much from inventories as they did in the prior year. And particularly for items like corn, we think that they actually are going to add to their inventory in 2023 and not sell as much as they had in the previous year from inventories. So that results in the change shown on this chart of about 16 billion dollars, and it gets...when you combine those, you get the value of crop production is



actually forecast to increase, when you factor in what we think farmers will produce, but not actually sell in 2023. So hopefully that answers...that makes it a little clearer.

Thanks Carrie, okay next question...Is there an adjustment for inflation for the debt to asset levels and the debt-to-equity ratio so that they can be compared to prior years?

For the actual levels there is an inflation adjustment and that is the chart that I showed. So, this chart that looks at the debt assets and equity levels, that is inflation adjusted. So, when we talk about debt being small here, you know, even when we inflation adjust prior years, it's you know...it's still going to be relatively, you know, low kind of maintained at that level that we have, you know, just gradual increases. For the debt to equity and debt to asset ratios, uh the inflation adjustment really isn't relevant because we inflation adjust everything by the same rate. We're not kind of, we don't have special uh different inflation adjustment factors for different components of the income statement or balance sheet. It's just an overall economy-wide in particular it's a GDP uh based on the GDP price index. So, when if you inflate the numerator of debt and the denominator say assets by the same amount, they just kind of cancel each other out. So...But these still do give you I think they give you a historical perspective, so it is valid I think to go back and look at the forecasted levels for the debt-to-equity ratio and debt-to-asset ratio. So, let's just say that to equity, which is about 15.24 that is still way below some of the peaks that we saw kind of during the 80s financial foreign, financial crisis.

Got it, alright next question...What estimated market prices are you assuming for 2023 for corn, soybeans, wheat...

Yeah, okay thank you. Yeah, these...For 2023, so we're talking about the 2023 harvest year or the 2023 marketing year / crop year, whichever kind of term you want to you want to talk about... um yeah...Those have not come out in the WASDE reports yet. I think it'll be a couple more months before those start to appear in the WASDE reports so for this release we are using projections of these crop market average marketing year crop prices for these commodities that come from uh internally from ERS from the analysts that specialize in those different crops. They're the same analysts who do the USDA Baseline Projections, which of course those projections go out 30 years, but these are just the short run numbers. So those numbers, the numbers used exactly in our data products, they're not available publicly, but if uh you want to get a sense of what ERS is thinking about commodity prices in 2023, I encourage you to check out the Baseline Projections. Some of the data for the Baseline Projections I believe came out in November maybe December, and the rest of it will come out later this month. But the reason ours don't exactly match there's for some crops is because those were done back like in October / November, so we asked the ERS analysts to kind of give us their latest and most up-to-date projections for the Farm Income Forecast.

Thanks Carrie. Alright, another question is asking what's driving the increase in indemnities in 2023? Maybe weather conditions?

Yeah, when forecasting indemnities, we don't try to forecast the weather. That's one of the one of the things that we don't want to say. We don't want to say we're projecting that there's going to be a lot of droughts or a lot of flooding, and certainly we can't project hurricanes and that kind of thing. So, we're looking at, we're looking at um, for 2023 because there's no data yet, we're looking at participation and we're looking at expected, like I can't remember the term, like a loss ratio...And we talked to the analysts at the Risk Management Agency (RMA) and USDA about

kind of what their expectations are for in 2023, and then we consider that. And you know some of it is also just kind of, you know, we saw a large growth in indemnities in 2022 and we think some of those payments were losses in 2022 will get paid out in calendar year 2023, because sometimes it takes time for you know farmers to file the reports, and the payments to get processed. So, kind of looking at um the 2022 gives us an indication also into what the what this may happen with levels for indemnities in 2023. But we're seeing overall just kind of really strong participation or growth in participation from the you know the federal insurance in particular.

Good to know, alright another question, can you explain what will cause the decrease in rent?

Yeah, that's expensive. So actually, there's two rent pieces in our farm income and wealth statistics. There's the rent piece that is received by farmers like when farmers rent out land to other farmers and that's a source of income. But we also have the rent that is paid, and that's what I'm going to assume this question goes to.... Is net rent paid by farm operations...and it is forecast to decline. And I would say just, in general, the primary factor is the expected lower growth or actually no growth decline in net farm income in 2023. That also kind of reflects like when you have like a share rent situation, uh wherefore where the landlord is getting a portion of the production...To forecast that out, one item that we look at or factor in is how cash receipts are expected to change and cash receipts are expected to fall in 2023. And then net rent, the net part I think is important to keep in mind, because landlords – they not only receive like say rental payments, but sometimes they receive a portion of government payments and those are forecast to fall. And sometimes they pay a portion of the farm operators production expenses, so they pay like for instance, they may pay the property taxes on the farm operation, so that's what we net at. We net any expenses out that were paid by the landlord and not the operator. So, I think those factors are all combining to get us the results that we're expecting that rent to fall in 2023.

Okay, all right let's see here...For our next question, uh why is average net cash farm income forecast to decrease for wheat farms when you're forecasting wheat cash receipts to increase in 2023?

Yeah, that is correct we are forecasting wheat cash receipts to increase marginally. I think it was about a 1% increase in 2023, and that increase is not expected to be enough to offset the expected declines in other forms of cash receipts because even though the farm may specialize in wheat, they could be growing other crops. And we also expect that even if wheat receipts increase, they're not going to increase enough to offset lower government payments and in particular higher production expenses in 2023. So overall for farm businesses that specialize in wheat we project that their average net cash income will decline

Alright, right um...let's see we've got time for one more question, um...What assumptions or information is underlying your forecast for lower fuel expenses in 2023?

Yeah, we're forecasting fuel and oil expenses to fall almost 15% and one of the major pieces of data that we look at when we make this forecast is the Energy Information Agency, the EIA's short-term energy projections or forecasts and among other things they're forecasting that retail diesel prices will fall I think it's 80 cents per gallon in 2023 relative to 2022. So, we're expecting that the cost of fuel and oils will come down somewhat in 2023.

Thanks Carrie. That's all the time we have for today. Thank you for another great presentation on our Farm Income and Financial Forecasts update and thank you to our listeners for taking time out of your day to join us. We really hope this has been helpful. Now before we sign off, I'd like to give a quick shout out to our ERS Charts of Note Mobile App. With this app, available free of charge on Apple and Android devices, you can receive digital snapshots of ERS research delivered straight to your mobile devices. And along with our website and Charts of Note Mobile App, you can also find more about ERS on social media where you can connect with us on Twitter and LinkedIn. Again, thank you for joining us today. This concludes our webinar.