U.S. Farm Income Outlook: 2021 Forecast

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SUMMARY

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March 14, 2022

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U.S. Farm Income Outlook: 2021 Forecast

The U.S. Department of Agriculture's (USDA's) Economic Research Service (ERS) forecasts that U.S. farm profitability—as measured by net farm income and net cash income—increased in 2021 for the third consecutive year. ERS expects net farm income rose 25.1% year-over-year in 2021 to $119.1 billion, up $23.9 billion from 2020. ERS forecasts that net cash income (calculated on a cash-flow basis) was $134.2 billion in 2021, an increase of $17.0 billion or 14.5% from 2020. If realized, net farm income and net cash farm income would attain their highest levels since 2013 and 2014 (in inflation-adjusted dollars), respectively, and would exceed their historic long-run averages between 1940 and 2021.

ERS forecasts that cash receipts from crop and livestock sales increased by nearly 19% in 2021, offsetting an increase of 10% in cash expenses. Annual production of corn, soybeans, sorghum, cotton, beef, eggs, milk, and poultry increased in 2021 relative to 2020 levels, while wheat, rice, barley, oats, and pork production declined. Many forces contributed to higher cash receipts and cash expenses in 2021 compared with 2020, including high commodity prices; widespread drought and adverse weather conditions; record levels of U.S. agricultural exports; COVID-19-related effects on supply chains, demand for agricultural commodities, and agricultural production; and inflationary impacts on the prices of fuel, natural gas, fertilizers, and other agricultural inputs. Price increases for some farm inputs may moderate in 2022, according to ERS, if supply chain disruptions abate and inflation returns to normal levels. If high input prices persist in 2022, Congress may wish to consider measures that would reduce structural factors that may limit domestic supply of fuel, natural gas, fertilizers, and other chemical inputs, which could include addressing trade restrictions, barriers deterring existing firms from increasing domestic production of farm inputs, and/or barriers deterring new firms from entering supply markets.

ERS forecasts direct government payments declined by more than 40% to $27.1 billion in 2021 from 2020's record-setting $45.7 billion total. The forecast for 2021 government direct payments is above the inflation-adjusted annual average of $20.1 billion since 1996. The majority of direct payments are from ad hoc programs created to respond to the COVID-19 pandemic: $7.8 billion from USDA's Coronavirus Food Assistance Program and other COVID-19 response programs and $8.7 billion from the Small Business Administration's Paycheck Protection Program. Commodity support programs authorized under the 2018 farm bill provided relatively low levels of payments because COVID-19 impacts on prices for crops covered by such programs were short-lived, and initial price declines were not severe enough to trigger payments from various farm bill revenue support programs. Crop and livestock producers also received approximately $5.8 billion and $3.7 billion in net indemnities from the federal crop insurance program in 2020 and 2021, respectively. In preparing for the next farm bill, Congress may wish to consider its objectives for providing public support for agricultural producers. These may include stabilizing the sector to assure adequate production of food and fiber, facilitating a diverse and robust base of farm businesses (including farms of different sizes), or facilitating environmental goals. Congress could assess what level of net farm income would achieve its objectives, as well as the mix of programs that could provide support under a range of market conditions for the farm sector as a whole and achieve its objectives for farm businesses of different sizes and production specialties.

Farm sector cash receipts rebounded strongly in 2021, due in large part to export demand from China. The Phase I deal with China expired at the end of 2021, leaving no guarantees for future Chinese purchases of U.S. agricultural commodities. In 2022, Congress may wish to monitor the U.S.-China trade relationship.

Sector-wide farm financial stress in 2021 was low compared with historical levels when considering farm debt-to-asset ratios, farm debt-to-equity ratios, farm bankruptcy rates, and delinquent agricultural debt held by commercial lenders. Both median household income and net worth increased for family farms in 2021. Although sector-wide financial stress was low, individual farms may have experienced farm financial stress, the extent of which may vary between households with small-scale versus large-scale farm businesses. Households with large-scale family farm businesses hold the majority of farm assets and debt, earn more income than the U.S. median household on average, and receive the majority of government direct payments to farmers. Households with smaller-scale family farm businesses typically earn negative income from their farm businesses, rely more heavily on off-farm income, and receive a smaller share of government direct payments since revenue support payments are based on a combination of historical and current production volume. Congress may wish to consider how to target support to households with smaller-scale farm businesses. For example, Section 12101 of the House-passed Build Back Better Act (H.R. 5376) would authorize USDA to provide debt relief and loan modifications to certain economically distressed or "at-risk" borrowers with Farm Service Agency loans. If enacted, this provision could provide support to a portion of smaller-scale farm households experiencing financial distress at levels that would exceed the total 2021 payments from USDA's COVID-19 pandemic response programs of $7.8 billion.

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Introduction

The U.S. Department of Agriculture (USDA) periodically forecasts several economic measures of the U.S. agricultural sector as an aid to Congress and to policymakers who monitor and respond to the changing health of the U.S. farm sector. Historically, Congress has used these farm income forecasts to inform deliberations regarding annual appropriations, farm bill programs, tax policy, and other legislative proposals.

This report focuses on two measures of U.S. farm sector income—net farm income and net cash farm income—and two measures of U.S. farm sector debt—the debt-to-asset ratio and debt-to-equity ratio (see text box "Measuring Farm Sector Profitability and Debt Leverage," below). Net farm and net cash farm income measure the aggregate profitability of U.S. crop and livestock production for the calendar year.[1] The debt-to-asset and debt-to-equity ratios measure the extent of farm capital financed by debt. Taken together, these measures of profitability and debt leverage provide indicators of the economic well-being of the national farm economy.

Measuring Farm Sector Profitability and Debt Leverage

This report discusses two indicators of farm profitability: net cash income and net farm income.

- Net farm income presents an accrual value of all goods and services produced on U.S. farms during the year—similar in concept to gross domestic product. Crop production is recorded as the value at harvest, regardless of whether the crops are sold or stored on farms. Net farm income also accounts for the imputed rental value of farm dwellings and depreciation of farm equipment—neither of which is included in net cash farm income.
- Net cash farm income measures only cash transactions for the year and is a measure of current funds available for the sector. Net cash income records a commodity's value after it is sold in the marketplace. Net cash income also records expenses in the year they are purchased. Net cash income includes inventory sales of stored commodities from prior years' harvests.

Measures of both net farm income and net cash farm income include income from direct government payments. Key considerations for farm income include the following:

- Net cash income generally is less variable than net farm income. Farmers can manage the timing of crop and livestock sales and purchase of capital equipment and inputs to stabilize the variability in their net cash income and manage taxable income. For example, farmers can hold crops from large harvests in on-farm storage to sell in the forthcoming year when output could be lower and prices higher than the current year.
- Off-farm income and crop insurance subsidies, both of which have increased in importance in recent years, are not included in the calculation of aggregate farm income. Crop insurance indemnity payments are included.

This report discusses two indicators of farm debt leverage: the debt-to-asset and debt-to-equity ratios.

- The debt-to-asset ratio measures the amount of outstanding debt as a proportion of the value of the assets used to collateralize the debt. Higher debt-to-asset ratios indicate that more assets are financed through debt as opposed to owner-provided capital (i.e., equity).
- The debt-to-equity ratio is the ratio of outstanding debt to owner-provided capital (i.e., equity). A high debt-to-equity ratio indicates that more of the sector's assets are financed by credit than through equity.

Key considerations for debt leverage include the following:

- Total debt leverage is an aggregate measure for the sector and cannot be used to assess the average creditworthiness or risk of insolvency for individual farm borrowers.

[1] The U.S. Department of Agriculture (USDA) forecasts farm income for each calendar year. Some factors that contribute to farm income normally are measured according to a crop year—the 12-month period beginning when a crop is planted. Additional factors may be measured according to the marketing year—the 12-month period beginning when a crop is harvested.

In addition to farm sector income, this report examines USDA's forecast for farm income of certain types of farm businesses and farm households. For agricultural policy, it is often helpful to understand changes in the average profitability of farms overall and for specific categories of farms. For example, agricultural and tax policy may apply differently to certain types of farms (e.g., family-owned farms, small farms), and policymakers may wish to consider farm income for those specific types of farms when considering policy changes. For agricultural, rural development, and tax policy, it is often helpful to understand how farm income contributes to total farm household income. Off-farm income sources can be critical sources of income for certain types of farm households, and policymakers may wish to consider trends in farm household income when deciding whether and how to target future support to the sector.

Additionally, this report reviews key events that influenced 2021 farm sector income, including commodity production, usage, and exports; weather-related disasters; the continuing impacts of the Coronavirus Disease 2019 (COVID-19) pandemic; and inflationary impacts on the farm sector. The report considers the implications of these events for policy decisions that occurred in 2021. It also identifies some farm income-related policy issues that may arise in 2022 and that may be relevant for consideration of the next farm bill.

This report analyzes the results of the third of three official USDA national farm income outlook forecasts released for 2021 by USDA's Economic Research Service (ERS).[2] The forecast released on December 1, 2021, when harvests were nearly completed for most crops and a substantial share of the harvested crops had been sold, provided the most comprehensive view of annual net farm income for the year. USDA is expected to update the estimates for 2021 as additional data become available throughout 2022.

2021 Farm Sector Income

Farm Sector Net Income Increased for Third Consecutive Year

ERS forecasts U.S. farm profitability—as measured by net farm income and net cash farm income—to increase for the third year in a row (**Table 1**). ERS expects net farm income to rise 25.1% year-over-year in 2021 to $119.1 billion, up $23.9 billion from 2020. ERS expects net cash income (calculated on a cash-flow basis) to rise to $134.2 billion in 2021, an increase of $17.0 billion or 14.5% from 2020. These forecasts of year-to-year increases in net farm income and net cash farm income are driven by annual increases in revenues from sales of crops and livestock that are expected to more than offset the decreases in government payments and increases in farm expenses.

Table 1. Farm Sector Income Measures, 2018-2021

$ billions, not adjusted for inflation

Item	2018	2019	2020	2021F	2020-2021 % Change
1. Cash Receipts	371.2	367.0	363.8	432.6	18.9%

[2] USDA, Economic Research Service (ERS), "2021 Farm Sector Income Forecast," December 1, 2021, at https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-sector-income-forecast/. ERS forecasted 2021 farm sector income in February and September 2021. For background on previous forecasts, see CRS In Focus IF11770, *U.S. Farm Income Outlook: February 2021 Forecast*; and CRS In Focus IF11936, *U.S. Farm Income Outlook: September 2021 Forecast*.

Item	2018	2019	2020	2021F	2020-2021 % Change
Crops[a]	194.9	191.6	198.8	236.6	19.1%
Livestock	176.3	175.4	165.0	195.9	18.8%
2. Government Payments[b]	13.7	22.4	45.7	27.1	-40.6%
3. Other Farm-Related Income[c]	29.1	34.7	34.3	32.7	-4.6%
4. Cash Expenses[d]	311.4	317.4	326.5	358.3	9.7%
Net Cash Income (1+2+3-4)	**102.6**	**106.9**	**117.2**	**134.2**	**14.5%**
5. Gross Income	424.9	427.5	453.0	510.6	12.7%
6. Total Expenses[e]	343.8	348.5	357.8	391.5	9.4%
Net Farm Income (5-6)	**81.1**	**79.0**	**95.2**	**119.1**	**25.1%**

Source: CRS using data from U.S. Department of Agriculture (USDA), Economic Research Service (ERS), "Farm Sector Income & Finances: 2022 Farm Sector Income Forecast," U.S. Farm Sector Financial Indicators, 2015-2022F, table, updated February 4, 2022.

Notes: Values for 2021 are forecasts.

a. Includes Commodity Credit Corporation loans under the farm commodity support program.

b. Government payments include payments made directly to all recipients in the farm sector, including nonoperator landlords. ERS offsets the share of payments made to nonoperator landlords in its estimates of the rental expenses paid to all farm sector landlords.

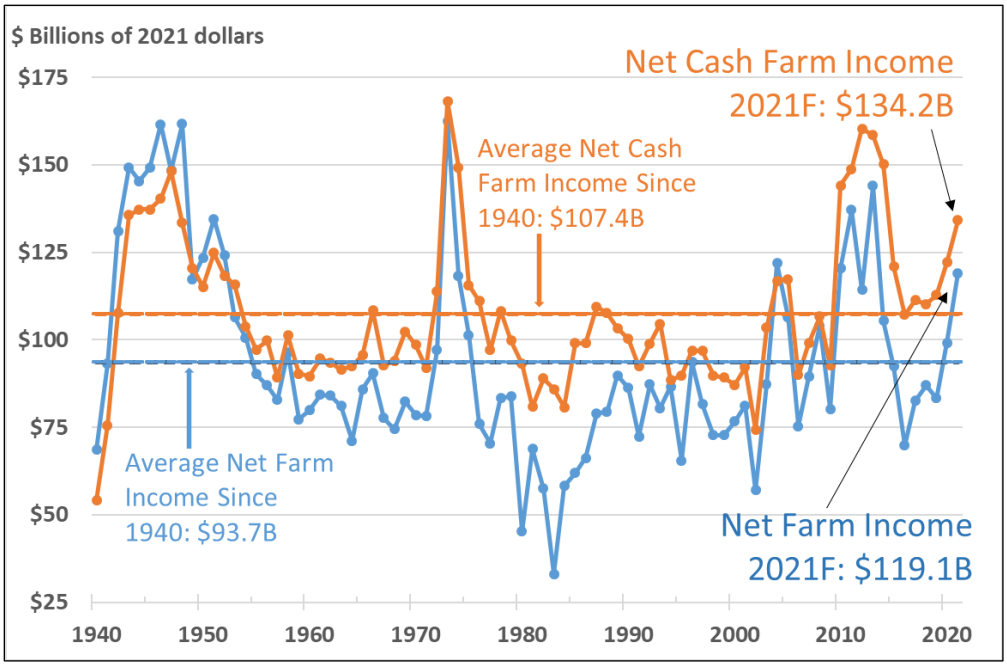
c. Includes crop insurance indemnities, custom work, machine hire, agritourism, forest product sales, and other farm sources of income.

d. Excludes depreciation and perquisites to hired labor.

e. Includes depreciation of capital assets and perquisites to hired labor.

If the 2021 forecast were realized, net farm income and net cash farm income would attain their highest levels since 2013 and 2014 (in inflation-adjusted dollars), respectively, and be above their historic long-run averages (**Figure 1**).

Figure 1. Farm Sector Inflation-Adjusted Income Measures, 1940-2021



Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," U.S. Farm Sector Financial Indicators, 2015-2022F, table, updated February 4, 2022.

