

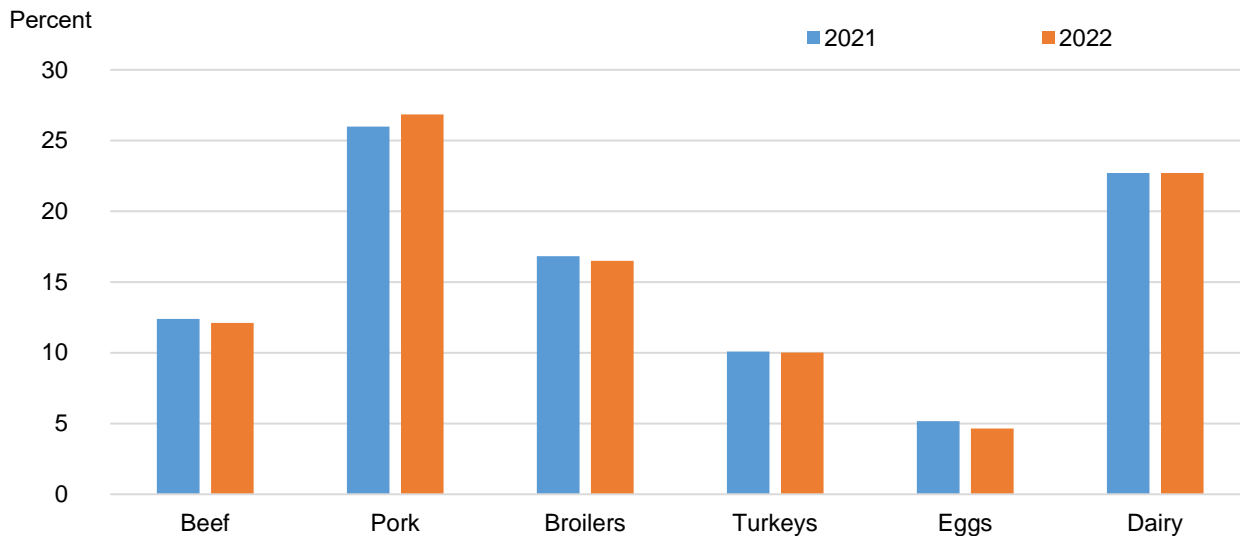


Livestock, Dairy, and Poultry Outlook: November 2021

Animal Product Exports as a Share of Production

Beef exports as a share of production are expected to fall slightly from 12.4 percent in 2021 to 12.1 percent in 2022. Both production and exports of beef are expected to decrease from 2021 to 2022. The share of U.S. pork production exported is expected to increase from 26.0 to 26.8 percent from 2021 to 2022, as production is forecast to decline slightly in 2022 while exports increase by about 3 percent year over year. In 2021, broiler exports are expected to account for 16.8 percent of domestic production. In 2022, this share is forecast to decline slightly to 16.5 percent, as production is forecast to increase by about 1 percent and exports are forecast to decline by about 1 percent year over year. Turkey exports as a share of production are forecast at 10.0 percent in 2021 and 10.1 in 2022; both production and exports are forecast to increase slightly from 2021 to 2022. Egg and egg product exports in 2021 are expected to be 5.2 percent of table egg production. In 2022, this share is forecast to decrease slightly to 4.6 percent as exports return to more typical levels and production increases by about 1 percent year over year. Dairy exports on a skim-solids milk-equivalent basis are expected to account for 22.7 percent of milk production in both 2021 and 2022, as both production and exports are forecast to increase by about 1 percent year over year.

Projected animal product exports as a share of production, 2021—2022



Note: Dairy export shares are on a skim-solids milk-equivalent basis.

Source: USDA, Economic Research Service calculations from U.S. Department of Commerce, Bureau of the Census.

Beef/Cattle: The forecast for 2021 commercial beef production was raised fractionally from last month to 27.885 billion pounds on robust cattle slaughter and heavier carcass weights. Fed and feeder steer prices were raised in 2021 fourth quarter. September's beef imports totaled 284 million pounds, down 5 percent from a year ago. The 2021 annual forecast for beef imports was raised 50 million pounds from last month to 3.260 billion pounds. September's beef exports were up 289 million pounds, 20.9 percent over the previous year. The annual forecast for 2021 beef exports was raised by 41 million pounds to 3.455 billion pounds. The forecast for 2022 was unchanged from last month at 3.270 billion pounds.

Dairy: U.S. milk production growth has slowed in recent months, and aggregate milk production growth among major dairy-exporting countries has also declined. U.S. milk production forecasts have been lowered for 2021 and 2022 due to lower expected milk cow numbers and milk per cow. The all-milk price for the fourth quarter of 2021 is projected to average \$20.00 per hundredweight (cwt), an increase of \$0.20 from last month's forecast. For the year, the all-milk price forecast is \$18.50 per cwt, an increase of \$0.05 from the previous projection. The all-milk price forecast for 2021 is \$20.25 per cwt, an increase of \$1.05 from last month's projection.

Pork/Hogs: Continued lower processing demand for hogs in the fourth quarter is expected to be largely offset by heavier average dressed weights, leaving the commercial pork production forecast largely unchanged from last month at 7.2 billion pounds, down by more than 4 percent from the same period a year ago. Forecasts for pork exports both this year and in 2022 are unchanged from last month. This year, exports are forecast at 7.2 billion pounds, down about 1 percent, and in 2022 exports are expected to be 7.4 billion pounds, 3 percent higher than shipments in 2021.

Poultry/Eggs: The broiler production forecast was increased in the fourth quarter on strong preliminary slaughter data and positive placement data. Broiler export forecasts were also increased in the fourth quarter and for 2022. Broiler price forecasts were increased in the fourth quarter and the first half of 2022 on recent price trends. The forecasts for table egg production for fourth quarter and first half of 2022 were revised up on recent trends in the rates of lay. The wholesale egg price forecast for the fourth quarter was lowered to 125 cents per dozen due to lower-than-expected late-October and early-November prices. Due to robust foreign demand, egg and egg product exports were revised up for the current quarter and the first two quarters of next year. Forecast turkey production was increased in the first quarter of 2022 on positive placement data. Turkey export forecasts were also increased in the fourth quarter and in 2022. Based on strong but volatile turkey prices in recent weeks, the fourth-quarter forecast price was increased to 135 cents per pound and the 2022 forecast price was adjusted up to 122 cents per pound.

Beef/Cattle

Christopher G. Davis and Hannah Taylor

Beef Production Up on Expected Heavier Dressed Weights and Higher Fed Cattle Slaughter

Based on the latest USDA, National Agricultural Statistics Service (NASS) federally inspected (FI) *Livestock Slaughter* report, the inferred (FI production /FI head slaughtered) carcass weight for September is 827.1 pounds, while the USDA Agricultural Marketing Service (AMS) weekly actual and estimated FI *Livestock Slaughter* reports showed that the inferred weight for October was 831.8 pounds, about 4.7 pounds heavier month over month. There were more fed cattle in the slaughter mix, which pushed up expected carcass weights in the fourth quarter. The pace of cow slaughter is greater year over year, despite one less slaughter day in October 2021 than a year ago.

The forecast for 2021 beef production was raised slightly on heavier anticipated carcass weights and expected pace of fed cattle slaughter that more than offset a decline in expected cow slaughter in the fourth quarter. As a result, this month's forecast for 2021 beef production is 27.885 billion pounds, up 53 million pounds from last month. The forecast for 2022 beef production was revised up slightly by 5 million pounds from a month ago to 27.0 billion pounds, with a temporal shift in expected fed cattle marketings from first-half 2022 to the second half of the year as improvement in winter pastures is expected to shift cattle placements from late 2021 to first-half 2022.

Fed Steer Price Was Raised in Fourth-Quarter 2021 and 2022; Feeder Steer Price Was Increased in Fourth-Quarter 2021

In October 2021, the average price for all grades of live steers sold in the 5-area marketing region was reported at \$124.33 per hundredweight (cwt), up 16.6 percent, or \$17.68, from October 2020. The fed steer price for the week ending November 7 was \$129.23 per cwt, while for the week ending October 24 it was \$124.39 per cwt, a \$4.84 increase in 2 weeks. The fourth-quarter forecast for fed steer was raised \$1.00 to \$128.00 per cwt on current price strength. The 2022 annual forecast for fed steers was raised \$1.25 to \$130.00 per cwt from last month on expected continued strength in packer demand.