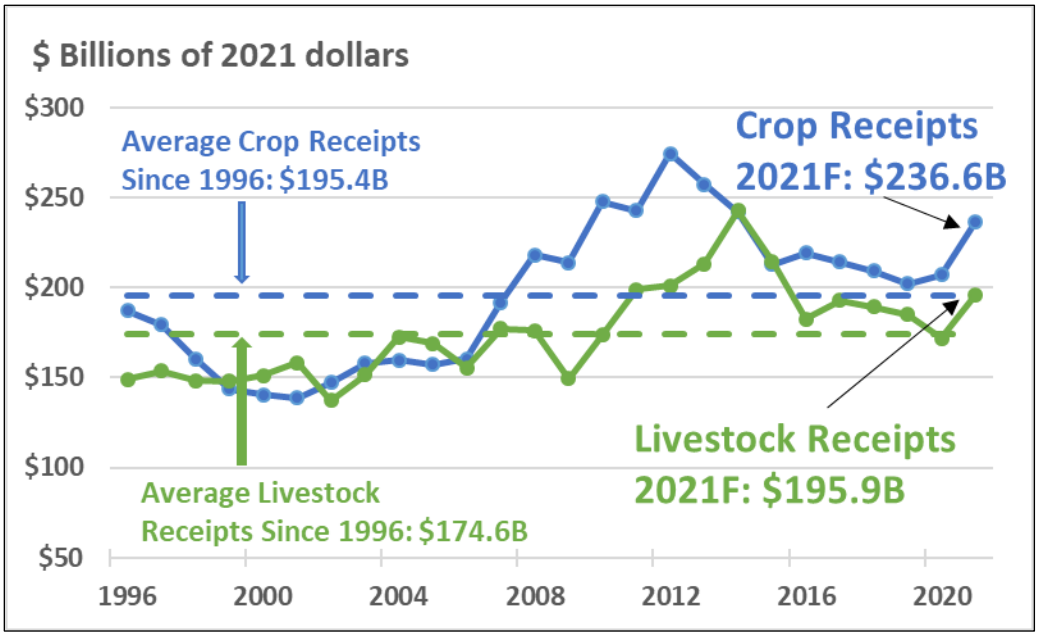
Notes: 2021F = 2021 forecast. Values adjusted for inflation using the Bureau of Economic Analysis (BEA) chain-type gross domestic product (GDP) deflator where 2021 = 100.

Cash Receipts Increased by Nearly 19%

ERS forecasts crop receipts increased by 19.1%, and livestock receipts increased by 18.8% in 2021 compared with 2020 (**Table 1**). Adjusting for inflation, the 2021 crop and livestock receipt forecasts, if realized, would be the highest since 2014 and 2015, respectively (**Figure 2**). Annual cash receipts reflect the volume of commodities produced and market prices. Crop receipts achieved their highest levels in inflation-adjusted dollars in 2012, a year when widespread drought in the United States contributed to high crop prices. Livestock receipts achieved their highest levels in inflation-adjusted dollars in 2014, as the drought conditions of 2012 and 2013 contributed to high livestock prices. Structural factors—including the establishment of the Renewable Fuel Standard and increasing Chinese demand for U.S. agricultural exports—increased overall demand for crops and livestock after 2007, which lead to higher prices and higher cash and livestock receipts compared with the period prior to 2007.[3]

[3] For background on the Renewable Fuel Standard, see CRS Report R43325, *The Renewable Fuel Standard (RFS): An Overview*. For background on Chinese demand for U.S. agricultural exports since 2000, see James Hansen et al., "U.S. Agricultural Exports to China Increased Rapidly Making China the Number One Market," *Choices*, quarter 2, 2017, at https://www.choicesmagazine.org/choices-magazine/theme-articles/us-commodity-markets-respond-to-changes-in-chinas-ag-policies/us-agricultural-exports-to-china-increased-rapidly-making-china-the-number-one-market.

Figure 2. Farm Sector Inflation-Adjusted Crop and Livestock Receipts, 1996-2021



Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," U.S. Farm Sector Financial Indicators, 2015-2022F, table, updated February 4, 2022.

Notes: 2021F = 2021 forecast. Values adjusted for inflation using the BEA chain-type GDP deflator where 2021 = 100.

ERS forecasts increased cash receipts in 2021 compared with 2020 for all forecast livestock commodities,[4] with the largest percentage increases accruing to hogs, poultry and eggs, and cattle and calves (**Table 2**). ERS also forecasts higher cash receipts for corn (49.4%), soybeans (24.6%), wheat (29.1%), cotton (4.6%), rice (9.0%), peanuts (12.9%), and hay (24.7%). ERS forecasts cash receipts for vegetables and melons declined by 5.7%, with fruits and nuts down by 8.6%.

Table 2. U.S. Farm Sector Cash Receipts by Commodity, 2018-2021

$ billions, not adjusted for inflation

Commodity	2018	2019	2020	2021F	2020-2021 % Change
Livestock					
Cattle and Calves	67.0	66.3	63.1	72.3	14.5%
Hogs	20.9	21.8	19.2	26.8	39.8%
All Dairy	35.2	40.5	40.5	42.0	3.5%
Poultry and Eggs	46.2	40.0	35.5	48.0	35.2%
Other Livestock	6.9	6.9	6.6	6.9	3.3%
Livestock Total	**176.3**	**175.4**	**165.0**	**195.9**	**18.8%**
Crops					
Corn	48.6	49.0	47.8	71.4	49.4%

[4] Forecasts for individual commodity receipts for 2021 are not available for aquaculture commodities, honey, mohair, wool, mink pelts, and all other animals and animal products.

Commodity	2018	2019	2020	2021F	2020-2021 % Change
Soybeans	37.0	34.1	41.5	51.8	24.6%
Wheat	9.5	8.6	8.9	11.4	29.1%
Cotton	7.5	6.8	7.0	7.4	4.6%
Rice	2.5	2.8	2.8	3.1	9.0%
Peanuts	1.5	1.1	1.2	1.4	12.9%
Hay	6.9	7.6	7.3	9.2	24.7%
Vegetables and Melons	18.5	18.3	18.2	17.2	-5.7%
Fruits and Nuts	29.2	29.0	28.1	25.7	-8.6%
Other Crops	33.6	34.3	35.8	38.1	6.6%
Crops Total	**194.9**	**191.6**	**198.8**	**236.6**	**19.1%**
Grand Total	**371.2**	**367.0**	**363.8**	**432.6**	**18.9%**

Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Cash Receipts by Select Commodity, 2013-2022F and Cash Receipts by Commodity, 2013-2022F, tables, updated February 4, 2022.

Note: 2021F = 2021 forecast.

Year-over-year increases in commodity prices are a major contributing factor behind the increase in livestock and crop cash receipts in 2021. USDA forecasts annual average farm prices for corn, soybeans, wheat, cotton, and rice increased for the 2021-2022 marketing year compared with the 2020-2021 marketing year average (**Table 3**).[5] USDA forecasts annual prices for cattle, hogs, chicken, eggs, and milk increased in 2021 compared with 2020. USDA forecasts prices for cattle, chicken, eggs, and milk will further increase in 2022 and forecasts hog prices will decline relative to 2021 but will remain above average prices for 2020.[6]

Table 3. U.S. Annual Average Farm Prices for Selected Commodities

by marketing year for crops and by calendar year for livestock

Crop	Unit	Marketing Year	2019-2020	2020-2021	2021-2022	20/21-21/22 % Change
Corn	$/bu.	Sept.-Aug.	3.56	4.53	5.45	20%
Soybeans	$/bu.	Sept.-Aug.	8.57	10.80	13.00	20%
Wheat	$/bu.	June-May	4.58	5.05	7.30	45%
Cotton (Upland)	¢/lb.	Aug.-July	59.60	66.30	90.00	36%
Rice	$/cwt.	Aug.-July	13.60	14.40	15.70	9%

[5] The marketing year is the 12-month period commencing at crop harvest. For example, the marketing year for corn runs from September 1 of the year when the crop is harvest to August 30 of the following year.

[6] USDA published this forecast on February 9, 2022, before the Russian invasion of Ukraine on February 24, 2022. For discussion of the potential impacts of this action on commodity markets and farm income, see "Heading into the 2022 Calendar Year."

Crop	Unit	Marketing Year	2019-2020	2020-2021	2021-2022	20/21-21/22 % Change
Livestock	**Unit**	**Calendar Year**	**2020**	**2021**	**2022**	**2021-2022 % Change**
Cattle (Choice Steers)	$/cwt.	Jan.-Dec.	108.51	122.40	137.50	12%
Hogs (Barrows/Gilts)	$/cwt.	Jan.-Dec.	43.18	67.29	65.00	-3%
Chicken (Broilers)	¢/lb.	Jan.-Dec.	73.20	101.20	113.00	12%
Eggs	¢/dozen	Jan.-Dec.	112.20	118.50	131.50	11%
Milk	$/cwt,	Jan.-Dec.	18.24	18.69	23.55	26%

Source: CRS using data from USDA, *World Agricultural Supply and Demand Estimates*, WASDE-621, February 9, 2022.

Notes: bu. = bushel; lb. = pound; cwt. = hundredweight. Values not adjusted for inflation. The marketing year is the 12-month period commencing at crop harvest. For example, the marketing year for corn produced in 2019 was the 12-month period between September 2019 and August 2020.

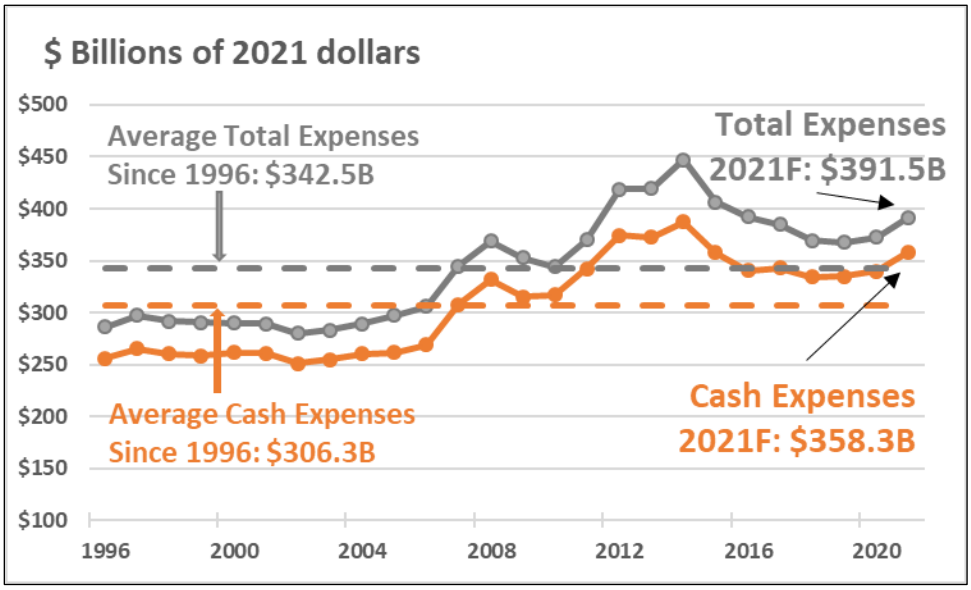
Forces driving cash receipts and prices for the various commodities include annual production levels, trade, adverse weather, and COVID-19-related factors (see "Selected Factors Driving Farm Sector"). Additionally, increased demand for ethanol and biofuels contributed to increased prices for corn and soybeans—in particular, demand for soybean oil to use for renewable diesel production.[7]

Cash Expenses Increased by Nearly 10%

ERS forecasts 2021 farm cash expenses and total expenses increased by 9.7% and 9.4%, respectively, compared with 2020. Adjusting for inflation, the 2021 forecasts for cash and total expenses, if realized, would be the highest since 2014 and 2016, respectively (**Figure 3**). Expenses reflect the volume of farm inputs used to produce crops and livestock and the prices paid for those inputs. Farmers tend to spend more on farm inputs in years when commodity prices are forecast to increase in order to maximize their profits from producing crops and livestock. Total and cash expenses achieved their highest levels in inflation-adjusted dollars in 2014 as farmers increased investments in crop and livestock production in response to higher commodity prices.

[7] CoBank Knowledge Exchange, *2022 The Year Ahead: Forces that will Shape the U.S. Rural Economy*, December 2021, at https://www.cobank.com/documents/7714906/7715332/Year-Ahead-Report-2022.pdf/eddc2de2-7524-b56c-a555-21d103167ce8?t=1639022329774; Kirk Maltais, "Renewable-Fuel Push Drives Soyoil Prices to Record High," *Wall Street Journal*, June 6, 2021, at https://www.wsj.com/articles/renewable-fuel-push-drives-soyoil-prices-to-record-high-11622980800; Keith Good, "ERS: 'Soybean Oil Domestic Use Expected to Grow,' Renewable Diesel a Factor," *University of Illinois Farm Policy News*, December 14, 2021, at https://farmpolicynews.illinois.edu/2021/12/ers-soybean-oil-domestic-use-expected-to-grow-renewable-diesel-a-factor/.

Figure 3. Farm Sector Inflation-Adjusted Expenses, 1996-2021



Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," U.S. Farm Sector Financial Indicators, table, updated February 4, 2022.

Notes: 2021F = 2021 forecast. Values adjusted for inflation using the BEA chain-type GDP deflator where 2021 = 100.

ERS forecasts year-on-year increases for all expense categories, with the largest percentage increases for purchases of fuel and oil, fertilizers and lime, livestock and poultry, and feed (**Table 4**). Rising commodity prices are a major contributing factor underlying the increase in expenditures for feed, as well as for livestock and poultry purchases (**Table 3**). Corn, soybeans, and other feed grains and oilseeds are key inputs for producing livestock and poultry feed rations. Higher prices for these commodities tend to increase the costs of feed for livestock and poultry, which in turn increase the costs of purchasing livestock and poultry to raise.

Table 4. U.S. Farm Sector Cash Expenses, 2018-2021

$ billions, not adjusted for inflation

Expense	2018	2019	2020	2021	2020-2021 % Change
Feed purchased	53.8	59.4	56.8	64.9	14.2%
Labor	33.8	34.7	36.6	37.7	3.0%
Livestock and poultry purchases	29.2	28.5	29.0	33.8	16.5%
Fertilizer and lime	23.2	22.3	24.4	28.5	16.6%
Seed	21.9	21.2	23.0	23.4	1.7%
Pesticides	15.4	15.5	16.5	16.9	2.4%
Fuel and oil	13.2	13.2	12.0	15.9	32.6%
Electricity	6.1	5.8	6.0	6.1	3.0%
Property taxes and fees	12.7	13.3	14.1	15.2	8.0%
Net rent to landlords	16.8	18.1	19.3	20.0	3.5%
Interest	19.4	19.8	18.8	20.2	7.3%
Other expenses	65.8	65.5	70.0	75.7	8.1%
Total	**311.4**	**317.4**	**326.5**	**358.3**	**9.7%**

Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Net Cash Income, table, updated February 4, 2022.

Notes: Values not adjusted for inflation. Columns may not total due to rounding.

Year-over-year increases in energy-related commodity prices are a major contributing factor for the increase in farm sector expenditures for fuel, oil, and fertilizers (**Table 5**). Farms use diesel and gasoline for powering farm machinery; electricity for irrigation and for cooling and lighting farm buildings; and natural gas and liquefied petroleum for heating buildings and drying grain.

Moreover, natural gas is a major feedstock for most nitrogen-rich fertilizers and certain pesticides, thus higher natural gas prices are a factor in price increases for fertilizers and other chemical inputs. Other factors that could have contributed to such price increases include fuel and electricity costs for manufacturing facilities; COVID-19-related supply chain disruptions (see "COVID-19 Pandemic Impacts on U.S. Agriculture"); weather-related disruptions in manufacturing or shipping;[8] increased demand for agricultural or other use of fertilizers; global supply and demand; and trade considerations.[9]

[8] Shefali Kapadia, "Ida Disrupts Freight Movement After Making Landfall as Category 4 Hurricane," *Supply Chain Dive*, August 30, 2021, at https://www.supplychaindive.com/news/hurricane-ida-supply-chain-freight-port-rail/605759/.