Feeder steers weighing 750-800 pounds sold in the Oklahoma City National Stockyards had an average price of \$153.52 per cwt for October, up about \$16 per cwt from a year earlier. Feeder prices averaged \$159.71 per cwt for November 8, more than \$21 above the price recorded the same week a year ago. The fourth-quarter forecast was raised by \$3.00 to \$154.00 per cwt relative to last month on current price strength and improved prospects of winter pasturing of stocker cattle, which will likely increase competition for feeders. The 2021 price was revised up from a month earlier to \$145.55 per cwt. The 2022 price is unchanged from last month at \$155.50.

Third-Quarter Beef Imports Stronger Than Expected; 2022 Import Forecast Raised

September beef imports totaled 284 million pounds, down 5 percent from last year but up 16 percent compared to the 5-year average for the month. The year-over-year decrease was driven mainly by

imports from Australia, down about 25 million pounds from 2020 or 39 percent. Imports from Uruguay and Argentina also decreased year over year, by 7 million and 13 million pounds, respectively.

The other major import suppliers showed year-over-year increases. Imports from Canada and Brazil stayed well above last year, accounting for the largest increases in year-to-date import shares; September imports from Canada were up 13 million pounds, or 19 percent, while Brazil was up nearly 12 million pounds, or 49 percent, compared to last year. Mexico, New Zealand, and Nicaragua also showed modest year-over-year increases as well.

U.S. year-over-year beef imports from major suppliers						
	September 2020	September 2021	Difference in volume	Year-over- year change	Import share September 2020 Year-to-date	Import share September 2021 Year-to-date
	-- Million pounds--			-- Percent --	-- Percent --	-- Percent --
Canada	68.8	81.9	13.1	19.0	23.2	28.5
Australia	65.0	39.6	-25.4	-39.1	20.3	12.1
Mexico	55.5	58.0	2.5	4.5	20.4	20.0
New Zealand	31.1	33.0	1.9	6.1	16.7	16.9
Brazil	23.3	34.8	11.5	49.4	5.6	9.7
Nicaragua	14.5	14.9	0.4	2.8	5.4	5.6
Uruguay	17.8	10.5	-7.3	-41.0	4.5	4.1
Argentina	18.8	6.0	-12.8	-68.1	2.0	1.5
ROW	5.1	5.6	0.5	9.8	2.0	1.6
Total Imports	300.1	284.4	-15.7	-5.2	100.0	100.0

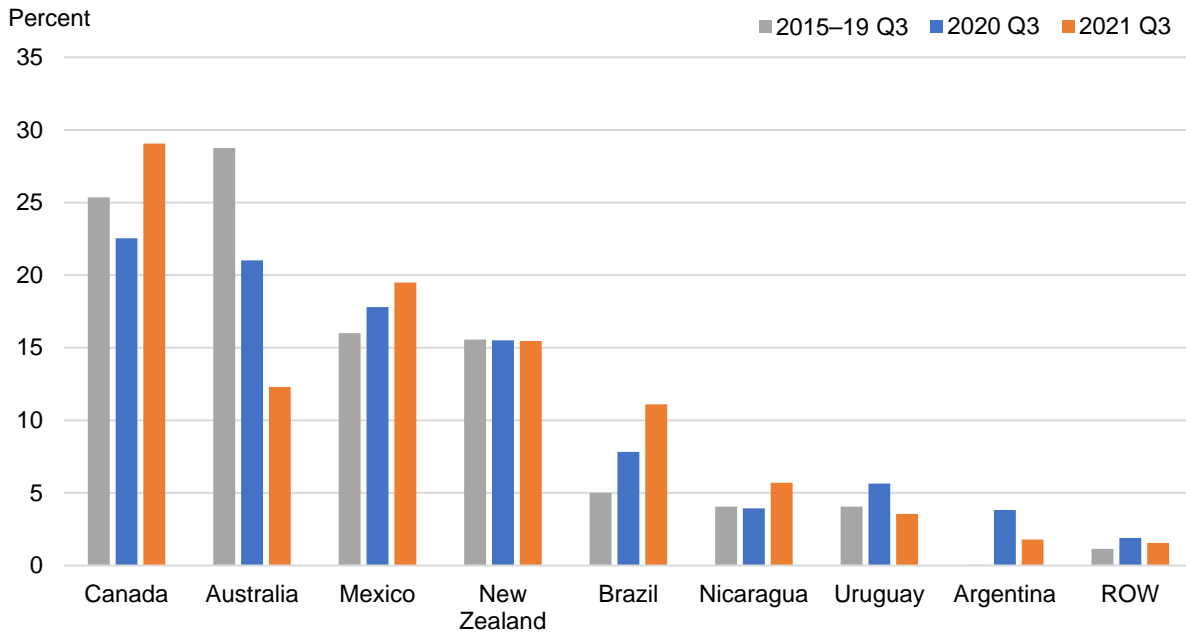
ROW = Rest of World.

Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.

Third-quarter 2021 beef imports totaled 923 million pounds, down about 10 percent from last year's record for the third quarter, but compared to the 5-year average, third-quarter imports were up 11 percent. This was the third-largest volume imported for the quarter and eighth largest volume overall. The chart below shows the share of imports for the third quarter by country. Australia had the greatest change in import shares for the quarter this year, declining to 12 percent compared to 21 percent in 2020. The country has had limited exportable supplies all year as it continues rebuilding its herd.

Canada, Mexico, and Brazil showed notable year-over-year increases in import shares for the third quarter. These three countries were also markedly higher than their 5-year-average share, contributing to this year's increase in third-quarter imports exceeding the average.

Share of third-quarter imports by country



ROW = Rest of World.

Q3 = Third quarter.

Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.

The fourth-quarter beef import forecast was raised 50 million pounds to 775 million, reflecting recent trade data and strong domestic beef demand. As a result, total imports for 2021 were increased to 3.260 billion pounds. Based on continued demand and greater exportable supplies from Oceania next year, imports for 2022 were also raised to 3.240 billion pounds, maintaining a slight decline year over year.

Beef Exports Up in September as Sales to China Continue Strong

September beef exports totaled 289 million pounds, up 20.9 percent (or 49.9 million pounds) from a year earlier. This rise in part reflects large shipments of beef to China, which accounted for the largest year-over-year increase in beef exports for September in both volume (39.7 million pounds) and percentage change (313 percent). The volume of beef sold to China during every month of 2021 has been a record for that destination. For the month of September only, the United States exported the largest volume of beef to Japan since 2018. Beef shipments to South Korea, the United States' second largest destination, exceeded last year beef export volume by 10.0 percent, or 5.8 million pounds. Beef exports to Mexico in September were 14.1 percent higher than a year ago.

In contrast, there were three major destinations in September to which the United States exported less beef than a year ago. Beef exports to Hong Kong were down 47.9 percent, or 9.3 million pounds, from a year earlier. The United States also exported less beef to Taiwan and Canada. But while there were some reductions in September's beef exports, they were not sufficient to offset the increase in U.S. beef exported to China, Japan, South Korea, and Mexico.