[9] In 2020, the United States imposed countervailing duties on phosphorus from Russia and Morocco. In 2021, China halted exports of phosphates until at least June 2022 to maintain domestic supplies. Both events may have contributed to higher domestic prices for phosphate fertilizers. For background on these actions, see Chris Clayton, "Producers Face Fertilizer Price Squeeze," *DTN Progressive Farmer*, September 30, 2021, at https://www.dtnpf.com/agriculture/web/ag/crops/article/2021/09/30/china-phosphate-fertilizer-export.

Table 5. U.S. Annual Average Prices for Selected Energy Commodities and Fertilizer Price Indices, 2018-2021

Commodity	Unit	2018	2019	2020	2021	2020-2021 % Change
Gasoline – Average Regular Pump	$/gallon	2.73	2.60	2.18	3.02	38.5%
Diesel – On-Highway Retail	$/gallon	3.18	3.06	2.56	3.29	28.5%
Natural Gas – Henry Hub Spot	$/thousand cubic feet	3.27	2.67	2.11	4.06	92.4%
Natural Gas – Industrial Sector	$/thousand cubic feet	4.19	3.90	3.32	5.48	65.1%
Natural Gas – Residential Sector	$/thousand cubic feet	10.46	10.46	10.76	12.29	14.2%
Electricity Price – Industrial Sector	$/kilowatt-hour	6.92	6.81	6.67	7.25	8.7%
Electricity Price – Residential Sector	$/kilowatt-hour	12.87	13.01	13.16	13.72	4.3%
Nitrogen Fertilizers	Index for Price Paid	66.5	71.4	69.2	87.1	25.9%
Potassium and Phosphate Fertilizers	Index for Price Paid	62.9	63.0	62.5	82.7	32.3%

Source: CRS using U.S. Energy Information Administration, "Short-Term Energy Outlook," Energy Prices, table 2, updated February 3, 2022, at https://www.eia.gov/outlooks/steo/report/prices.php; and USDA, National Agricultural Statistics Service, "Quick Stats," downloaded on February 10, 2022, at https://quickstats.nass.usda.gov/.

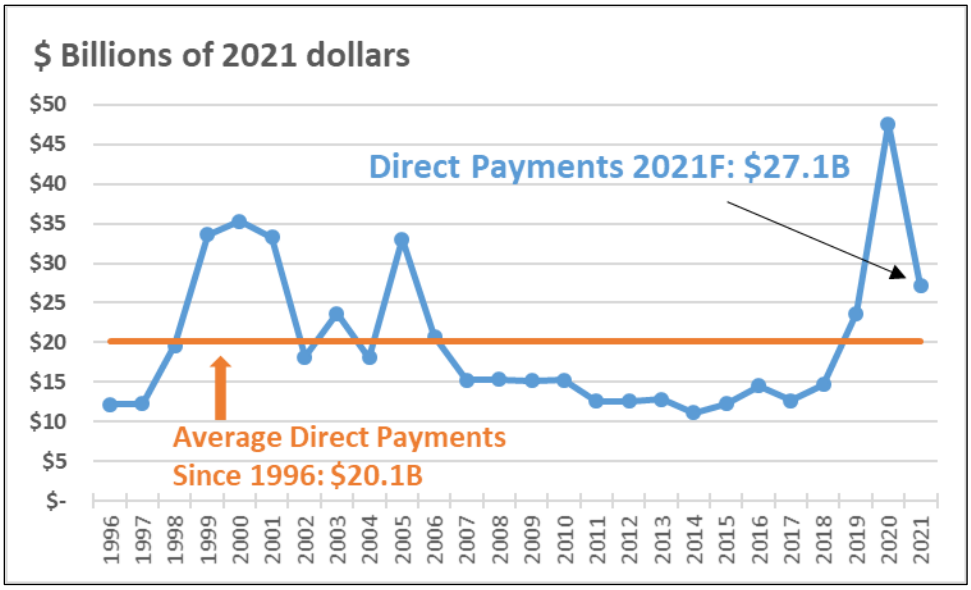
Notes: Values not adjusted for inflation. USDA reports national prices for nitrogen, potassium, and phosphate fertilizers in values relative to the prices of these commodities in 2011. A value of 100 indicates that the commodity price is equal to the price in 2011; a value of 50 indicates that the commodity price is equal to half of the price in 2011; and a value of 200 indicates that the commodity price is twice the price in 2011.

Government Direct Payments Declined from 2020 Record Level

ERS forecasts 2021 total government direct payments to farmers of $27.1 billion,[10] a decrease of 40.6% from 2020 of $45.7 billion, which marked the highest recorded amount since 1996 in both nominal and inflation-adjusted dollars. Adjusting for inflation, the forecasts for 2021 government direct payments, if realized, would be $7.0 billion above the long-run average for government direct payments of $20.1 billion since 1996 (**Figure 4**).

[10] ERS does not include net indemnities from the federal crop insurance program (FCIP) in its tally of direct government payments. Net indemnities are calculated as the difference between FCIP indemnities received and FCIP premiums paid. As of February 4, 2022, ERS projects that farmers paid approximately $5.6 billion in FCIP premiums and receive approximately $9.3 billion in FCIP indemnities in 2021, thus receiving net indemnities from the FCIP of $3.7 billion. For any given calendar year, net indemnities paid may not equal the total premium subsidies provided by the federal government to the FCIP. For details on how net indemnities differ from FCIP premiums subsidies paid, see CRS Report R46686, *Federal Crop Insurance: A Primer*.

Figure 4. Inflation-Adjusted Government Direct Payments to the Farm Sector, 1996-2021



Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," U.S. Farm Sector Financial Indicators, table, updated February 4, 2022.

Notes: 2021F = 2021 forecast. Values adjusted for inflation using the BEA chain-type GDP deflator where 2021 = 100.

Farmers receive direct government payments for participation in numerous different programs authorized in various ways (**Figure 5**). Payments from commodity support and conservation programs currently are authorized under the Agriculture Improvement Act of 2018 (2018 farm bill; P.L. 115-334). Disaster assistance payments and payments from miscellaneous programs include programs authorized by the farm bill and those authorized through annual and supplemental appropriations. Other assistance payments include payments from the following programs: Market Loss Assistance from 1998 to 2002; the Market Facilitation Program (MFP) from 2018 to present; and COVID-19 response programs administered by USDA and the Small Business Administration (SBA) from 2020 to present.[11] Payments from these other assistance programs were authorized through numerous laws and executive branch actions, including supplemental appropriations and authorities of the Commodity Credit Corporation.

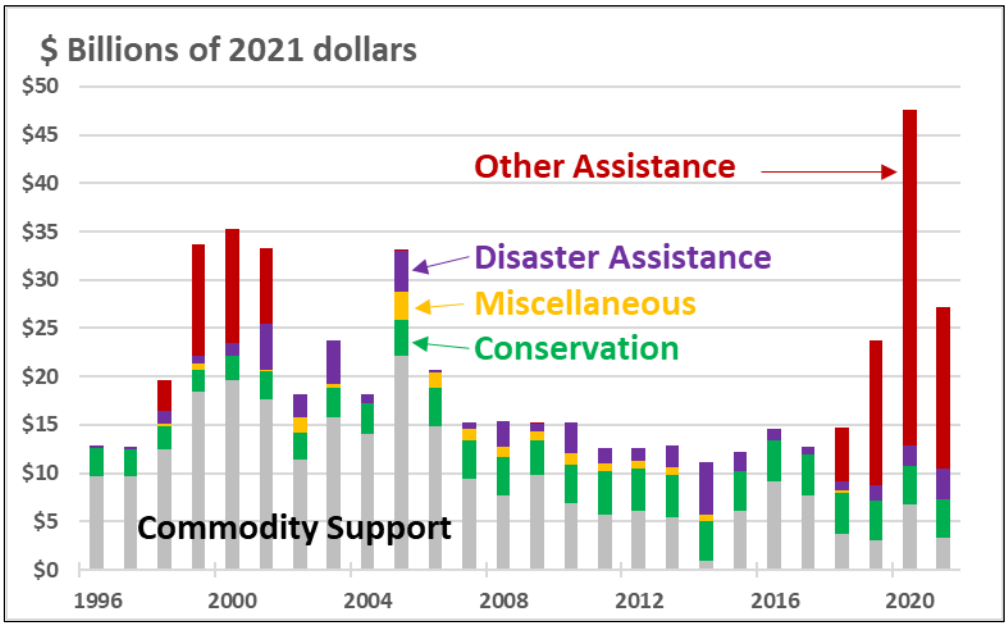
Payments from conservation programs tend to be relatively stable from year to year, generally totaling between $3.5 billion and $4.0 billion per year. Payments from other types of programs, however, vary significantly from year to year based on market conditions, natural disasters, other adverse growing conditions, and other factors. Since 1996, various farm bills have made changes to commodity support, disaster assistance, and other programs that modified the conditions triggering program payments and the levels of program payments provided. Additionally,

[11] For background on the Market Loss Assistance program, see General Accounting Office, *Farm Programs: Observation on Market Loss Assistance Payments*, GAO/RCED-00-177R, June 30, 2000, at https://www.gao.gov/assets/rced-00-177r.pdf. For background on the Market Facilitation Program (MFP), see CRS Report R45310, *Farm Policy: USDA's 2018 Trade Aid Package*; and CRS Report R45865, *Farm Policy: USDA's 2019 Trade Aid Package*. For background on USDA's COVID-19 response programs, see CRS Report R46395, *USDA's Coronavirus Food Assistance Program: Round One (CFAP-1)*; and CRS Report R46645, *USDA's Coronavirus Food Assistance Program: Round Two (CFAP-2)*. For background on the Small Business Administration's COVID-19-related support to farmers, see CRS Insight IN11357, *COVID-19-Related Loan Assistance for Agricultural Enterprises*.

Congress and USDA expanded the coverage available from the federal crop insurance program (FCIP) starting in the 1990s. As market penetration for the FCIP increased, Congress decreased the extent of direct payments provided through certain commodity support programs authorized under the farm bills. In certain years with widespread disasters—including 2012, 2013, and 2015—FCIP indemnities provided the bulk of disaster support to agricultural producers.[12]

Figure 5. Government Direct Payments to the Farm Sector, by Program Type

1996-2021, in inflation-adjusted dollars



Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Federal Government Direct Farm Program Payments, table, updated February 4, 2022.

Notes: 2021F = 2021 forecast. Values adjusted for inflation using the BEA chain-type GDP deflator where 2021 = 100. The Commodity Support and the Conservation categories include various programs authorized under the 1996, 2002, 2008, 2014, and 2018 farm bills. The Disaster Assistance and the Miscellaneous categories include programs authorized under various farm bills and other assistance authorized outside of farm bills. Other Assistance includes payments from certain ad hoc programs, including Market Loss Assistance (1998-2001), the Market Facilitation Program (2018-2020), the Coronavirus Food Assistance Program (2020-2021), and the Paycheck Protection Program (2020-2021).

ERS forecasts that payments from commodity support programs authorized in the 2018 farm bill totaled $3.4 billion in 2021, including $2.1 billion for the Price Loss Coverage (PLC) program, $120 million for the Agriculture Risk Coverage (ARC) program, less than $10 million for benefits associated with the Marketing Assistance Loan (MAL) program, and $1.13 billion for the Dairy Margin Coverage (DMC) program.[13] The MAL and PLC programs provide payments when prices for eligible commodities drop below certain threshold levels. The ARC program provides payments when county revenues for eligible commodities drop below guaranteed levels. The DMC program provides payments when dairy margins (i.e., the difference between the "all milk price" and a calculated feed value) drop below guaranteed levels. Payments for most commodity

[12] For background on the FCIP's role in responding to natural disasters, see CRS In Focus IF11924, *Federal Crop Insurance Program Support for Natural Disasters*.

[13] For background on the Price Loss Coverage, Agriculture Risk Coverage, Marketing Assistance Loan, and Dairy Margin Coverage programs, see CRS Report R45730, *Farm Commodity Provisions in the 2018 Farm Bill (P.L. 115-334)*.

support programs are designed to be countercyclical with commodity prices (i.e., as commodity prices increase, program payments tend to decrease or cease). Despite the initial and continuing disruptive effects of the COVID-19 pandemic on commodity markets, annual average prices for many commodities exceeded the levels eligible for payments from the MAL and PLC programs in 2020 and 2021 (**Table 6**).

Table 6. Market Prices and Threshold Prices for Selected Commodity Support Programs

by crop years

Commodity	Unit	2020 and 2021 Maximum Price Eligible for MAL Benefits	2020 Maximum Price Eligible for PLC Benefits	2020 Marketing Year Average Price	2021 Maximum Price Eligible for PLC Benefits	2021P Marketing Year Average Price
Wheat	bu.	$3.38	$5.50	$5.05	Same as 2020	$7.15
Barley	bu.	$2.50	$4.95	$4.75	Same as 2020	$5.15
Oats	bu.	$2.00	$2.40	$2.77	Same as 2020	$3.80
Peanuts	lb.	$0.1775	$0.2675	$0.2100	Same as 2020	$0.2300
Corn	bu.	$2.20	$3.70	$4.53	Same as 2020	$5.45
Grain Sorghum	bu.	$2.20	$3.95	$5.04	Same as 2020	$5.45
Soybeans	bu.	$6.20	$8.40	$10.80	Same as 2020	$12.60
Dry Peas	lb.	$0.0615	$0.1100	$0.0984	Same as 2020	$0.1700
Lentils	lb.	$0.1300	$0.2233	$0.1820	$0.2043	$0.3300
Canola	lb.	$0.1009	$0.2015	$0.1840	Same as 2020	$0.3200
Large Chickpeas	lb.	$0.1400	$0.2477	$0.2330	$0.2369	$0.3500
Small Chickpeas	lb.	$0.1000	$0.2026	$0.2020	Same as 2020	$0.2700
Sunflower Seed	lb.	$0.1009	$0.2015	$0.2130	Same as 2020	$0.3155
Flaxseed	bu.	$5.650	$11.284	$11.10	Same as 2020	$27.00
Mustard Seed	lb.	$0.1009	$0.2317	$0.2670	Same as 2020	$0.3730
Rapeseed	lb.	$0.1009	$0.2247	$0.2260	$0.2015	$0.3600
Safflower	lb.	$0.1009	$0.2015	$0.2150	Same as 2020	$0.2860
Crambe	lb.	$0.1009	$0.2317	$0.2710	$0.2202	$0.4320
Sesame Seed	lb.	$0.1009	$0.2317	$0.3700	Same as 2020	$0.3900
Seed Cotton	lb.	$0.2500	$0.3670	$0.3393	Same as 2020	$0.4608
Rice (long grain)	lb.	$0.0700	$0.1400	$0.1260	Same as 2020	$0.1320
Rice (medium or short grain)	lb.	$0.0700	$0.1400	$0.1310	Same as 2020	$0.1380
Rice (temperate japonica)	lb.	$0.0700	$0.1730	$0.2260	Same as 2020	$0.2400

Source: CRS using USDA, Farm Service Agency, "ARC/PLC Program Data," Table 3: 2020 Price Loss (PLC) Coverage Payment Rates, updated January 31, 2022, at https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/arc-plc/2020/pdf/2020_plc.pdf; and Table 3: Projected 2021 Price Loss (PLC) Coverage Payment Rates, updated January 12, 2022, at https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/arc-plc/2021/pdf/2021_plc.pdf.