U.S. year-over-year beef exports to major destinations

	September 2020	September 2021	Difference in volume	Year-over-year change	Export Share September 2020	Export Share September 2021
Japan	62.8	69.3	6.5	10.3	26.3	24.0
South Korea	58.7	64.6	5.8	10.0	24.6	22.4
China	12.7	52.3	39.7	311.8	5.3	18.1
Mexico	20.1	22.9	2.8	14.1	8.4	7.9
Canada	23.1	22.2	-0.9	-3.9	9.7	7.7
Taiwan	18.0	16.4	-1.6	-8.9	7.5	5.7
Hong Kong	19.3	10.1	-9.3	-47.9	8.1	3.5
ROW	24.3	31.0	6.7	27.6	10.2	10.7
Total Exports	238.9	288.7	49.8	20.8	100.0	100.0

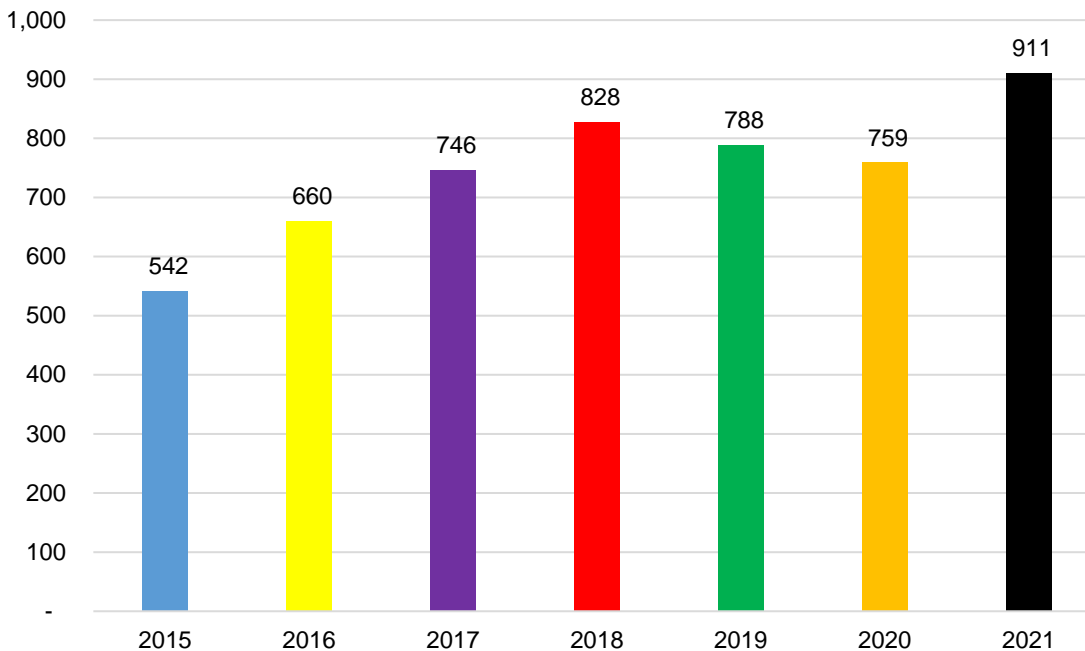
ROW = Rest of the World.

Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.

In third-quarter 2021, the United States set a record for the largest volume of beef exported in a single quarter—911 million pounds, smashing the record set in second-quarter 2021 by 38 million pounds. After exceeding the 2021 second-quarter volume, beef exports in the 2021 third quarter were 10 percent, or 83 million pounds, larger than the volume recorded in the 2018 third quarter record. Below is a chart displaying third-quarter beef exports from 2015 – 21. This robust beef export pace in the third quarter was partly due to strong shipments to China.

U.S. third-quarter beef exports from 2015–21

Million pounds



Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.

The fourth-quarter forecast for 2021 beef exports was raised by 50 million pounds from last month to 875 million on strong demand in Asian markets. The annual forecast for 2021 beef exports was raised by 41 million pounds to 3.455 billion pounds. The forecast for 2022 was unchanged from last month at 3.270 billion pounds.

Dairy

Jerry Cessna and Angel Teran

Recent Wholesale Dairy Product Prices

From the week ending October 2 to the week ending October 30, all wholesale dairy product prices reported in the USDA *National Dairy Products Sales Report* (NDPSR) increased. The price of 40-pound blocks of Cheddar cheese rose to \$1.8152 per pound (+2.7 cents), and the price of 500-pound barrels (adjusted to 38 percent moisture) rose to \$1.8070 per pound (+24.3 cents). Prices for butter, nonfat dry milk (NDM), and dry whey increased to \$1.8405 (+7.5 cents), \$1.4054 (+9.1 cents), and \$0.5596 per pound (+3.0 cents), respectively.

Dairy wholesale product prices from USDA *National Dairy Products Sales Report* (dollars per pound)

	For the week ending		Change
	October 2	October 30	
Butter	1.7654	1.8405	0.0751
Cheddar cheese			
40-pound blocks	1.7887	1.8152	0.0265
500-pound barrels*	1.5642	1.8070	0.2428
Nonfat dry milk	1.3142	1.4054	0.0912
Dry whey	0.5295	0.5596	0.0301

*Adjusted to 38-percent moisture.

Source: USDA, Agricultural Marketing Service, *National Dairy Products Sales Report*, November 3, 2021.

Except for cheese prices, weekly average prices at the Chicago Mercantile Exchange (CME) for the trading week¹ ending November 5 were higher than the most recent NDPSR prices. Weekly CME prices for butter, NDM, and dry whey averaged \$1.9480, \$1.5640, and \$0.6480 per pound, respectively. Weekly CME prices for Cheddar cheese 40-pound blocks and 500-pound barrels averaged \$1.6365 and \$1.6005 per pound, respectively.

U.S. prices have remained competitive with major foreign exporters. All foreign export prices for dairy products reported by USDA *Dairy Market News* (DMN) increased from September to October.

¹ While the end of each week for NDPSR average prices falls on a Saturday, the trading week for CME usually ends on a Friday.

International dairy product export price averages (dollars per pound)

Product	Region	September	October	Change
Butter	Oceania	2.202	2.260	0.058
	Western Europe	2.212	2.507	0.295
Skim milk powder	Oceania	1.459	1.532	0.073
	Western Europe	1.398	1.444	0.046
Whole milk powder	Oceania	1.674	1.729	0.055
	Western Europe	1.757	1.867	0.110
Cheese	Oceania	1.945	1.994	0.049
Dry whey	Western Europe	0.552	0.558	0.006

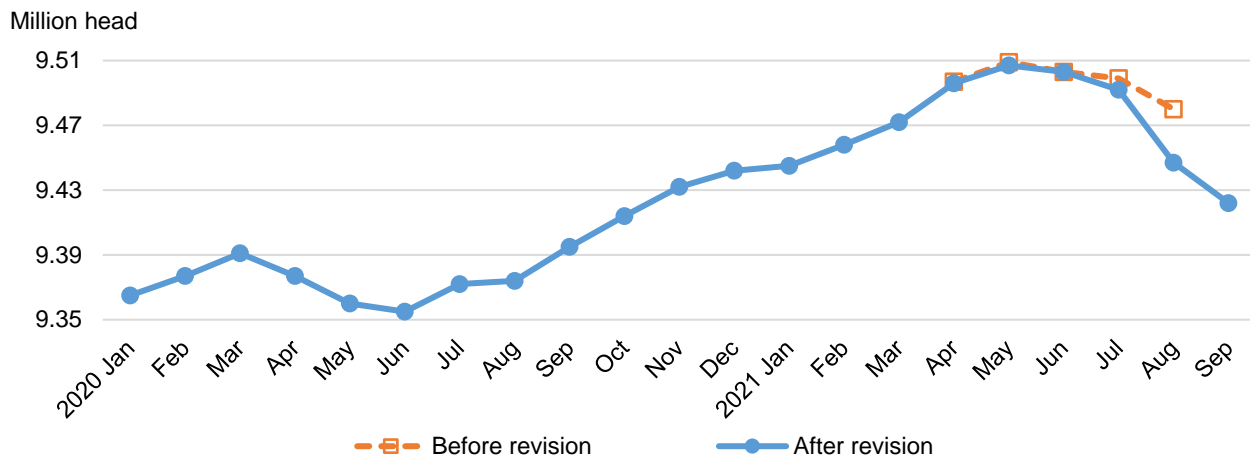
Source: USDA, Agricultural Marketing Service, *Dairy Market News*.

The Global Dairy Trade (GDT) Price Index for the event of November 2 was up 4.3 percent from the GDT event of October 19. Notably, the average price for Cheddar cheese GDT contracts shot up from \$2.01 per pound on October 19 to \$2.29 per pound on November 2.

Recent Dairy Supply and Use Data

In the *Milk Production* report published on October 20, USDA, National Agricultural Statistics Service (NASS) estimated that milk production in September totaled 18.075 billion pounds, only 0.2 percent higher than September 2020. The number of milk cows in September was 9.422 million head, 25,000 fewer than August. Milk per cow in September was 1,918 pounds per head, 1 pound lower than September 2020. NASS also revised milk production data for recent months; most of the revisions were minor, but the estimate for the number of milk cows in August was revised downward by 33,000 head from the previous report. High input costs for feed, labor, and fuel relative to milk prices over the last several months have likely had negative effects on milk production growth.

Number of milk cows in the United States

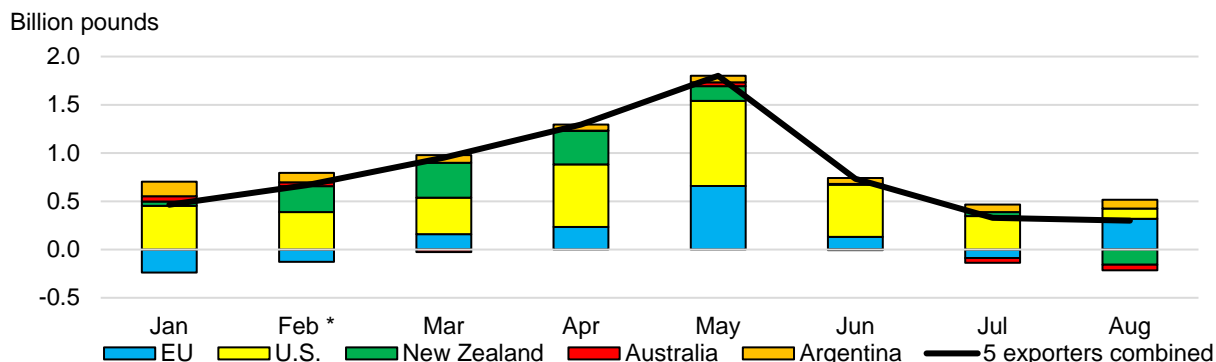


Source: USDA, National Agricultural Statistics Service.

Aggregate growth in milk production among major global dairy-exporting countries has weakened in recent months. In August (the most recent month for which comprehensive data are available), milk production for the EU, United States, New Zealand, Australia, and Argentina combined was only about 0.3 billion pounds higher than August 2020. Notably, August milk production quantities for New Zealand

and Australia were below August 2020. According to the DMN report for the week of October 25–29, rain and cool weather have likely restrained milk output in both countries, along with labor issues related to the pandemic.

Year-over-year changes in milk production of major global dairy-exporting countries 2001 minus 2000 quantites for each month



* February has been adjusted to account leap year in 2020.

Sources: USDA, Economic Research Service Calculations using data from the European Commission; USDA, National Agricultural Statistics Service; Dairy Companies Association of New Zealand, Dairy Australia, and the Argentina Ministry of Agroindustry.

U.S. dairy exports were relatively strong in September. On a milk-fat milk-equivalent basis, they totaled 1.070 billion pounds, 329 million pounds higher than September 2020. On a skim-solids milk-equivalent basis, September dairy exports totaled 4.100 billion pounds, 408 million higher than September 2020. Notably, exports of cheese totaled 75.2 million pounds in September, 12.8 million higher than September 2020. Exports of anhydrous milk fat (AMF) and butteroil totaled 7.5 million pounds, 6.3 million higher than September 2020.

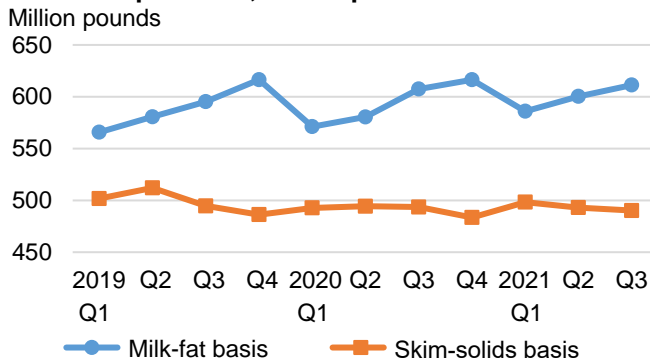
U.S. dairy imports on a milk-fat basis in September totaled 601 million pounds, 23 million lower than September 2020. On a skim-solids basis, September imports totaled 491 million pounds, 70 million higher than September 2020. Notably, imports of butter totaled 10.6 million pounds in September, 0.6 million lower than August but 0.9 million higher than September 2020. Imports of AMF and butteroil totaled 1.1 million pounds in September, 0.6 billion higher than August, but 3.1 million pounds below September 2020.

For the third quarter of 2021 (2021-Q3, July through September), year-over-year growth in domestic use was relatively weak on a milk-fat basis (+0.6 percent) and negative on a skim-solids basis (-0.7 percent). Comparisons to the previous year are complicated by effects of the pandemic in both years. For example, in September 2020, the Farmers to Families Food Box program was in effect, mitigating some of the negative effects of the pandemic on domestic consumption. This year, the strengthening economy has probably had positive effects on domestic use; however, rising dairy product prices in recent months have probably had negative effects.

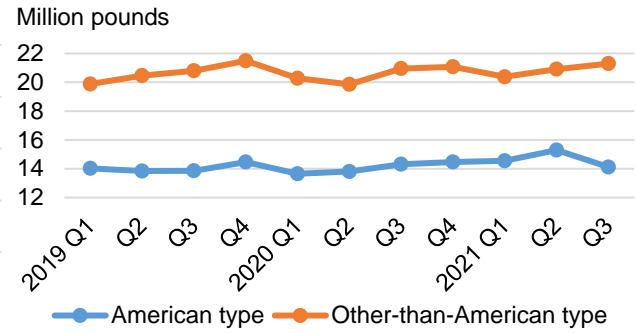
Year-over-year changes in domestic use varied considerably by product in 2021-Q3. Of the major dairy product categories tracked by USDA, the largest year-over-year increase in domestic use in 2021-Q3 was for butter (+10.1 percent). The largest year-over-year decrease was for dry skim milk products (-19.8 percent).

U.S. domestic use per day

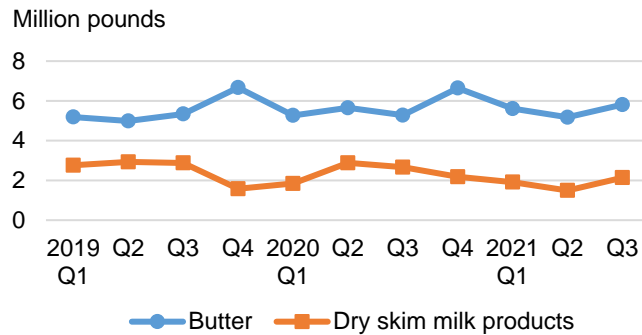
Milk in all products, milk-equivalent bases



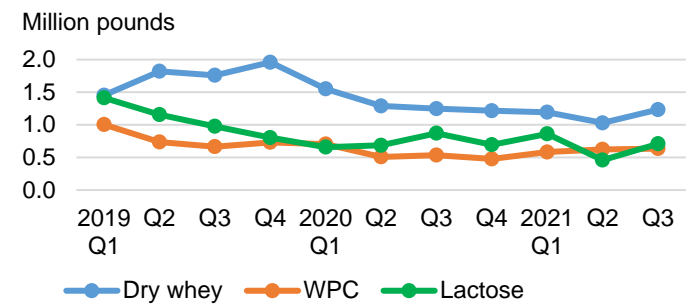
Cheese



Butter and dry skim milk products



Dry whey, whey protein concentrate (WPC), and lactose



Q1 = January to March. Q2 = April to June. Q3 = July to September. Q4 = October to December.

Sources: USDA, National Agricultural Statistics Service; USDA, Foreign Agricultural Service; U.S. Department of Commerce, Bureau of the Census; and USDA, Economic Research Service calculations.

Dairy ending stocks at the end of September totaled 18.048 billion pounds on a milk-fat basis, 431 million higher than September 2020. On a skim solids basis, ending stocks for September totaled 11.041 billion pounds, 681 million higher than September 2020.

Outlook for Feed Prices

The 2021/22 corn price projection is \$5.45 per bushel, unchanged from last month's forecast. The 2021/22 price projection for soybean meal is \$325 per short ton, also unchanged from last month's forecast.² For more information, see *Feed Outlook*, published by USDA, Economic Research Service. The alfalfa hay price in September was \$209 per short ton, \$3 higher than August and \$41 higher than September 2020. The 5-State weighted-average price for premium alfalfa hay in September was \$244 per short ton, \$6 higher than August and \$52 higher than September 2020.