Notes: bu. = bushel; lb. = pound; MAL = Marketing Assistance Loan program; PLC = Price Loss Coverage program; 2021P = 2021 projected prices from USDA using the *World Agricultural Supply and Demand Estimates* or Interagency Commodity Estimates Committee Minutes. Under the 2018 farm bill, the statutory price for PLC can adjust from year to year under certain conditions. For details, see CRS Report R45730, *Farm Commodity Provisions in the 2018 Farm Bill (P.L. 115-334)*.

ERS forecasts that payments from disaster assistance programs totaled $3.2 billion for 2021. This total includes payments from disaster assistance programs authorized under the 2018 farm bill and payments from ad hoc disaster assistance programs, including the Wildfire and Hurricane Indemnity Program Plus (WHIP+) and the Quality Loss Adjustment Program.[14] Payments from disaster assistance programs vary from year to year depending on the number and severity of disaster events, such as droughts, floods, and storms (see "Widespread Drought and Adverse Weather Conditions"). WHIP+ payments in 2021 also provided compensation for severe disaster events that occurred in 2018 and 2019.[15]

Since 2018, farmers have received other assistance from ad hoc programs created in response to trade retaliation and the COVID-19 pandemic. These programs constituted more than half of all government payments in 2019 and 2020 and are forecast to account for more than half of all government payments again in 2021 (**Table 7**).

USDA created the MFP in 2018 using authority under the Commodity Credit Corporation Charter Act of 1938 to provide compensation for financial damages incurred by U.S. producers of agricultural products in response to retaliatory tariffs imposed on U.S. exports by a number of other countries, including China. The program provided two rounds of payments beginning in 2018 and 2019.[16] Although some of these tariffs remained in place in 2021, the Biden Administration has not announced any new payments for 2021.[17]

Table 7. Payments to Farmers from Other Assistance Programs, 2018-2021

$ billions, not adjusted for inflation

	2018	2019	2020	2021
Market Facilitation Program	$5.1	$14.2	$3.8	$0.1
USDA Pandemic Assistance	NA	NA	$23.5	$7.8

[14] For background on the disaster assistance programs authorized under the 2018 farm bill, see CRS Report RS21212, *Agricultural Disaster Assistance*. For background on the WHIP+ program, see CRS In Focus IF11539, *Wildfires and Hurricanes Indemnity Program (WHIP)*. For background on the Quality Loss Adjustment Program, see USDA, Farmers.gov, "[Archived] Quality Loss Adjustment Program," at https://www.farmers.gov/archived/quality-loss.

[15] As part of the Extending Government Funding and Delivering Emergency Assistance Act (P.L. 117-43), Congress appropriated $10 billion to cover losses caused by certain disaster events in 2020 and 2021.

[16] USDA initiated two rounds of MFP payments to partially offset price declines and income effects of lost commodity sales to major markets. The 2018 trade aid package was valued at up to $12 billion, and the 2019 trade aid package was valued at up to $16 billion. For more details, see CRS Report R45310, *Farm Policy: USDA's 2018 Trade Aid Package*; and CRS Report R45865, *Farm Policy: USDA's 2019 Trade Aid Package*.

[17] The U.S.-China Phase I deal provided a temporary resolution for some of the concerns cited by the Trump Administration in authorizing payments through the MFP in 2018 and 2019. For background about this deal, see CRS In Focus IF11412, *U.S.-China Phase I Deal: Agriculture*.

	2018	2019	2020	2021
Small Business Administration Paycheck Protection Program	NA	NA	$6.0	$8.7
Total	**$5.1**	**$14.2**	**$33.3**	**$16.6**
Total from Other Assistance Programs as Share of All Government Direct Payments to Farmers	38%	63%	73%	61%

Source: CRS calculations using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Federal Government Direct Farm Program Payments, table, updated February 4, 2022.

Notes: NA = not available. Values rounded to the nearest $0.1 billion. USDA pandemic assistance includes payments from the Coronavirus Food Assistance Program (rounds 1 and 2) and may include payments from various other programs. For descriptions of all USDA pandemic response programs, see USDA, Farmers.gov, "Pandemic Assistance for Producers," at https://www.farmers.gov/coronavirus/pandemic-assistance.

In 2020, in response to the COVID-19 pandemic, Congress authorized USDA to provide financial assistance to agricultural producers and authorized the SBA to provide forgivable loans through the Paycheck Protection Program to certain small businesses (including agricultural producers).[18] In 2020, USDA used the funds appropriated by Congress and funds from the Commodity Credit Corporation to provide two rounds of payments to farmers through the Coronavirus Food Assistance Program (CFAP).[19] In 2021, USDA made additional payments through the CFAP and provided financial and other types of assistance through numerous additional pandemic response programs.[20]

Average Net Cash Farm Income Increased for Large-Scale Farms, Decreased for Smaller-Scale Farms

Net farm income and net cash farm income measure the profitability of the farm sector overall, but the U.S. farm sector encompasses a diverse range of farms. Most programs that provide government direct payments to farms—including the MFP and the CFAP—are designed to provide support that increases with the amount of crops and livestock produced on the farm. Revenue support programs authorized in the 2018 farm bill—the MFP and the CFAP—are subject to payment limits and producer eligibility criteria, which may limit the extent of payments that large farms are eligible to receive from these programs. Government outlays on federal crop insurance premium subsidies also scale with farm size. To understand changes in the profitability of U.S. crop and livestock production, it can be helpful to look at average net cash farm income for the generally larger farms that produce the bulk of U.S. agricultural commodities separately from average net cash farm income for the generally smaller farms that produce a relatively small share of commodities.

[18] For an overview of congressional and USDA actions in 2020 to provide COVID-19-related relief to agricultural producers, see CRS In Focus IF11764, *U.S. Agricultural Aid in Response to COVID-19*.

[19] In 2020, USDA allocated $16 billion in funding for the first round of Coronavirus Food Assistance Program (CFAP-1) payments and $14 billion in funding for the second round of CFAP payments (CFAP-2). In December 2020, Congress enacted the Consolidated Appropriations Act, 2021 (P.L. 116-260), which provided USDA an additional $11.2 billion for COVID-19-related relief to agricultural producers, including funds for CFAP "top up" payments. As of December 29, 2021, USDA provided $10.6 billion in CFAP-1 payments, $1.2 billion in CFAP-1 top up payments, $14.2 billion in CFAP-2 payments, and $4.8 billion in CFAP-2 top up payments ($30.8 billion in total).

[20] For a list and descriptions of all USDA pandemic response programs, see USDA, Farmers.gov, "Pandemic Assistance for Producers," at https://www.farmers.gov/coronavirus/pandemic-assistance.

One approach to differentiating farm businesses is based on the farm revenues earned (i.e., gross cash farm income). ERS forecasts farm income separately for three categories of farm businesses by gross cash farm income:

- Commercial farm businesses—farms earning $350,000 or more in gross cash farm income.
- Intermediate farm businesses—farms earning less than $350,000 in gross cash farm income and operated by individuals whose primary occupation is farming.
- Residence farms—farms earning less than $350,000 in gross cash farm income and operated by individuals whose primary occupation is not farming.

USDA's Agricultural Resource Management Survey (ARMS) data for 2020 indicate that approximately 11% of U.S. farms are commercial farm businesses, 40% are intermediate farm businesses, and 50% are residence farms.[21] According to ERS, commercial farm businesses operated more than 45% of farmland in 2020 and produced more than 66% of the farm sector's crops and livestock, while intermediate and residence farms in total operated more than 48% of farmland in 2020 and produced more than 20% of the farm sector's crops and livestock.[22] Taken together, commercial and intermediate farms hold most of the farm sector's assets and debt.[23]

ERS forecasts average net cash farm income increased in 2021 by about $1,800, or 4%, for all farms compared with 2020 and by $7,100, or 19%, compared with 2019 (**Table 8**). Compared with 2020, ERS forecasts net cash farm income increased for commercial farm businesses and declined for intermediate farm businesses and residence farms. ERS forecasts that commercial and intermediate farm businesses had higher average net cash farm incomes than in 2019 (prior to the COVID-19 pandemic) and that residence farms had lower average net cash farm income.

Table 8. Average Net Cash Farm Income by Farm Business Type

$ thousands per farm, not adjusted for inflation

Type of Farm	Share of All Farms	2018	2019	2020	2021F	2020-2021 $ Change	2019-2021 $ Change
All Farms	100.0%	35.5	38.0	43.3	45.1	1.8	7.1
Commercial Farm Businesses	10.8%	325.9	336.9	368.7	387.5	18.8	50.6
Intermediate Farm Businesses	39.5%	6.9	7.5	8.8	8.5	-0.3	1.0
Residence Farms	49.7%	-1.2	0.5	0.0	-0.2	-0.2	-0.7

Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Farm-Level Average Net Cash Income by Sales Class and Typology, 2013-2022F, table, updated February 4, 2022.

[21] For more information on the Agricultural Resource Management Survey, see USDA, National Agricultural Statistics Service, "Surveys," at https://www.nass.usda.gov/Surveys/Guide_to_NASS_Surveys/Ag_Resource_Management/.

[22] Christine Whitt, Jessica Todd, and Andrew Keller, *America's Diverse Family Farms: 2021 Edition*, ERS, Economic Information Bulletin (EIB) no. 231, December 2021, at https://www.ers.usda.gov/webdocs/publications/102808/eib-231.pdf?v=920.5. Figures are for family-owned farms only. Nonfamily owned farms (which may include residential, intermediate, and/or commercial farms) in total operated 6.5% of agricultural land and produced 13.4% of the farm sector's crops and livestock.

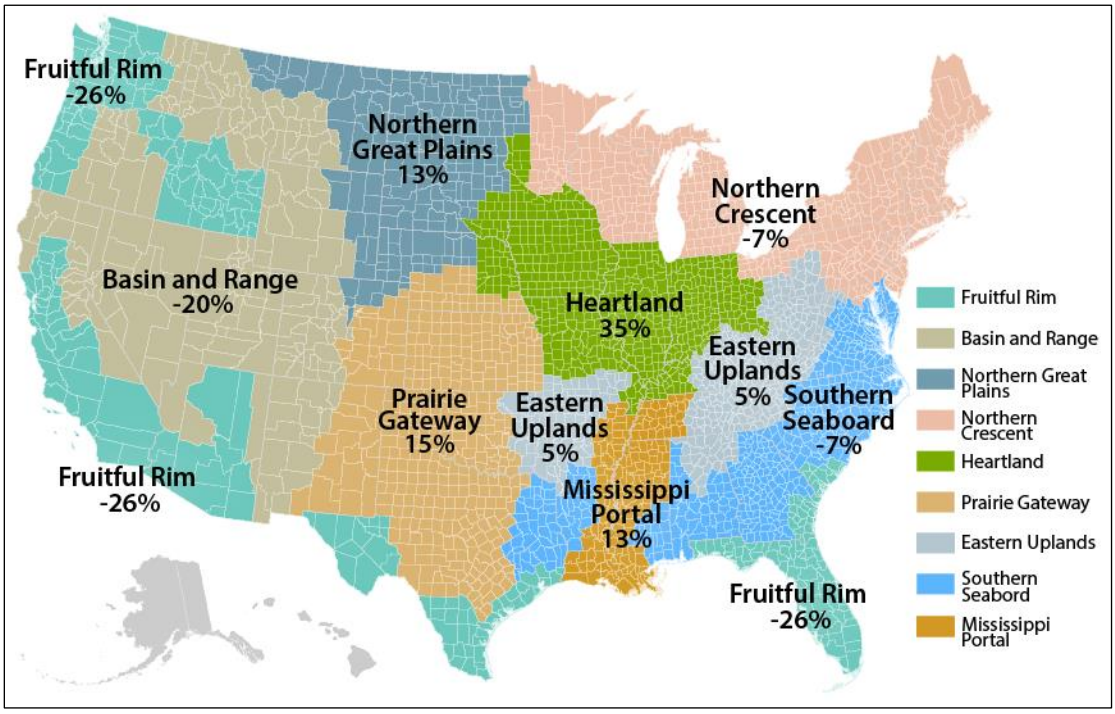
[23] USDA, ERS, "Farm Sector Income & Finances: Farm Business Income," as of December 1, 2021, at https://www.ers.usda.gov/topics/farm-economy/farm-sector-income-finances/farm-business-income/.

Notes: 2021F = 2021 forecast. Commercial farm business operations are farms with gross cash farm income of over $350,000. Intermediate farm business operations are farms with gross cash farm income less than $350,000 but where farming is reported as the operator's primary occupation. Residence farms are small farms (with annual gross cash farm income less than $350,000) operated by those whose primary occupation is something other than farming. The average net cash income for all farms is approximately equal to the weighted sum of average net cash income for farm businesses and residence farms, with any differences due to rounding errors.

Although ERS forecasts average net cash farm income increased overall in 2021 for commercial farms and intermediate farms and decreased overall for residence farms, individuals farms may experience different changes depending on the specific commodities produced on the farm. ERS forecasts average net cash farm income increased for commercial and intermediate farms specializing in corn, soybean, wheat, hog, and/or poultry production.[24] These farms accounted for the majority of farm sector production and net cash farm income. ERS forecasts average net cash farm income for 2021 declined for commercial and intermediate farms specializing in cotton, specialty crops (e.g., fruits, vegetables, and nuts), dairy, and/or cattle and calves. Because there are regional patterns to where these commodities are produced, commercial and intermediate farms in certain areas of the country are more likely to see increases in average net cash farm income than in other regions (**Figure 6**).

Figure 6. Increases and Decreases in Average Net Cash Farm Income for Commercial and Intermediate Farm Businesses

2021 forecast compared with 2020, by ERS resource region



Source: USDA, ERS, "Farm Sector Income & Finances: 2021 Farm Income Forecast," February 4, 2022.

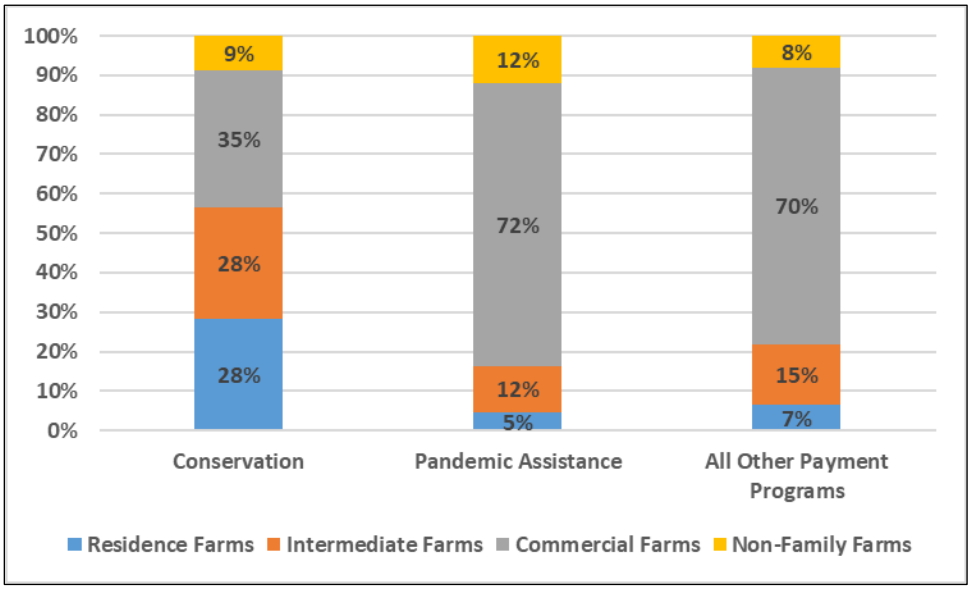
Notes: ERS resource regions define geographic areas where farms produce similar mixes of commodities and include the continental United States only. For a description of each ERS resource region, see Ralph Heimlich, *Farm Resource Regions*, ERS, Agricultural Information Bulletin no. 760, September 2000. Commercial farm

[24] USDA determines a commodity specialization for farm businesses where at least 50% of the value of production derives from a particular commodity. However, farm businesses often produce multiple commodities, so average net cash farm income statistics are not to be interpreted as resulting solely from the production and sale of the commodity highlighted as the farm's specialization.

businesses have gross cash incomes of at least $350,000. Intermediate farm businesses have gross cash incomes of less than $350,000 and are operated by individuals whose primary occupation is farming.

Government payments are another key factor driving differences in average net cash farm income for different types of farm business. ERS forecasts the contribution of direct government payments to the farm sector as a whole in 2021, but has not issued a forecast for the contribution of direct government payments to average net cash farm income for the sector as a whole or for commercial, intermediate, and residence farms separately. However, for 2020, commercial farm businesses received the largest share of payments from all types of programs (**Figure 7**). In 2020, residence farms and intermediate farm businesses received a greater proportion of conservation program payments compared with their share of payments from all other programs, including pandemic-related and farm revenue support payments. Unlike pandemic program payments and revenue support payments, conservation program payments are not based on farm production.

Figure 7. 2020 Government Direct Payments by Type of Farm Business and Program



Source: CRS using data from Christine Whitt, Jessica Todd, and Andrew Keller, *America's Diverse Family Farms: 2021 Edition*, ERS, Economic Information Bulletin no. 231, December 2021, p. 25.

Notes: Conservation includes the Conservation Reserve Program and various others that provide payments for conservation activities on working lands. Pandemic Assistance includes payments from the Coronavirus Food Assistance Program, the Paycheck Protection Program, and other pandemic-related assistance. All Other Payment Programs includes payments from the Market Facilitation Program, commodity support programs, disaster assistance programs, and other payment programs.

Commercial farm business operations are farms with gross cash farm income of over $350,000. Intermediate farm business operations are farms with gross cash farm income less than $350,000 but where farming is reported as the operator's primary occupation. Residence farms are small farms (with annual gross cash farm income less than $350,000) operated by those whose primary occupation is something other than farming. USDA distinguishes between family farms where an operator and individuals related to the operator own the majority of the business and nonfamily farms where an operator and persons related to the operator do not own a majority of the business. In 2020, there were 999,055 residence family farms, 794,379 intermediate family farms, 169,955 commercial family farms, and 47,275 nonfamily farms.

Median Farm Household Income Increased by 4%

Net cash farm income is one source of income for farm households. Many farm households also earn income from off-farm sources (e.g., if members of the household work off-farm or own

assets that provide interest, dividends, or capital gains). Measures of farm household income, which include income earned on and off the farm, provide a view into the welfare of farm households and information about rural labor markets. ERS forecasts farm household income for the subset of farms that are family-owned (i.e., family farms). USDA distinguishes between family farms where an operator and individuals related to the operator own the majority of the business and nonfamily farms where an operator and persons related to the operator do not own a majority of the business. In 2020, family farms accounted for more than 97% of all U.S. farms. Family farms may own residential, intermediate, or commercial farm businesses.

ERS forecasts total household income for the median family farm household increased by 4% to $83,311 in 2021 (**Table 9**).[25] ERS also forecasts farm income declined by 12% for the median farm household, with the majority of family farms earning negative income from their farm businesses. ERS forecasts median off-farm wage and other income increased by 4% and 6%, respectively, in 2021, and median off-farm wage income remained below pre-pandemic levels. Median total household income for family farms in 2020 exceeded median total household income for all U.S. households, a trend that has continued since 1998.

Table 9. Median Income for Family Farms and U.S. Households

by type of income, not adjusted for inflation

Household Income	2018	2019	2020	2021F	2020-2021F % Change
All Family Farms					
Total Household Income	$72,481	$83,111	$80,060	$83,311	4%
Farm Income	-$1,735	$296	-$1,198	-$1,344	-12%
Off-Farm Wage Income	$37,500	$39,574	$32,428	$33,569	4%
Off-Farm Other Income	$20,404	$27,225	$31,057	$32,829	6%
All U.S. Households					
Total Household Income	$63,179	$68,703	$67,521	NA	NA

Source: CRS using data from USDA, ERS, "Farm Household Income and Characteristics," Principal Farm Operator Household Finances, 2018-2022F, table, updated February 4, 2022. ERS compiles data on total household income for all U.S. households through 2020 from U.S. Census Bureau, *Income and Poverty in the United States,* Report P60-273, updated September 14, 2021.

Notes: NA = not available; 2021F = 2021 forecast. Amounts are the median value for each type of income and do not total by column. Off-farm wage income includes wages and salaries earned from work other than on the farm. Other off-farm income includes interest and dividends from nonfarm investments, pensions, Social Security payments, veterans' benefits, and other sources of nonwage income. ERS does not forecast total household income for U.S. households. USDA distinguishes between family farms where an operator and individuals related to the operator own the majority of the business and nonfamily farms where an operator and persons related to the operator do not own a majority of the business. In 2020, family farms accounted for more than 97% of all U.S. farms.

In addition to direct payments received for their farm businesses, farm households may have benefitted in 2020 and 2021 from pandemic assistance available to the general U.S. population, including economic impact payments from the U.S. Department of the Treasury and federal

[25] ERS defines *family farms* as operations where an operator and individuals related to the operator own the majority of the farm business. ERS household income forecasts exclude nonfamily farms, which account for less than 3% of all farms.

pandemic unemployment compensation.[26] In a preliminary analysis, ERS estimated that 86% of farm households were likely to have been eligible to receive economic impact payments in 2020, with a median payment of $2,400.[27] ERS also estimated that farm households eligible to receive federal pandemic unemployment compensation likely received an average of $996 per household.

The importance of farm income to total farm household income varies by the type of farm business operated by the household. In 2020, the median family farm with a commercial farm business had a total household income of $226,369; the median family farm with an intermediate farm business had a total household income of $58,055; and the median family farm with a residence farm had a total household income of $99,357 (**Table 10**). Since at least 2014, the ranking of total household income for the median commercial, intermediate, and residential family farms has followed the same order as in 2020.[28] Households with residence farms relied most heavily on off-farm wage income to contribute to total household income, with more than half of these households earning losses from their farm businesses. Households with intermediate farm businesses also relied on off-farm income to contribute to total household income but earned less off-farm income on average than households with residence farms. Households with commercial farm businesses earned similar amounts of off-farm income on average as households with intermediate farm businesses but receive significantly more income from their farm businesses.

Table 10. 2020 Median Household Income for Family Farms

by type of income and type of farm

Household Income	All Family Farms	Residence Farms	Intermediate Farm Businesses	Commercial Farm Businesses
Total Household Income	$80,060	$99,357	$58,055	$226,369
Farm Income	-$1,198	-$2,334	-$900	$164,362
Off-Farm Wage Income	$32,428	$72,336	$22,209	$24,421
Off-Farm Other Income	$31,057	$28,050	$31,057	$27,500

Source: CRS using data from USDA, ERS, "Farm Household Income and Characteristics," Principal Farm Operator Household Finances, by farm type, 2020, table, updated December 1, 2021.

Notes: Amounts are the median value for each type of income and do not total by column. ERS does not report household income for households with nonfamily farms. In 2020, there were 1,963,389 family farms—999,055 family farms with residence farms, 794,379 family farms with intermediate farms, and 69,955 family farms with commercial farms—and 47,275 nonfamily farms.

[26] The Coronavirus Aid, Relief, and Economic Security Act (CARES Act; P.L. 116-136) authorized direct payments to individuals in 2020, referred to by the Internal Revenue Service as "economic impact payments." Payments were authorized at $1,200 per adult, $2,400 per couple filing a joint return, and $500 for dependent children. For additional background on these payments, see CRS Insight IN11322, *The Child Support Federal Tax Offset of CARES Act Economic Impact Payments*. The CARES Act also authorized increased benefits for individuals receiving weekly unemployment insurance payments. For background on these payments, see CRS Report R46789, *Unemployment Insurance: Legislative Issues in the 117th Congress, First Session*.

[27] Anil Giri et al., *COVID-19 Working Paper: Financial Assistance for Farm Operations and Farm Households in the Face of COVID-19*, ERS COVID-19 Working Paper no. AP-090, July 2021, at https://www.ers.usda.gov/webdocs/publications/101712/ap-090.pdf?v=3375.

[28] USDA, ERS, "Webinar: Farm Income and Financial Forecasts for 2022," February 2022.

2021 Farm Sector Finances

Farm Sector Debt-to-Asset and Debt-to-Equity Ratios Hold Steady

ERS forecasts farm sector assets, debt, and equity increased by about 3% from 2020 to 2021 to their highest levels since record keeping started in 1960 (**Table 11**). Debt-to-asset and debt-to-equity ratios are forecast to have held steady at 13.9 and 16.1, respectively. These debt-to-asset and debt-to-equity ratios would be the highest of the last two decades but would be below their long-run averages since 1960 (**Figure 8**). Higher debt-to-asset and debt-to-equity ratios indicate that the farm sector is becoming increasingly leveraged, which could affect the farm sector's aggregate ability to repay outstanding debt in the event of a downturn in commodity prices or an upturn in borrowing costs. The last such widespread event occurred in the 1980s when farm sector debt-to-asset and debt-to-equity ratios spiked above long-run averages.[29]

Table 11. Farm Sector Balance Sheet, 2018-2021

not adjusted for inflation

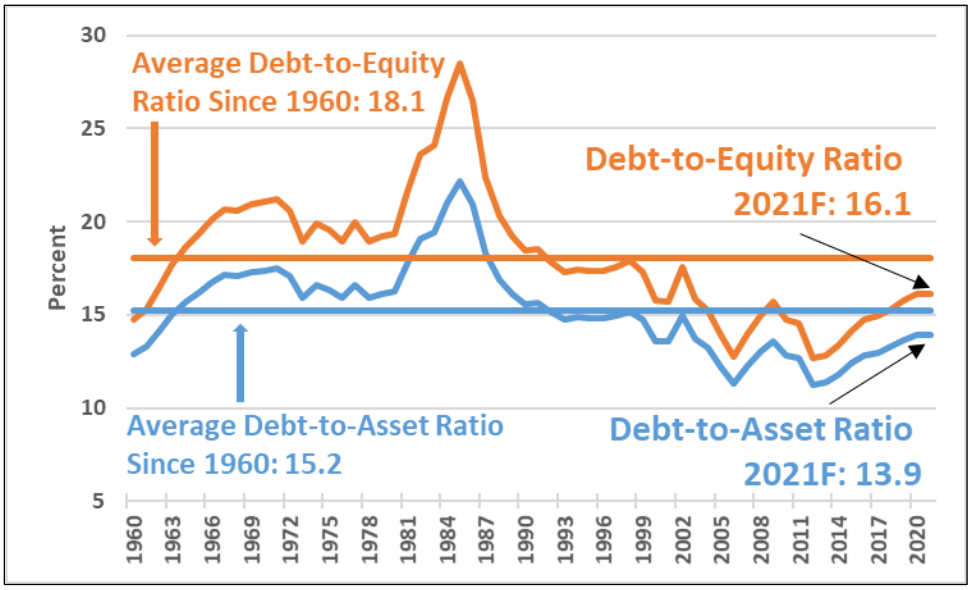
Category	2018	2019	2020	2021F	2020-2021F % Change
Assets ($ billion)	3,027	3,075	3,175	3,270	3.0%
Debt ($ billion)	402	420	441	454	3.0%
Equity ($billion)	2,625	2,655	2,733	2,816	3.0%
Debt-to-Asset Ratio (%)	13.3	13.7	13.9	13.9	-0.1%
Debt-to-Equity Ratio (%)	15.3	15.8	16.1	16.1	-0.1%

Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Farm Sector Balance Sheet, 2013-2022F, table, updated February 4, 2022.

Note: 2021F = 2021 forecast.

[29] For background on the farm debt crisis in the 1980's, see Charles W. Calomiris, R. Glenn Hubbard, and James H. Stock, "The Farm Debt Crisis and Public Policy," *Brookings Papers on Economic Activity*, vol. 2 (1986), at https://www.brookings.edu/wp-content/uploads/1986/06/1986b_bpea_calomiris_hubbard_stock_friedman.pdf; and the Federal Deposit Insurance Corporation, *Two Crises: A Comparison*, Federal Deposit Insurance Corporation Staff Studies report no. 2020-02, March 2020, at https://www.fdic.gov/analysis/cfr/staff-studies/2020-02.pdf. For background on Congressional action in response to the farm debt crisis in the 1980's, see CRS Report R46277, *Federal Assistance to Troubled Industries: Selected Examples*.

Figure 8. Farm Sector Debt-to-Asset and Debt-to-Equity Ratios, 1960-2021



Source: CRS using data from USDA, ERS, "Farm Income and Wealth Statistics: Data Files," Farm Sector Balance Sheet, 1960-2022F, table, updated February 4, 2022.

Notes: 2021F = 2021 forecast. Farm sector debt-to-asset and debt-to-equity ratios peaked in 1985.

ERS forecasts increased holdings of all categories of farm sector assets from 2020 to 2021, including a 2% increase in farm real estate, a 4% increase in farm machinery and vehicles, and a 14% increase in the value of farm inventories held (e.g., stored crops, livestock, and purchased inputs). ERS forecasts farm real estate debt increased by 5% in 2021 and non-real estate debt to hold largely steady. Increases in the values for real estate, machinery and vehicles, and farm inventories may reflect increasing prices for these items, increasing inventories held, or both.[30]

Median Net Worth for Family Farms Increased in 2020

In 2020, the median net worth for family farms was $1.048 million, an increase from the 2019 value of $1.043 million. Median household farm assets for family farms in 2020 increased by 8% compared with 2019, while median household farm debt for family farms declined by 2% in 2020 compared with 2019.