Dairy Forecasts for the Remainder of 2021

Based on recent milk production data, milk cows for 2021-Q4 are projected to average 9.400 million head, 60,000 below last month's projection. The average milk output per cow in 2021-Q4 is projected to be 5,910 pounds per head, 10 pounds less under the previous month than expected. The milk

²The marketing year begins September 1 for corn and October 1 for soybean meal.

production forecast for 2021 is 226.4 billion pounds, 0.6 billion pounds lower than last month's projection.

The forecasts for dairy exports in 2021-Q4 have been raised. Based on recent export data, higher exports of cheese and butterfat products (AMF, butteroil, and high-fat dairy spreads) are expected due to U.S. price competitiveness in the international markets. In 2021-Q4, export forecasts have been raised to 3.0 billion pounds on a fat basis (+0.2 billion pounds) and 12.1 billion pounds on a skim-solids basis (+0.1 billion pounds). For the year, the export forecast is 11.9 billion pounds on a milk-fat basis (+0.1 billion pounds). On a skim-solids basis, the export forecast for 2021 is unchanged at 51.4 billion pounds, as the higher forecast in 2021-Q4 is offset by lower than expected exports in 2021-Q3.

On a milk-fat basis, the 2021-Q4 projection for dairy products imports has been lowered to 1.6 billion pounds (-0.1 billion) due to lower expected imports of butterfat products. The annual forecast for 2021 imports on a milk-fat basis has been lowered to 6.4 billion pounds (-0.2 billion). On a skim-solids basis, the forecast for 2021-Q4 imports is unchanged from last month's projection of 1.4 billion pounds, and the annual forecast is unchanged at 5.7 billion pounds.

The forecast for 2021 ending stocks on a milk-fat basis has been lowered by 0.6 billion pounds to 14.9 billion pounds. On a skim-solids basis, the forecast for ending stocks is 11.0 billion pounds, unchanged from last month's forecast. Due to recent weakness in domestic use and higher expected prices for most dairy products, the forecast for 2021-Q4 domestic use on a milk-fat basis is 57.0 billion pounds, 0.3 billion lower than last month's forecast. On a skim-solids basis, the forecast for domestic use for 2021-Q4 is 44.6 billion pounds, 0.60 billion below the previous forecast. Annual forecasts for 2021 domestic use are 220.6 billion pounds on a milk-fat basis (-0.2 billion) and 179.5 billion pounds on a skim-solids basis (-0.5 billion).

Based on recent increases in prices for butter, NDM, and dry whey, 2021-Q4 price forecasts for those products have been raised to \$1.870 (+13.5 cents), \$1.460 (+9.0 cents), and \$0.570 (+2.0 cent) per pound, respectively. The 2021-Q4 price forecast for Cheddar cheese has been lowered to \$1.730, 4.5 cents lower than the previous forecast.

With the lower projected wholesale price for cheese more than offsetting the higher dry whey price forecast, the Class III milk price forecast for 2021-Q4 is \$17.65 per cwt, \$0.25 lower than the previous month's forecast. Due to higher butter and NDM price forecasts, the Class IV milk price projection for 2021-Q4 is \$18.30 per cwt, \$1.35 higher than last month's forecast. The all-milk price forecast for 2021-Q4 has been raised to \$20.00 per cwt, up \$0.20 from the previous forecast. The forecast for the year has been raised \$18.50 per cwt for all year 2021, up \$0.05 from last month's projection.

Dairy Forecasts for 2022

The U.S. dairy herd is projected to continue decreasing in the first two quarters of 2022. Consequently, the annual 2022 forecast has been lowered to 9.395 million head, 55,000 head below the last month's forecast and 60,000 less than 2021. The 2022 forecast for milk per cow is 24,280 pounds, 25 pounds lower than last month's forecast. The projection for 2022 milk production has been lowered to 228.1 billion pounds, 1.6 billion pounds below last month's forecast but 1.7 billion pounds above 2021.

On a milk-fat basis, the export forecast for 2022 is 11.4 billion pounds, 0.4 billion higher than last month's projection due to higher expected exports of cheese and butterfat products. On a skim-solids basis, 2022 dairy exports are projected to total 51.8 billion pounds, unchanged from last month's

forecast. On a milk-fat basis, 2022 dairy products imports are forecast at 6.5 billion pounds, 0.2 billion lower than last month's forecast due to lower expected imports of butterfat products. On a skim-solids basis, the forecast for 2021 imports is 5.5 billion pounds, unchanged from last month.

Due to higher expected prices and recent weakness in domestic use, forecasts for domestic use have been lowered from the previous month's forecast. On a milk-fat basis, the domestic use forecast for 2022 is 222.3 billion pounds, 2.2 billion below the previous forecast. On a skim-solids basis, the forecast for domestic use is 180.8 billion pounds, 1.4 billion lower than last month's forecast.

Ending stocks on a milk-fat basis for 2022 have been lowered to 14.7 billion pounds (-0.6 billion), as lower expected total supply and higher exports more than offset lower expected domestic use. On a skim-solids basis, the forecast for ending stocks has been lowered to 10.9 billion pounds (-0.2 billion) as a lower expected supply more than offsets lower expected domestic use.

With the substantially lower projected milk supply, dairy product price forecasts for 2022 have been raised from last month's projections. Wholesale price forecasts for Cheddar cheese, butter, NDM, and dry whey are \$1.765 (+5.0 cents), \$1.910 (+15.5 cents), \$1.485 (+10.5 cents), and \$0.530 (+2.0 cents) per pound, respectively.

With higher projected wholesale prices for cheese and dry whey, the Class III milk price forecast for 2022 is \$17.75 per cwt, \$0.65 higher than the previous month's forecast. Due to higher butter and NDM price forecasts, the Class IV milk price projection for 2022 is \$18.70 per cwt, \$1.55 above last month's forecast. The all-milk price forecast for 2022 is \$20.25 per cwt, an increase of \$1.05 from last month's projection.

Pork/Hogs

Mildred Haley

Slaughter Constraints Limit Fourth-Quarter Processing Activity

Each *Quarterly Hogs and Pigs* report breaks the inventory of market hogs into four weight categories.³ These categories can serve as indicators of upcoming supplies of hogs for slaughter and processing. The September 2021 report indicated that hog numbers in the 180-pound-and-over category declined 1 percent from a year earlier. September 1 hogs classified in this category should have been processed by the end of October. It is notable, then, that estimated federally inspected (FI) slaughter numbers for September and October 2021 (adjusted for slaughter-day differences) declined about 3 percent from the same period of 2020. The shortfall in FI slaughter numbers could be attributable to several factors, the most credible being a decline in processor demand for hogs.

The most important factors driving lower processor demand for hogs are reduced supplies of processing plant labor and court-imposed ceilings on line speeds in several processing plants. Industry analysis has indicated that the U.S. pork industry has struggled for quite some time with binding labor constraints.⁴ Longstanding labor shortages have likely been exacerbated by the pandemic and by measures to recover from it. Lower line speeds pertain to six processing plants that had been running at speeds higher than the industry average as part of a USDA study. The reductions resulted from a Federal court order that took effect on June 30. The court order slowed line speeds from 1,402 head per hour to 1,106 head per hour, effectively reducing weekly U.S. pork processing capacity by about 2.5 percent.⁵

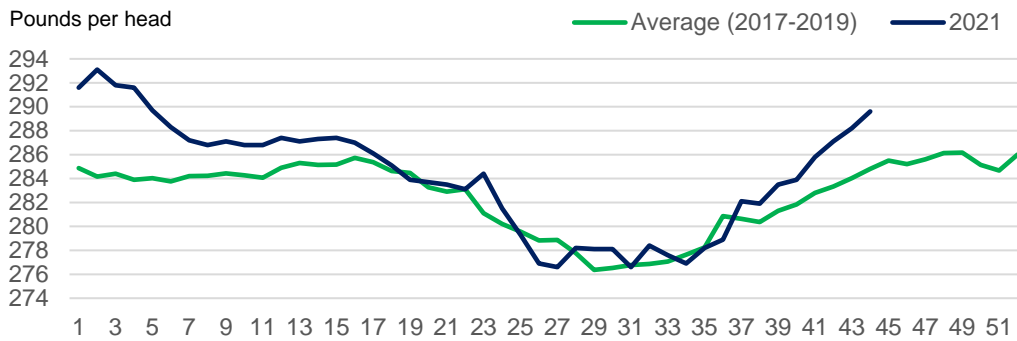
Constraints on slaughter capacity/throughput likely explain much of the September-October decline in processor demand for market hogs compared with a year ago. It follows that labor shortages in processing plants have both upstream and downstream effects. The figure below shows weekly hog live weights.