The net worth of family farms varies depending on the type of farm business owned. The median family farm with a commercial farm business has significantly more farm assets and farm debt compared with the median family farm with an intermediate farm business or a residence farm (**Table 12**). However, the median family farm with an intermediate farm business has more nonfarm assets and less nonfarm debt compared with the median family farm with a resident farm or a commercial farm. Nonfarm assets can include the household residence, retirement accounts, cash, financial investments, nonfarm businesses, and other nonfarm investments. Nonfarm debt can include home mortgages, credit card debt, student loans, personal loans, nonfarm business loans, and other sources of nonfarm debt. When applying for new credit, lenders may choose to include the farm household's total assets and debt in their assessment of the farm business's ability to repay a new loan. On average, farm households with residence or intermediate farm

[30] For example, in the Corn Belt, prices for land and farm equipment increased in 2021 relative to 2020. David Oppendahl, *AgLetter: November 2021*, Federal Reserve Bank of Chicago, AgLetter no. 1994, November 2021, at https://www.chicagofed.org/publications/agletter/2020-2024/november-2021.

businesses have lower farm incomes than farm households with commercial farm business (**Table 10**) and fewer household total assets (**Table 12**). As a result, some lenders may prefer to make credit available to farm households with commercial farm businesses.

Table 12. 2020 Median Household Assets, Debt, and Net Worth for Family Farms

by type of farm

Item	All Farms	Residence Farms	Intermediate Farm Businesses	Commercial Farm Businesses
Household Net Worth	$1,048,208	$889,963	$1,092,875	$2,814,555
Farm Assets	$559,250	$414,600	$600,000	$2,898,100
Nonfarm Assets	$542,768	$511,290	$627,203	$542,768
Farm Debt	$875	$625	$953	$295,225
Nonfarm Debt	$88,595	$88,595	$76,566	$90,000

Source: USDA, ERS, "Farm Household Income and Characteristics," Principal Farm Operator Household Finances, by farm type, 2020, table, updated December 1, 2021.

Notes: Amounts are the median value for each item and do not total by column. In 2020, there were 1,963,389 family farms, 999,055 residence farms, 794,379 intermediate farms, and 169,955 commercial farms.

Bankruptcies Declined for Second Consecutive Year

ERS forecasts that bankruptcies declined for the second consecutive year to fewer than two bankruptcies per 10,000 farms.[31] The share of delinquent farm loans held by commercial banks and farm credit system banks declined in 2021 compared with 2020.[32] Although some individual farms may be experiencing elevated levels of farm financial stress, evidence from farm bankruptcy filings and loan delinquencies suggests that the total number of individual farms experiencing financial stress may be lower than in recent years.

Selected Factors Driving Farm Sector Income in 2021

Corn, Soybeans, and Cotton Production Up in 2021, Wheat Down

USDA forecast that annual production of corn, soybeans, sorghum, cotton, beef, eggs, milk, and poultry increased in 2021 relative to 2020 levels, while wheat, rice, barley, oats, and pork declined (**Table 13**). Production of wheat, barley, and oats declined in 2021 due to poor harvests caused by widespread drought conditions (see "Widespread Drought and Adverse Weather Conditions").

[31] USDA ERS forecast using data from the U.S. Courts Statistical Tables. USDA, ERS, "Webinar: Farm Income and Financial Forecasts for 2022," February 2022. For background on how ERS calculates bankruptcy rates, see Robert Dubman et al., *Agricultural Income and Finance Situation and Outlook: 2021 Edition*, ERS, EIB-228, November 2021, at https://www.ers.usda.gov/publications/pub-details/?pubid=102669.

[32] Nathan Kauffman and Ty Kreitman, "Ag Finance Update: Limited Demand for Farm Loans, But Strong Profits for Ag Banks," Kansas City Federal Reserve, December 1, 2021, at https://www.kansascityfed.org/agriculture/agfinance-updates/limited-demand-for-farm-loans-but-strong-profits-for-ag-banks/; Hal Johnson, "Farm Credit System Condition and Performance as of September 30, 2021," presented at the Farm Credit Administration board meeting, December 9, 2021, at https://www.fca.gov/template-fca/about/2021DecQuarterlyReportonFCSCondition.pdf.

Table 13. U.S. Domestic Production of Key Agricultural Commodities

2020 and 2021 crop years

Commodity	Unit	2020 Production	2021 Production	% Change
Field Crops				
Corn	millions of bu.	14,111	15,115	7%
Soybeans	millions of bu.	4,216	4,435	5%
Wheat	millions of bu.	1,828	1,646	-10%
Sorghum	millions of bu.	373	448	20%
Rice	millions of cwt.	227.6	191.8	-16%
Barley	millions of bu.	171	118	-31%
Oats	millions of bu.	66	40	-39%
Cotton	millions of 480 lb. bales	14.61	17.62	21%
Meat, Dairy, Poultry, and Eggs				
Chicken (Broilers)	millions of lb.	44,583	44,889	1%
Pork	millions of lb.	28,303	27,673	-2%
Beef	millions of lb.	27,174	27,937	3%
Eggs	millions of dozens	9,283	9,327	<1%
Milk	billions of lb.	223.2	226.3	1%

Source: CRS using data from USDA, *World Agricultural Supply and Demand Estimates*, WASDE-621, February 2022.

Notes: bu. = bushel; lb. = pound; cwt. = hundredweight. Field crops produced in 2020 were marketed in 2020 and 2021. Field crops produced in 2021 were marketed in 2021 and will continue to be marketed in 2022. The bulk of meat, dairy, poultry, and egg production was marketed in the same year.

Exports Up for Animal Products, Down for Field Crops

The United States exported more than $177 billion in agricultural goods in 2021, an increase of 18% from 2020 and the highest level on record.[33] The volume of U.S. agricultural exports increased overall in 2020, reflecting the effects of several trade agreements, including signings of the Phase 1 deal with China, the "Stage One" U.S.-Japan Agreement, and the U.S. Mexico-Canada Agreement.[34] Although the volume of exports for most key agricultural commodities in 2021 declined relative to 2020 (**Table 14**), exports of most commodities—with the exception of wheat, rice, and cotton—exceeded export levels recorded in 2019.

[33] USDA, "American Agricultural Exports Shattered Records in 2021," press release, February 8, 2022.

[34] For background on the Phase 1 deal with China, see CRS In Focus IF11412, *U.S.-China Phase I Deal: Agriculture*. For background on the agricultural provisions in the Stage One U.S.-Japan Agreement, see CRS Report R46576, *"Stage One" U.S.-Japan Agreement: Agriculture*. For background on the agricultural provisions in the U.S.-Mexico-Canada Agreement, see CRS Report R45661, *Agricultural Provisions of the U.S.-Mexico-Canada Agreement*.

Table 14. U.S. Exports of Key Agricultural Commodities, by Volume

2019, 2020, and 2021 crop years

Commodity	Unit	2019 Exports	2020 Exports	2021 Exports	2020-2021 % Change
Field Crops					
Corn	millions of bu.	1,777	2,753	2,425	-12%
Soybeans	millions of bu.	1,679	2,265	2,050	-9%
Wheat	millions of bu.	969	992	810	-18%
Sorghum	millions of bu.	203	284	310	9%
Rice	millions of cwt.	94.2	93.9	87.0	-7%
Barley	millions of bu.	6	14	11	-21%
Oats	millions of bu.	2	3	2	-33%
Cotton	millions of 480 lb. bales	15.51	16.37	14.75	-10%
Meat, Dairy, Poultry, and Eggs					
Chicken (Broilers)	millions of lb.	7,103	7,367	7,367	0%
Pork	millions of lb.	6,321	7,280	7,030	-3%
Beef	millions of lb.	3,026	2,951	3,447	17%
Eggs	millions of dozens	333.8	344.0	392.3	14%
Milk (fat basis)	billions of lb.	9.1	9.3	11.6	25%
Milk (skim-solids basis)	billions of lb.	41.5	47.2	51.1	8%

Source: CRS using data from USDA, *World Agricultural Supply and Demand Estimates*, WASDE-621, February 2022.

Notes: bu. = bushel; lb. = pound; cwt. = hundredweight. Field crops produced in 2020 were marketed in 2020 and 2021. Field crops produced in 2021 were marketed in 2021 and will continue to be marketed in 2022. The bulk of meat, dairy, poultry, and egg production was marketed in the same year. ERS calculates milk exports based on the fat or skim-solids content in the milk used to produce exported products (e.g., butter, cheese, nonfat dry milk, whey). This provides a milk equivalent for a variety of dairy product exports.

Widespread Drought and Adverse Weather Conditions

In 2021, severe drought, storms, and other adverse weather conditions affected growing conditions in most of the western United States. Because of low water levels, the U.S. Bureau of Reclamation curtailed delivery of irrigation water to the Klamath Basin, the Central Valley Project, and to multiple locations in Montana.[35] The Secretary of Agriculture designated 1,060 counties as disaster areas for the 2021 crop year (**Figure 9**).[36] For the 2021 crop year through

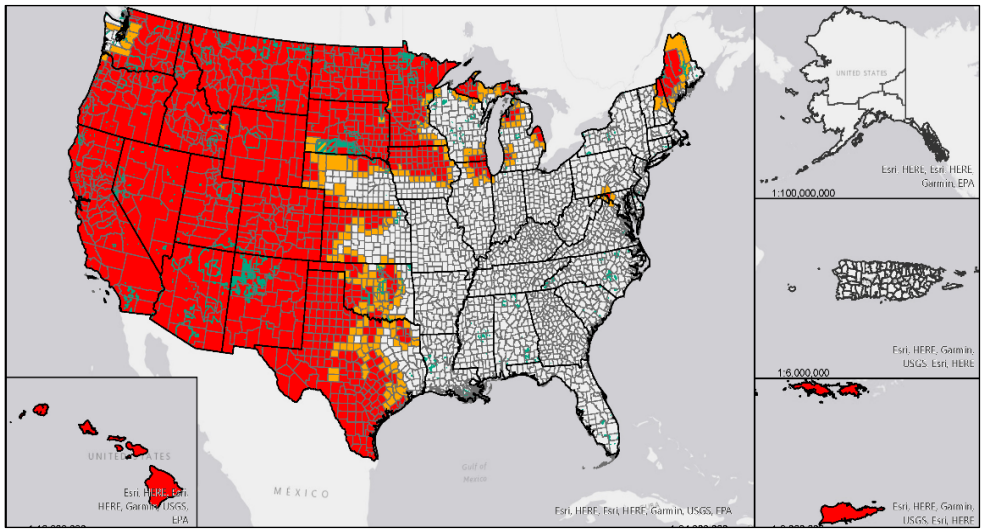
[35] U.S. Bureau of Reclamation (Reclamation), "Extreme Drought Conditions Force Closure of Klamath Project's 'A' Canal," news release, May 12, 2021, at https://www.usbr.gov/newsroom/#/news-release/3850; Reclamation, "Reclamation Updates Central Valley Project 2021 Water Supply," news release, May 26, 2021, at https://www.usbr.gov/newsroom/#/news-release/3869; and Reclamation, "Drought Conditions to Affect Operation of Montana's Rivers and Reservoirs This Summer," news release, June 14, 2021, at https://www.usbr.gov/newsroom/#/news-release/3888.

[36] For background on the Secretary of Agriculture's role in designating areas as natural disasters, see USDA, Farm Service Agency, "Disaster Assistance: Emergency Disaster Designation and Declaration Process Factsheet," at

December 27, 2021, the FCIP had provided insured producers with nearly $6.9 billion in indemnity payments (**Figure 10**). As part of the Extending Government Funding and Delivering Emergency Assistance Act (P.L. 117-43), Congress appropriated $10 billion of supplemental funding for the Secretary of Agriculture to address crop and livestock losses caused by disasters in 2020 and 2021,[37] as well as $275 million of supplemental funding for USDA's Emergency Watershed Protection Program.[38]

Figure 9. Counties with Disaster Designations by the Secretary of Agriculture

2021 crop year



Source: USDA, Farm Service Agency, Program Delivery/Safety Net Division, "2021 Secretarial Drought Designations – All Drought," January 12, 2022.

Notes: Inset boxes display counties for Hawaii (bottom left), Alaska (top right), Puerto Rico (middle right), and the U.S. Virgin Islands (bottom right). Counties in red received disaster designations from the Secretary of Agriculture. Counties in yellow are contiguous to counties with secretarial disaster designations. Counties in South Dakota with green diagonal hatching indicate a tribal area with a secretarial disaster designation.

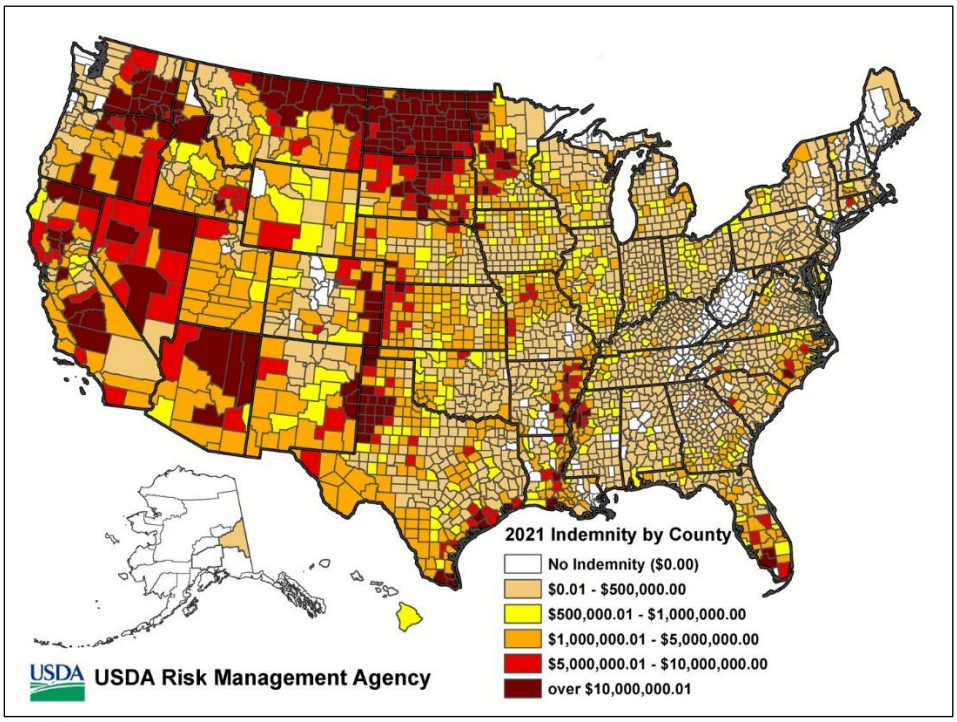
https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/FactSheets/emergency_disaster_designation_declaration_process-factsheet.pdf.

[37] Congress appropriated supplemental funds to respond to natural disasters in 2018 and 2019. For background on how USDA used those funds, see CRS In Focus IF11539, *Wildfires and Hurricanes Indemnity Program (WHIP)*.

[38] The Emergency Watershed Protection Program provides technical and financial assistance to individuals implementing emergency recovery measures to reduce runoff and prevent erosion that would present imminent hazards to life and property in the wake of a natural disaster. For additional background on this program, see CRS Report R42854, *Emergency Assistance for Agricultural Land Rehabilitation*.

Figure 10. Indemnities Paid by the Federal Crop Insurance Program

for the 2021 crop year through December 2021



Source: USDA, Risk Management Agency, "Crop Indemnity Maps," as of December 27, 2021.

Notes: Indemnities paid to all counties totaled $6.873 billion.

COVID-19 Pandemic Impacts on U.S. Agriculture

Impacts in 2020

In mid-January 2020, COVID-19 was reported in the United States and spread rapidly through the country. The COVID-19 pandemic produced an aggregated demand shock across the U.S economy. Many locations instituted temporary lockdowns, businesses closed, individuals lost their jobs, and demand for gasoline declined as the population reduced driving and commuting. Consumers reallocated funds normally spent on services toward savings and purchases of durable and consumer goods. Supply chains for many goods were disrupted by shortages of labor and materials, mismatches in demand for certain goods and services along the supply chain, and consumers switching from buying in-person to purchasing goods from online retailers. There was considerable uncertainty about how long COVID-19-induced market disruptions would persist.

The main COVID-19-related impacts to U.S. agriculture in 2020 included

- reduced demand for certain agricultural commodities due to business closures;
- temporary closures of slaughterhouses and meatpacking facilities due to COVID-19 outbreaks;
- loss of market channels for perishable commodities, including fruits, vegetables, dairy products, and market-ready livestock and poultry;
- reduced demand for ethanol to blend with gasoline;
- accumulations of grain and oilseed stocks; and

- farm price declines between January and July 2020.

By fall 2020, farm prices for many commodities began to recover from their early declines. However, many businesses remained closed or operated at reduced levels as cases of COVID-19 spiked around the end of the year.

Impacts in 2021

In 2021, as COVID-19 vaccines became available nationwide, many businesses increased operations, unemployment decreased, wages increased for many types of workers, and demand for in-person dining increased in many locations. Aggregate planting and harvesting of crops proceeded as normal except in certain areas impacted by severe drought and adverse weather conditions (see "Widespread Drought and Adverse Weather Conditions"). Cattle producers were able to market animals that were delayed by COVID-19 disruptions to processing plants in 2020. Livestock and poultry producers received higher prices in 2021, but higher input costs led producers to drawdown inventories of live animals during the year. Some large producers also reported having difficulty hiring adequate labor for their operations.[39]

Supply chains, including agricultural supply chains, faced continued disruptions from labor and material shortages, mismatches in demand along the supply chain, and increases in shipping times and costs. Congestion at major international container shipping ports exacerbated shipping delays for U.S. imports and exports and caused large price increases on many shipping lanes.[40] Port congestion and higher container shipping prices also may have increased costs for certain farm inputs,[41] creating a negative headwind for net farm income.

Although the majority of U.S. agricultural exports ship as bulk freight, a wide variety of agricultural commodities are shipped at least in part in containers, including hay, animal feed, soybeans, meat, poultry, cotton, vegetables, nuts, fruits, dairy products, and other commodities.[42] The average price of shipping 40-foot containers from China/East Asia to the west coast of North America increased from $3,843 per container in October 2020 to $19,175 per container in September 2021 (**Figure 11**). Agricultural exporters shipping commodities to Asia in containers saw average prices increase from $410 per container in October 2020 to $1,144 per container in July 2021. As prices to ship containers from Asia to U.S. West Coast ports increased, shipping companies found it more profitable to make the return trip from the United States to Asia without loading freight, thereby reducing the available capacity for certain U.S. agricultural commodity shipments to Asia.[43] As a result, export shipments for certain commodities were delayed, diverted

[39] Jenny Shaffstall, "Five Facts About the Ag Labor Shortage," *AgWeb Farm Journal*, July 27, 2021, at https://www.agweb.com/news/business/taxes-and-finance/five-facts-about-ag-labor-shortage. Article includes data from the Ag Economy Barometer of 400 farm operators with production of at least $500,000 per year. Farmers and other employers in the agricultural sector reported difficulty finding enough workers for numerous years before the COVID-19 pandemic. For more information, see Steven Zahniser et al., *Farm Labor Markets in the United States and Mexico Pose Challenges for U.S. Agriculture*, ERS, EIB-201, November 2018, at https://www.ers.usda.gov/publications/pub-details/?pubid=90831.

[40] For background on the impacts of port congestion on supply chains, see CRS Insight IN11800, *Supply Chain Bottlenecks at U.S. Ports*.

[41] Tyne Morgan, "Shipping Costs Surge, Causing Farm and Ranch Supplies Prices to Climb," *Farm Journal AgWeb*, March 26, 2021, at https://www.agweb.com/news/business/taxes-and-finance/shipping-costs-surge-causing-farm-and-ranch-supplies-prices-climb.

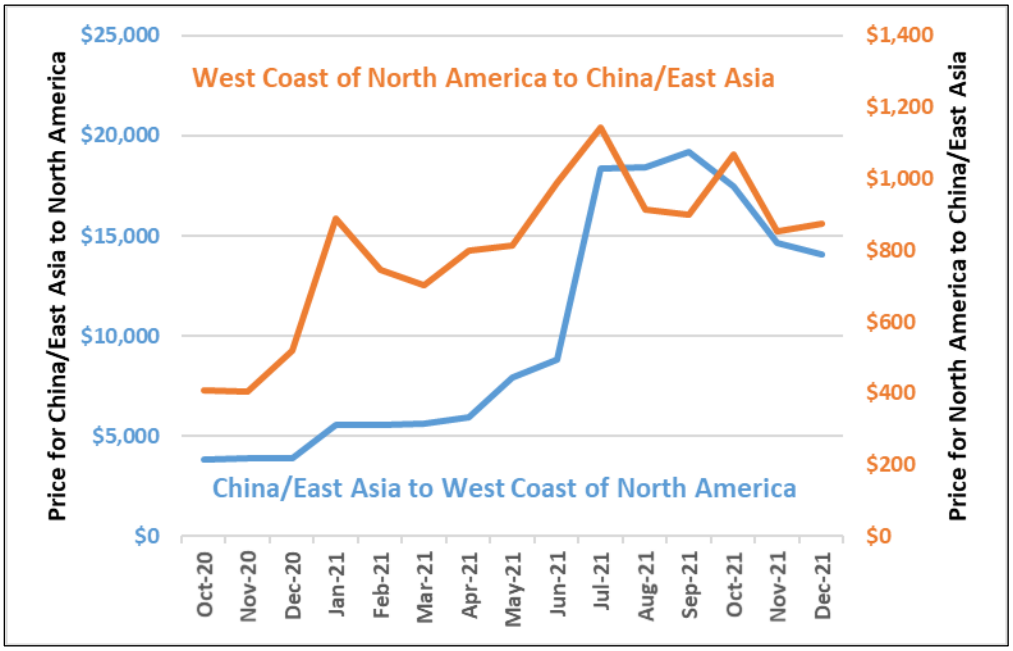
[42] Elaine Kub, "Ag Exports' Sensitivity to Container Congestion," Progressive Farmer, October 20, 2021, at https://www.dtnpf.com/agriculture/web/ag/news/article/2021/10/20/ag-exports-sensitivity-container.

[43] Ana Swanson, "Crunch at Ports May Mean Crisis for American Farms," *New York Times*, November 14, 2021, at https://www.nytimes.com/2021/11/14/business/economy/farm-exports-supply-chain-ports.html.

to higher cost shipping modes, or diverted to domestic uses. The combined impact of the delays and diversions may have reduced the prices that some farmers received for their commodities and further decreased net farm income relative to the levels that would have been realized if container shipping had not been disrupted.

Figure 11. Average Market Prices for Container Shipments Between East Asia and West Coast of North America

prices for shipping a 40-foot container



Source: Data from Freightos as provided by Statista, downloaded January 5, 2022.

Notes: Data are a price index representing a market rate based on aggregated data from global freight carriers, freight forwarders, and shippers that use the WebCargo by Freightos freight rate management platform. Index values are an average of the five business days of the last full week in each month and not adjusted for inflation.

The main COVID-19-related impacts to U.S. agriculture in 2021 included

- lower revenues for certain vegetables, fruits, and tree nuts than in 2020;[44]
- strength in domestic and international demand for U.S. meat products, leading to increased prices for livestock producers compared with 2020;
- declining inventories for cattle and hogs due to drought and higher input costs for producers;
- reported shipping delays and higher costs to export certain goods;[45]
- reported shortages of truck drivers;[46]

[44] Wilma Davis and Gary Lucier, *Vegetables and Pulses Outlook: November 2021*, ERS Vegetables and Pulses Outlook no. 367, November 19, 2021, at https://www.ers.usda.gov/publications/pub-details/?pubid=102664.

[45] Scott Horsley, "Farmers Have a Big Problem on Their Hands: They Can't Find a Way to Ship Their Stuff," *National Public Radio*, July 23, 2021, at https://www.npr.org/2021/07/23/1019496567/farmers-have-a-big-problem-on-their-hands-they-cant-find-a-way-to-ship-their-stu.

[46] Jacqui Fatka, "Trucker Shortages Plague Food Supply Chain," *Farm Progress*, November 3, 2021, at

- reported shortages of parts for certain agricultural equipment;[47] and
- higher prices for fertilizers and certain chemical inputs than in 2020.

Policy Responses to the Impacts of COVID-19 on the Agricultural Sector

In 2020, Congress appropriated funds in response to the impacts of the COVID-19 pandemic on agriculture. USDA used those funds to compensate agricultural producers for market disruptions and to purchase and distribute surplus agricultural commodities to food banks and other organizations.[48] These payments contributed to record high levels of government direct payments to agriculture in 2020 (see "Government Direct Payments Declined from 2020 Record Level"). Congress also provided funds for direct payments to taxpayers, supplemental unemployment benefits for the unemployed, and loans and grants to small businesses. Farm households also benefitted from these programs (see "Median Farm Household Income Increased by 4%").

In 2021, USDA used residual funds from prior appropriations and additional funds appropriated by Congress under the Consolidated Appropriations Act, 2021 (P.L. 116-260) and the American Rescue Plan Act of 2021 (P.L. 117-2) to provide additional support to the agricultural sector and low-income consumers through programs included in the USDA Pandemic Assistance for Producers (PAP) initiative. PAP includes support provided by programs created specifically to respond to the COVID-19 pandemic and through preexisting USDA programs (see text box, below).

To address supply chain disruptions, the Biden Administration created a Supply Chain Disruptions Task Force.[49] The task force undertook several actions to decrease congestion at the ports of Los Angeles and Long Beach.[50] On January 31, 2022, USDA announced that it was using funding from the Commodity Credit Corporation to make investments to expedite agricultural exports at the ports of Savannah and Oakland.[51] The ports of Los Angeles, Long Beach, Oakland, and Savannah combined accounted for more than 50% of the volume of all U.S. containerized agricultural exports in 2018, 2019, and 2020 and more than 49% of U.S. containerized agricultural exports in 2021.[52]

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https://www.farmprogress.com/farm-policy/trucker-shortages-plague-food-supply-chain.

[47] P.J. Huffstutter and Mark Weinraub, "Ag Parts Shortage Roils U.S. Harvest," *Agweek*, October 17, 2021, at https://www.agweek.com/business/agriculture/7242640-Ag-parts-shortage-roils-U.S.-harvest.

[48] USDA also used discretionary authority under the Commodity Credit Corporation Charter Act to augment the funds provided by Congress. For additional background on these programs and associated appropriations, see CRS In Focus IF11764, *U.S. Agricultural Aid in Response to COVID-19*.

[49] The White House, "Fact Sheet: Biden-Harris Administration Announces Supply Chain Disruptions Task Force to Address Short-Term Supply Chain Discontinuities," June 8, 2021, at https://www.whitehouse.gov/briefing-room/statements-releases/2021/06/08/fact-sheet-biden-harris-administration-announces-supply-chain-disruptions-task-force-to-address-short-term-supply-chain-discontinuities/.

[50] The White House, "Fact Sheet: Biden Administration Efforts to Address Bottlenecks at Ports of Los Angeles and Long Bean, Moving Goods from Ship to Shelf," October 13, 2021, at https://www.whitehouse.gov/briefing-room/statements-releases/2021/10/13/fact-sheet-biden-administration-efforts-to-address-bottlenecks-at-ports-of-los-angeles-and-long-beach-moving-goods-from-ship-to-shelf/.

[51] USDA, "USDA Announces Partnership to Ease Port Congestion and Restore Disrupted Shipping Services to U.S. Grown Agricultural Commodities," press release, January 31, 2022, at https://www.usda.gov/media/press-releases/2022/01/31/usda-announces-partnership-ease-port-congestion-and-restore.

[52] CRS calculations using data from USDA Agricultural Marketing Service, U.S. Agricultural Port Profiles, downloaded February 22, 2022, at https://agtransport.usda.gov/stories/s/U-S-Agricultural-Port-Profiles/7vku-v3nn/.

USDA's Pandemic Assistance for Producers Initiative

USDA announced the Pandemic Assistance for Producers (PAP) initiative on March 24, 2021.[53] PAP includes activities from a variety of programs created specifically to respond to the COVID-19 pandemic, as well as pandemic-related activities using programs that predate the outbreak of COVID-19 in the United States. PAP programs provide support to crop and livestock producers, as well as to timber producers, processors of certain commodities, certain other entities involved in food or agricultural commodity supply chains, and low-income consumers. As of January 6, 2022, PAP provided support through 17 USDA programs.[54]

Programs created to respond to the COVID-19 pandemic include the following:

- **Coronavirus Food Assistance Program.** Created in 2020, this program provides payments to producers of crops and livestock who incurred marketing losses in 2020.
- **Pandemic Livestock Indemnity Program.** Created in 2021, this program provides payments to chicken, turkey, and swine producers who depopulated livestock or poultry in 2020.
- **Spot Market Hog Pandemic Program.** Created in 2021, this program provides payments to contracted hog producers who incurred marketing losses in 2020.
- **Dairy Donation Program.** Created in 2021, this program reimburses dairy processors and farmers who donated dairy products to feeding organizations after January 1, 2020.
- **Pandemic Market Volatility Assistance Program.** Created in 2021, this program provides payments to dairy operations that incurred revenue losses in 2020.
- **Pandemic Response and Safety Grant Program.** Created in 2021, this program provides grants to certain producers, processors, distributions, and farmers markets to purchase equipment to protect workers against COVID-19.
- **Seafood Processors Pandemic Response and Safety Block Grant Program.** Created in 2021, this program provides block grants to states to distribute funds to seafood processors and processing vessels for certain COVID-19-related expenses.
- **Organic and Transitional Education and Certification Program.** Created in 2021, this program provides monetary assistance for certification and education expenses incurred in FY2020, FY2021, and FY2022.
- **Pandemic Cover Crop Program.** Created in 2021, this program increases premium subsidies for producers of certain crops who purchased federal crop insurance coverage in 2021 and planted cover crops during the 2021 crop year.
- **Pandemic Assistance for Timber Harvesters and Haulers Program.** Created in 2021, this program provides payments to timber harvesting and timber hauling businesses that experienced revenue losses in 2020.
- **Pandemic Assistance for Cotton Users.** Created in 2021, this program provides payments to U.S. textile mills that used upland cotton of any origin or domestically produced extra long staple cotton in their operations during 2020.

Programs that predate the COVID-19 pandemic that received additional funding in response to the pandemic include the following:[55]

- **Dairy Margin Coverage Program.** This program provides payments to dairy producers based on market conditions. Under PAP, USDA expanded sign-up and provided supplemental payments for certain small- and mid-sized dairy operations.