³ Under 50 pounds, 50-119 pounds, 120-179 pounds, and 180 pounds and over.

⁴ "A Baseline Study of Labor Issues and Trends in U.S. Pork Production." Christian Boessen, Georgeanne Artz, and Lee Schulz. March 2018. Research Commissioned by the National Pork Council. Updated by Holly Cook, August 2021.

⁵ "Economic Impact of the Recent District Court Ruling Regarding Line Speeds on the U.S. Pork Industry." Research Commissioned by the National Pork Council. Dermot Hayes, 2021.

Weekly estimated average weight of barrows and gilts: Iowa, Southern Minnesota-South Dakota direct hog reporting area

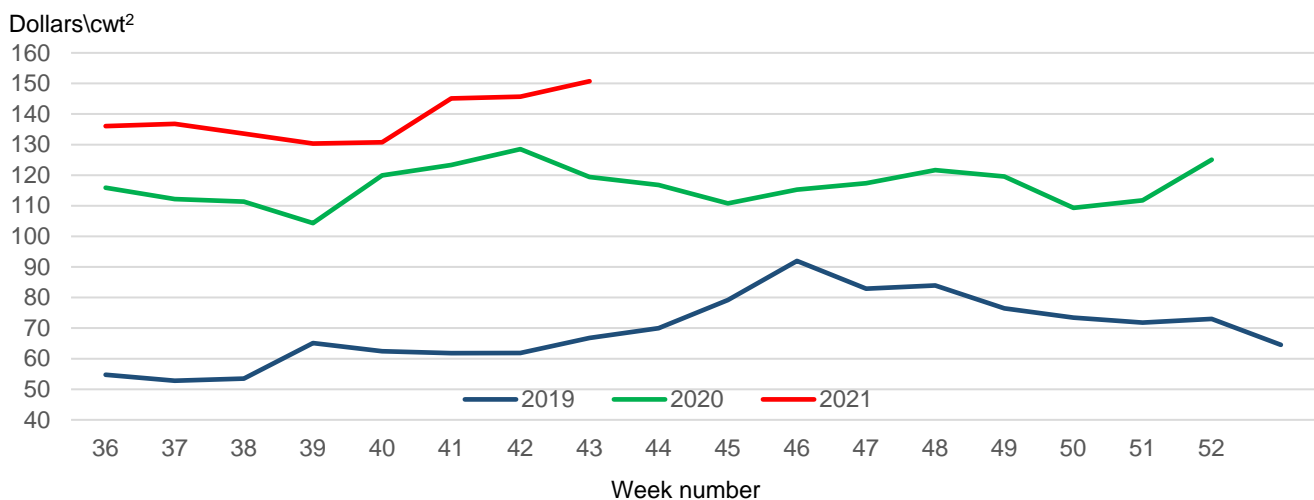


Source: USDA, Agricultural Marketing Service.

From the week ending September 4 (week 36 in the figure) through the week ending November 6 (week 45), live weights have increased 11.2 pounds, or more than 4 percent, compared with 4.6 pounds and 1.6 percent for the average of the 3 years from 2017-19. Part of the increase is almost certainly attributable to cooler Midwest weather and to new, nutrient-rich corn compounded into hog rations, but part of the weight gain is probably also attributable to slower pace of processor demand for hogs. As the rate of processor purchases slows, market-ready hogs that would have been purchased and processed continue to consume feed and gain weight, as they wait to be processed.

Downstream effects from short-handed processing plants are apparent in widening price spreads of deboned pork cuts—which require increased labor allocations—and bone-in pork cuts. The September-October 2021 ham price spread averaged \$138.62 per cwt, an increase of almost 19 percent from the \$116.87 per cwt spread in the same period of 2020, and 131.5 percent higher than 2019’s average spread of \$59.88 per cwt.

Weekly price spread: [Weighted average basket of boneless pork cuts¹] - [23-27 pound trimmed selected bone-in ham]



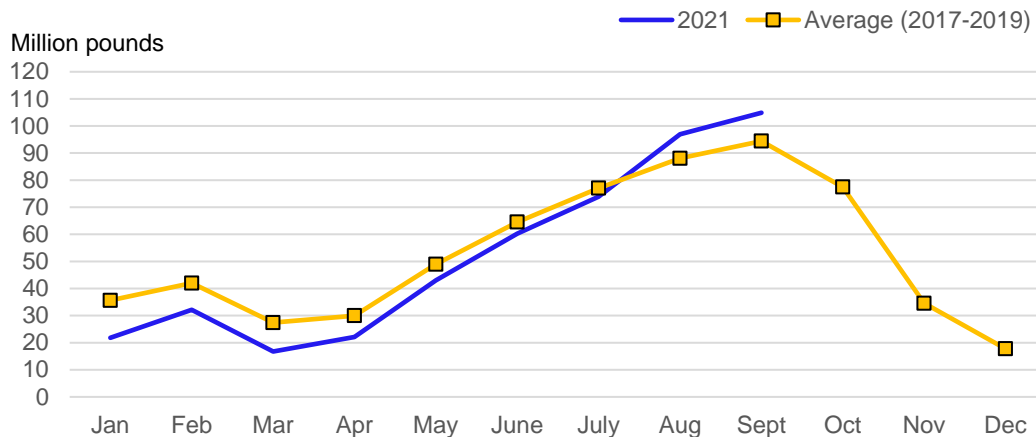
¹Weighted average basket of boneless pork cuts= insides+outsides+knuckles+lite butts.

²Hundredweight.

Source: USDA, Economic Research Service calculations with USDA Agricultural Research Service price series.

While meat price spreads are likely affected by the higher costs confronting the U.S. meat distribution system in late 2021—transportation bottlenecks and energy costs especially—the rapid accumulation of bone-in ham stocks between July and September, in particular, suggests a labor reallocation away from boning work at the processing plant level. Between July and September 2021, bone-in ham stocks increased almost 42 percent, from about 74 million pounds in July to almost 105 million pounds in September. This compares with the 23-percent change of stocks between July and September in the 3-year-average period 2017–19.

Monthly ending stocks: Bone-in hams



Source: USDA, Agricultural Marketing Service.

Fourth-Quarter Commercial Pork Production Forecast Largely Unchanged; Hog Prices Decline

Continued year-over-year lower slaughter rates in the fourth quarter is expected to be largely offset by heavier average dressed weights, leaving the commercial pork production forecast largely unchanged from last month. Production is expected to be 7.2 billion pounds, down more than 4 percent from a year ago. Ample national hog supplies are expected to pressure prices seasonally. Fourth-quarter prices of live equivalent 51-52 percent lean hogs are expected to average \$57 per cwt, down from the October forecast of \$65 per cwt.

U.S. pork exports in September were 510 million pounds, down 6.3 percent from a year ago. Exports totaled 1.5 billion pounds for the third quarter, 5 percent lower than the third quarter of 2020. Tables summarizing major export destinations in September 2021 and in the third quarter of this year are summarized below. It is notable that the United States exported 8 percent of its commercial pork production to Mexico in the third quarter of 2021, and that 58 percent of U.S. third-quarter exports were shipped to Western Hemisphere nations. U.S. pork exports in 2021 are expected to be 7.2 billion pounds, down 1.2 percent from 2020. The 2022 pork export forecast is unchanged at 7.4 billion pounds, a year-over-year increase of 3 percent.

U.S. pork exports: Volumes and export shares of the 10 largest foreign destinations in September 2020 and 2021					
Country	Exports	Exports	Percent change	Export share	Export share
	September 2020	September 2021	(2021/2020)	September 2020	September 2021
	(Million pounds)	(Million pounds)		Percent	Percent
World	545	510	-6.3		
Mexico	129	189	47	24	37
Japan	95	88	-7	17	17
Canada	60	57	-5	11	11
China	120	54	-55	22	11
South Korea	28	27	-3	5	5
Colombia	13	22	67	2	4
Dominican Republic	8	12	49	2	2
Honduras	8	12	60	1	2
Australia	19	10	-49	3	2
Guatemala	2	9	260	0.5	2

Source: USDA, Economic Research Service.

U.S. pork exports: Volumes and export shares of major destination regions in the third Quarter of 2020 and 2021					
Country	Exports	Exports	Percent change	Export share	Export share
	Third qtr. ¹ 2020	Third qtr. ¹ 2021	(2021/2020)	Third qtr. ¹ 2020	Third qtr. ¹ 2021
	(Million pounds)	(Million pounds)		Percent	Percent
World	1,627	1,544	-5		
Western hemisphere	699	902	29	43	58
Asia	828	594	-28	51	38
European Union	0.37	0.95	155	0.02	0.06
Australia	48	33	-32	3	2
Other	52	15	-72	3	1

¹Quarter

Source: USDA, Economic Research Service.

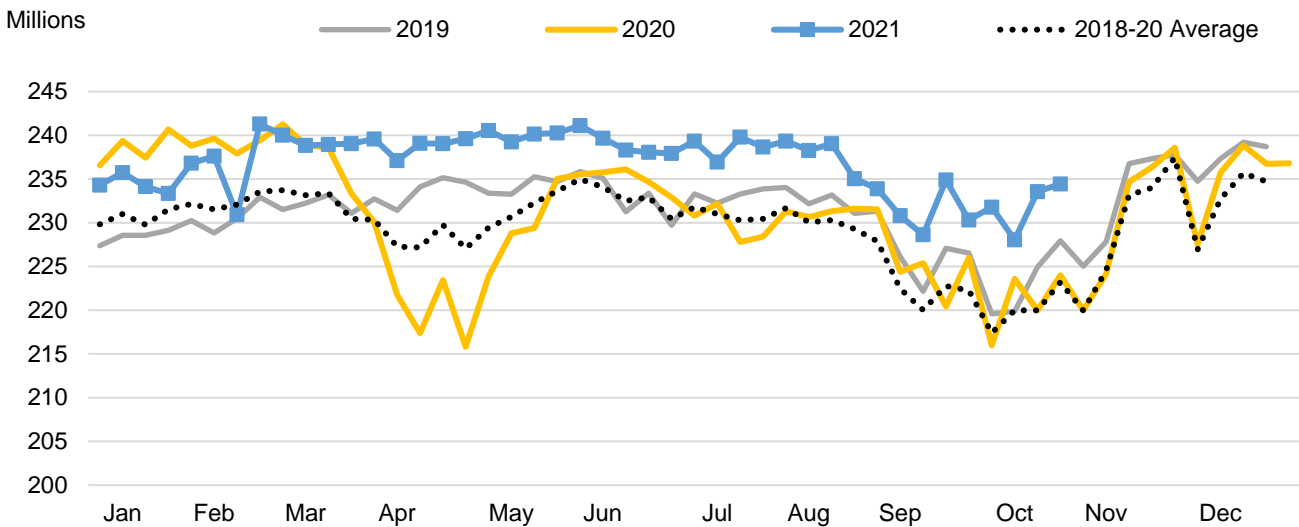
Poultry

Grace Grossen and Adriana Valcu-Lisman

Broiler Production Forecasts Adjusted Up in Fourth Quarter; Unchanged in 2022

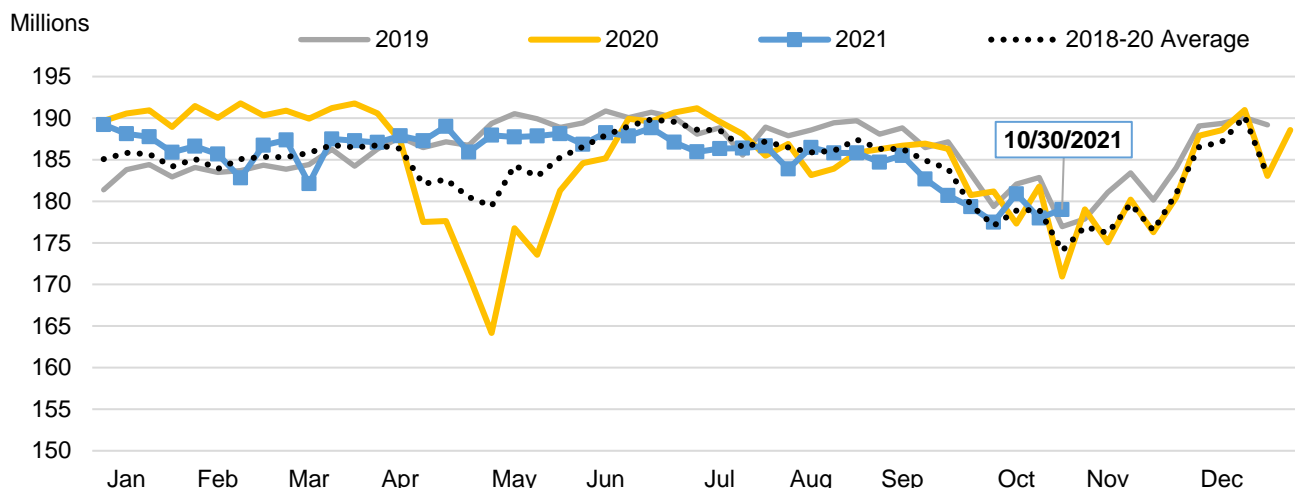
September broiler production totaled 3.927 billion pounds, a year-over-year increase of 1.3 percent. While slaughter was only about half a percent up from the year before, the average live weight increased by almost 1 percent year over year. Third-quarter production totaled 11.579 billion pounds, a 2-percent increase from 2020. Chick placements were up 6 percent year over year in the week ending October 30th, the largest increase since May, when year-over-year comparisons were still skewed by the COVID-19-related disruptions in 2020. While weekly egg sets have averaged about 4 percent above 2020 levels since April, weekly broiler placements have trended at or below 2020 numbers. Based on this stronger placement data and preliminary October production data, the fourth-quarter production forecast was increased by 25 million pounds to 11.125 billion pounds. This would bring annual production to 44.828 billion pounds, an increase of almost 1 percent over 2020 production. The production forecast for 2022 is unchanged at 45.240 billion pounds, 1-percent growth over the 2022 forecast.

Weekly broiler eggs set



Source: USDA, National Agricultural Statistics Service.

Weekly broiler chick placements



Source: USDA, National Agricultural Statistics Service.

Broiler Exports Adjusted Up

September broiler exports totaled 597.3 million pounds, a decrease of 3 percent from last September. Year-over-year decreases to China (-41.3 million pounds), Iraq (-8.8 million pounds), Canada (-7.7 million pounds), Vietnam (-7.6 million pounds), Haiti (-1.8 million pounds), and others were only partially offset by year-over-year increases in shipments to Mexico (+4.8 million pounds), Cuba (+6.1 million pounds), Guatemala (+4.9 million pounds), and Angola (+2.6 million pounds). Thanks in part to strong August shipments, third-quarter broiler exports totaled 1.844 billion pounds, an increase of 1 percent over the third quarter of 2020. Based on optimism for shipments to a number of emerging markets in the fourth quarter, the fourth-quarter export forecast was increased by 50 million pounds to 1.9 billion pounds. This would bring the annual total to 7.544 billion pounds, a 2-percent increase over 2020. The 2022 export forecast was adjusted up to 7.465 billion pounds, 80 million pounds less than the 2021 forecast. This would represent just under 17 percent of forecast production in 2022.