[53] USDA, "After Identifying Gaps in Previous Aid, USDA Announces 'Pandemic Assistance for Producers' to Distribute Resources More Equitably," press release, March 24, 2021, at https://www.usda.gov/media/press-releases/2021/03/24/after-identifying-gaps-previous-aid-usda-announces-pandemic.

[54] USDA, Farmers.gov, "USDA Pandemic Assistance for Producers," accessed January 6, 2022, at https://www.farmers.gov/coronavirus/pandemic-assistance.

[55] For background on the Dairy Margin Coverage Program, see CRS In Focus IF11188, *2018 Farm Bill Primer: Dairy Programs*. For background on the Value-Added Producer Grant Program, the Specialty Crop Block Grant Program, the Local Agriculture Market Program, the Beginning Farmer and Rancher Development Program, and the Gus Schumacher Nutrition Incentive Program, see CRS Report R46538, *Local and Urban Food Systems: Selected Farm Bill and Other Federal Programs*.

- **Value-Added Producer Grant Program.** This program provides grants to develop new value-added products from agricultural commodities or promote established products. Under PAP, USDA made additional funding available.
- **Specialty Crop Block Grant Program.** This program provides block grants to states to expand the specialty crop food sector. Under PAP, USDA made additional funding available.
- **Local Agriculture Market Program.** This program provides grants to support local and regional food markets, businesses, and value-added agricultural products. Under PAP, USDA made additional funding available.
- **Beginning Farmer and Rancher Development Program.** This program provides grants to organizations for providing education, mentoring, and technical assistance to beginning farmers and ranchers. Under PAP, USDA made additional funding available.
- **Gus Schumacher Nutrition Incentive Program.** This program provides grants to entities to support fruit and vegetable purchases by low-income consumers. Under PAP, USDA made additional funding available.

Inflation

Inflation in the United States was 6.8% between December 2020 and December 2021, the highest level since 1982.[56] Inflation can negatively affect farm households, like nonfarm households, in many ways. For example, the prices of goods and services purchased may increase, and retirement savings may become inadequate to maintain a targeted lifestyle, which may be a key consideration for the farm population. According to the most recent Census of Agriculture, the average U.S. farmer was 57.5 years old, and 34% of farmers were 65 or older.[57]

Inflation also can have specific impacts for agriculture, including the following:

- **Increased cost for farmland.** Historically, the rate of return for owning farmland has been correlated with inflation.[58] Inflation expectations may encourage investors to purchase farmland as a hedge against future inflation, driving up the cost farmers must pay for land purchases. Additionally, commodity price inflation also can lead to higher land rents in areas that specialize in commodity crop production.[59] Average agricultural land values in Illinois, Indiana, Iowa, and Wisconsin increased by 22% in 2021 compared with 2020 levels,[60] and average land values in Kansas, Nebraska, Oklahoma, Missouri, Colorado, New Mexico, and Wyoming increased by more than 20%.[61]

[56] U.S. Bureau of Labor Statistics, "Economic New Release: Consumer Price Index Summary," updated December 10, 2021. Inflation refers to the general increase in the price of goods and services (not including asset prices) across the economy. The Federal Reserve defines *stable prices* to be inflation of 2% annually. For background on the causes on inflation in 2021, see CRS Report R46890, *Inflation in the Wake of COVID-19*.

[57] Carl Zulauf, "Age of US Farmers: Is the Wrong Issue Being Addressed?," *farmdoc daily*, February 26, 2020, at https://farmdocdaily.illinois.edu/2020/02/age-of-us-farmers-is-the-wrong-issue-being-addressed.html.

[58] Bruce Sherrick, "IFES 2020: Farmland Markets and Macro Linkages," *farmdoc daily*, January 11, 2021, at https://farmdocdaily.illinois.edu/wp-content/uploads/2021/01/fdd110121.pdf.

[59] Jennifer Latzke, "Land Sales: Increased Prices for Commodities May Play a Role in Your Next Farmland Lease Negotiations," *Farm Progress*, June 10, 2021, at https://www.farmprogress.com/farm-business/higher-commodity-prices-may-figure-farmland-leases.

[60] Federal Reserve Bank of Chicago, *Ag Letter*, updated February 10, 2022, at https://www.chicagofed.org/publications/agletter/index.

[61] Francisco Scott and Ty Kreitman, "Rise in Farm Real Estate Values Accelerates," Federal Reserve Bank of Kansas City AG Credit Survey, February 10, 2022, at https://www.kansascityfed.org/agriculture/ag-credit-survey/rise-in-farm-real-estate-values-accelerates/.

- **Increased cost of other agricultural inputs.** High levels of inflation in general may lead to higher prices of farm inputs, such as gasoline, diesel, natural gas, chemicals and fertilizers, farm equipment, wages for farm laborers, and other farm production inputs. Prices for many of these inputs increased in 2021 (**Table 5**).

Historically, the Federal Reserve has responded to periods of sustained inflation above targeted levels by increasing interest rates. Rising interest rates can have numerous repercussions for agriculture, including the following:

- **Reduced competitiveness of exports.** Increases in U.S. interest rates relative to interest rates in other countries tend to cause capital inflows to the United States and make dollars more expensive compared with other countries' currencies. If dollars become more expensive, American agricultural exports may become less competitive in global commodity markets compared with exports from competitor exporting countries (e.g., Brazilian soybeans). Commodity exports were a key factor supporting farm incomes in 2021 (see "Exports Up for Animal Products, Down for Field Crops").
- **Reduced volume of farm loans.** Higher interest rates in general typically lead to higher interest rates for agricultural lending. Some farmers may respond to higher interest rates by reducing their demand for farm loans, and some lenders may tighten lending standards. ERS forecasts 2021 farm debt from all lenders increased relative to pre-pandemic levels (**Table 11**).

Heading into the 2022 Calendar Year

On February 4, 2022, ERS forecasted net farm income and net cash farm income for 2022 at $113.7 billion and $136.1 billion, respectively.[62] These forecasts represent a 1.4% increase in net cash farm income and a decrease of 4.5% in net farm income relative to 2021 forecasted levels. ERS forecasts net cash farm income to increase in 2022 relative to 2021 based on higher cash receipts that more than offset increases in cash expenses and reductions in government payments. Net cash farm income also includes sales from inventories of commodities produced in prior years. ERS forecasts net farm income, which excludes inventory sales, to decrease in 2022 relative to 2021. USDA is scheduled to update these forecasts twice in 2022.

These two forecasts reflect USDA's projections for crop and livestock production, costs, and prices in 2022. Some farmers reported difficulties securing fertilizers, herbicides, insecticides, and farm machinery parts in December 2021.[63] If these difficulties become widespread, they could affect total planted acres as well as the mix of crops planted, crop yields, or both. Additionally, the same forces driving farm sector income in 2021—weather conditions; trade; COVID-19-related impacts on supply chains, demand for agricultural commodities, and agricultural production; government payments; and inflation—may influence farm sector income in 2022.

A potentially significant development that occurred following these ERS projections is the war in Ukraine, which ranks as a major exporter of wheat, corn, barley, and sunflower oil. The length of

[62] USDA, ERS, "Farm Income and Wealth Statistics: Data Files," U.S. Farm Sector Financial Indicators, 2015-2022F, table, updated February 4, 2022.

[63] James Mintert and Michael Langemeier, "Farmer Sentiment Rises on Strengthening Current Financial Position," Purdue University, Ag Economy Barometer, January 4, 2022, at https://ag.purdue.edu/commercialag/ageconomybarometer/ag-barometer-rises-on-strengthening-current-financial-position/.

the war and the extent of the social upheaval and destruction of infrastructure caused by Russia's invasion may curb Ukraine's production and exports of these commodities, affecting global trade flows and international commodity prices. Additionally, Russia is a major global exporter of oil, natural gas, certain fertilizers, and certain agricultural commodities, including wheat, sunflower oil, sunflower seeds, and barley. International and U.S. actions in response to the war may affect 2022 domestic and international prices for fertilizers, energy commodities, and agricultural commodities, thereby impacting 2022 U.S. farm income.

Issues for Congress

Net farm income exceeded long-run average levels in 2020 and 2021 due to high levels of direct government payments. The majority of direct payments came from ad hoc programs created to respond to the COVID-19 pandemic. Commodity support programs authorized under the 2018 farm bill provided relatively low levels of payments compared with ad-hoc payments in response to COVID-19 because COVID-19 impacts on prices for crops covered by commodity support programs were transient phenomena, and initial price declines were not severe enough to trigger payments from certain revenue support programs (**Table 6**). Livestock producers, with the exception of dairy producers, were not eligible for commodity support under the 2018 farm bill. Cash receipts for livestock fell below long-run average levels in 2020 but recovered in 2021. Livestock and dairy producers were the beneficiaries of four new USDA programs in 2021 to compensate for COVID-19-related losses. Crop and livestock producers also received approximately $5.8 billion and $3.7 billion in net indemnities from the federal crop insurance program in 2020 and 2021, respectively.[64]

The 2018 farm bill expires in 2023. In preparing for the next farm bill, Congress may wish to consider what constitutes an adequate level of net farm income for the sector, under what circumstances and to what extent might the government intervene to support farm income, and what mix of programs could best ensure the farm sector maintains that adequate level under normal and abnormal market conditions. Congress may also wish to clarify its goals for farm income support, which may include securing adequate supplies of certain agricultural commodities, stabilizing rural incomes, reducing farm bankruptcies, and/or other goals. Farm income support policies under the current farm bill distribute the majority of payments to large-scale farms. Congress may wish to assess whether its goals for farm income support could be achieved at lower cost to the U.S. taxpayer by reducing total payments to the sector and/or by altering the distribution of farm payments across various types of farms.

Sector-wide farm financial stress in 2021 was low compared with historical levels when considering farm debt-to-asset ratios, farm debt-to-equity ratios, farm bankruptcy rates, and delinquent agricultural debt held by commercial lenders. Beneath these broad indicators of agriculture's financial health, some individual farms may have experienced financial stress, and households with intermediate farm businesses may be more likely to experience financial stress than households with commercial farm businesses or residence farms. Households with large-scale farm businesses hold the majority of both farm assets and debt (**Table 12**), but they also earn the majority of their household incomes from farming. These households constitute less than 10% of all U.S. farms and earn significantly more on average than the median U.S. household (**Table 10**). As a group, they receive the majority of government direct payments to farmers because payments are linked to historical and current production, and these farms produce the majority of agricultural products (**Figure 7**). The majority of U.S. farm households operate

[64] CRS calculations using USDA, ERS, "Value Added to the U.S. Economy by the Agricultural Sector, 2013-2022F," updated February 4, 2022.

smaller-scale farms. Households with smaller-scale farms typically earn negative income from their farm businesses, relying more on off-farm employment for income. The median household with a residence farm earns more than the median U.S. household because it has off-farm income that offsets the losses from its farm business. The median household with an intermediate farm business does not offset its losses with off-farm income because it allocates household labor to the farm business.

The 2018 farm bill authorized various programs that target support for smaller-scale farms.[65] These programs provide grants and loans, as opposed to direct farm payments, and receive less annual funding than programs providing direct farm payments—$100 million annually compared with more than $3.4 billion in 2021 commodity support program payments. In preparing for the next farm bill, Congress may wish to evaluate the efficacy of USDA's programs and activities in supporting households with smaller-scale farm businesses. Separately, Section 12101 of the House-passed Build Back Better Act (H.R. 5376) would authorize USDA to provide debt relief and loan modifications to certain "economically distressed" or "at-risk" borrowers with Farm Service Agency (FSA) direct or guaranteed loans.[66] The Congressional Budget Office estimates that this provision would provide an additional $11.7 billion in financial support to economically distressed and underserved farmers.[67] If enacted, this provision may provide support to a portion of farm households with smaller-scale farms experiencing financial distress and at aggregate levels that would exceed 2021 total payments from USDA's COVID-19 pandemic response programs. This provision would provide additional support to farm households in financial distress that have outstanding loans with the FSA. At the end of FY2019, the FSA had a portfolio of $12 billion in direct loans to 87,000 borrowers (approximately 4% of all farms) and provided loan guarantees of $16 billion for 39,000 borrowers (approximately 2% of all farms).[68] Recent profiles of FSA borrowers are not available, but borrowers with annual sales below $250,000 (i.e., residence and intermediate farms) accounted for more than 70% of new FSA direct loans each year between 2007 and 2015.[69] Additionally, it is unclear whether forgiving loans during the COVID-19 pandemic may change borrowers' expectations about needing to repay future loans during future economic downturns (i.e., increased moral hazard by borrowers of FSA farm lending).

The 2021 expenses for farm production increased for the fourth year in a row as farmers increased production to take advantage of higher commodity prices. Prices rose for animal feed, farmland, fuel, and fertilizers due to supply chain disruptions because of adverse weather events that disrupted crop production, shifts in global supply and demand, and other factors. Price

[65] For background on programs that provide targeted support for certain smaller-scale farmers, see CRS Report R46538, *Local and Urban Food Systems: Selected Farm Bill and Other Federal Programs*.

[66] The Build Back Better Act defines *economically distressed borrowers* based on several factors, including being 90 days delinquent on farm loans; owing more interest than principal; undergoing bankruptcy or foreclosure; receiving farm loan program disaster set-asides during the COVID-19 pandemic (see CRS Insight IN11415, *COVID-19 and USDA Farm Loan Flexibilities*); experiencing instances of certain debt restructuring; or farming in zip codes or counties with more than 20% poverty or on Native American tribal land. The act would allow the Secretary of Agriculture to establish a definition of *at-risk borrowers* using factors such as whether a borrower has low income or low wealth (i.e., a limited resource farmer) and the amount of payments received by the borrower from the CFAP.

[67] Congressional Budget Office, *Estimated Budgetary Effects of Title I, Committee on Agriculture, H.R. 5276, the Build Back Better Act*, November 15, 2021, at https://www.cbo.gov/publication/57618.

[68] For background on the Farm Service Agency's lending programs, see CRS Report R46768, *Agricultural Credit: Institutions and Issues*.

[69] Charles B. Dodson and Bruce L. Ahrendsen, "Beginning Farmer Credit and the Farm Service Agency's Role," *Choices*, vol. 31, no. 4, 2016.

increases may taper in 2022, according to ERS, as supply chain disruptions abate and inflation subsides. But if high input prices persist or continue to increase, Congress may wish to consider measures to address structural factors limiting domestic supply of these inputs, such as trade restrictions, barriers deterring existing firms from increasing domestic production of farm inputs, and/or barriers deterring new firms from entering supply markets.

Farm sector cash receipts rebounded strongly in 2021 due in large part to an increase in export demand from China following a bilateral agreement on agricultural trade. The Phase I deal with China expired at the end of 2021, creating uncertainly about China's future purchases of U.S. agricultural commodities. The Biden Administration has stated its desire to realign the U.S.-China trade relationship.[70] Congress may wish to monitor further developments in the U.S.-China trade relationship.

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[70] For background on the Biden Administration's goals for the U.S.-China trade relationship, see United States Trade Representative, *2022 Trade Policy Agenda & 2021 Annual Report*, March 2022, at https://ustr.gov/sites/default/files/2022%20Trade%20Policy%20Agenda%20and%202021%20Annual%20Report.pdf.