U.S. Broiler Exports: Volume and export share, September 2020 and 2021

Country	Volume (million pounds CWE)			Export Share (percent)	
	September 2020	September 2021	Change in volume	September 2020	September 2021
Mexico	133.3	138.2	4.8	21.6	23.1
Cuba	33.2	39.3	6.1	5.4	6.6
Philippines	20.5	18.9	-1.6	3.3	3.2
China	70.5	29.1	-41.3	11.4	4.9
Taiwan	26.1	26.0	-0.1	4.2	4.4
Canada	33.6	25.8	-7.7	5.4	4.3
Guatemala	19.1	24.0	4.9	3.1	4.0
Angola	26.0	28.6	2.6	4.2	4.8
Vietnam	22.4	14.8	-7.6	3.6	2.5
Colombia	20.2	17.9	-2.3	3.3	3.0
Haiti	15.8	14.0	-1.8	2.6	2.3
World	617.2	597.3	-19.9	100	100

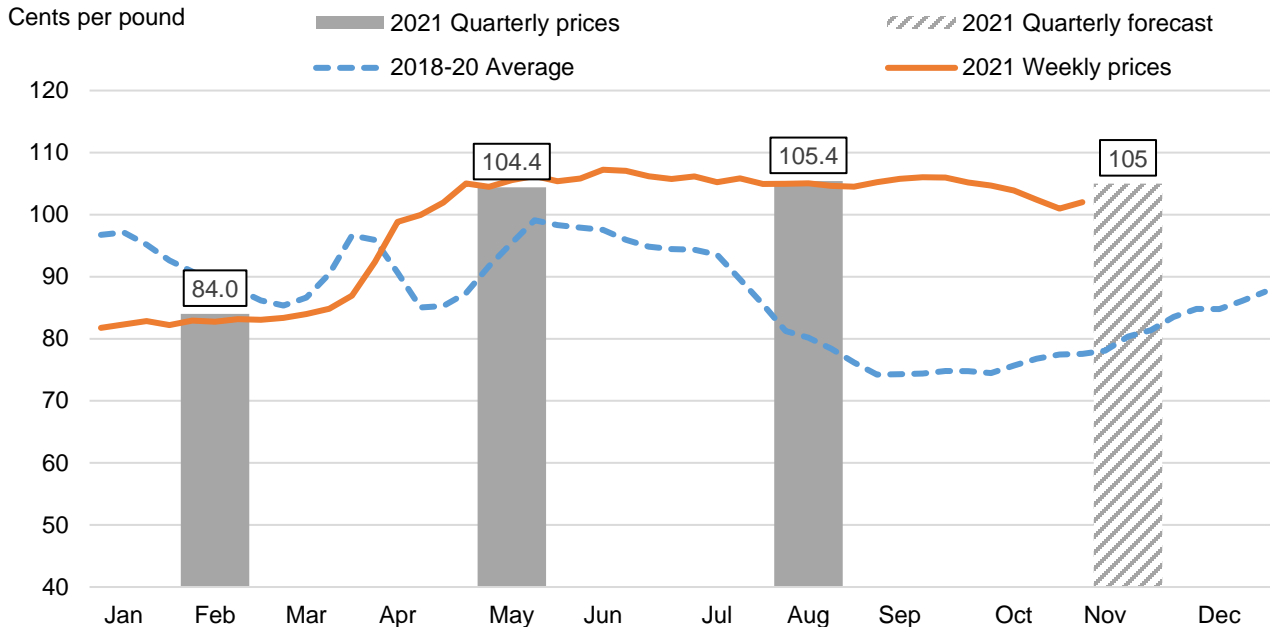
Notes: Top foreign markets based on 2021 year-to-date exports, CWE = Carcass weight equivalent.

Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

Broiler Prices Adjusted Up

October broiler prices began to gradually decline from their steady levels in the third quarter, averaging 102.95 cents per pound and reaching a low of 100.98 cents per pound in the week ending October 29th. Prices bounced back to an average of 102.02 cents per pound in the first week of November. Based on expectations of a seasonal upswing in prices in the last months of the year, the fourth-quarter forecast was adjusted up by 5 cents to 105 cents per pound. Forecast prices for 2022 were adjusted up to 105 and 106 cents per pound in the first and second quarters, respectively, making the 2022 annual average forecast price 99 cents per pound.

National composite wholesale broiler price



Source: USDA, Agricultural Marketing Service, and USDA, *World Agricultural Supply and Demand Estimates*.

While wholesale prices for broiler parts remain elevated from last year, they declined in October from September levels. Boneless-skinless breast prices declined by 11 percent month over month to 186.5 cents per pound. This is still more than double last October's price. Wholesale prices for chicken wings declined by 6 percent from September, averaging 293.9 cents per pound in October. This is 35 percent above last year. Chicken tender prices also declined by 10 percent month over month, averaging 270.67 cents per pound in October, 78 percent above October of last year.

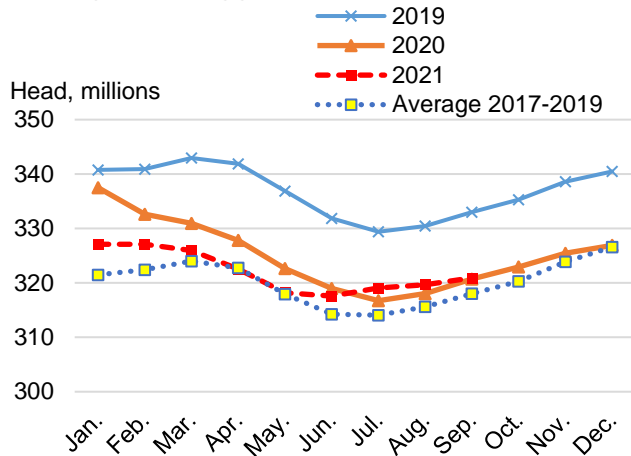
Near-Term Table Egg Production Revised Up

Table egg production was 661.4 million dozen in September, about 1.3 percent higher than a year ago. This increase was due to a 1.2-percent year-over-year increase in the average lay rate, while the size of the layer flock was just above year-ago levels.

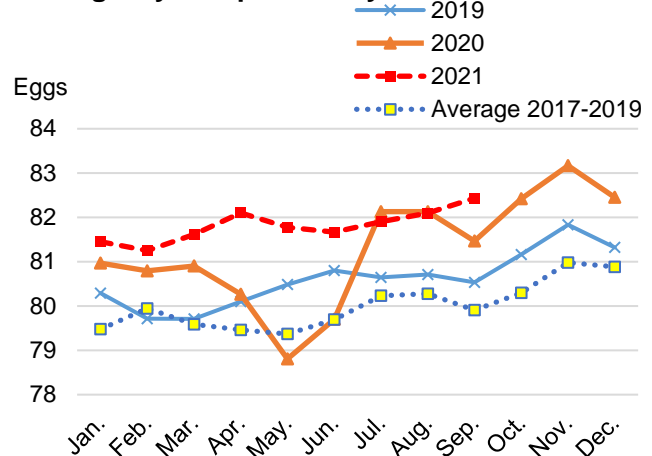
Year-to-date average sizes of the table layer flock show that COVID-19-linked flock adjustments continue to linger. Following the reductions in the first part of 2020, producers have been slowly rebuilding the table layer flock, with July the first month when the flock was year-over-year larger. However, younger layer flocks are more productive, meaning that higher laying rates can partly compensate for smaller flock sizes. Additionally, producers can control the size and age of the layer

flock via molting, pullet replacement, and slaughtering of the light spent hens (former egg-laying chickens). With generally steady trends in the above production indicators, the higher lay rates have the potential to support higher production levels in the near term (see chart). The fourth-quarter table egg production forecast was revised up to 2,085 million dozen, while the forecasts for the first two quarters of next year were revised up 5 million dozen each, to 2,025 million dozen and 2,020 million dozen, respectively.

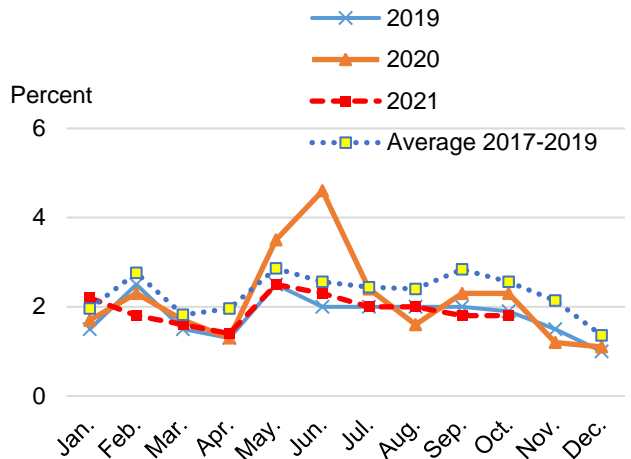
Average table egg layer inventory



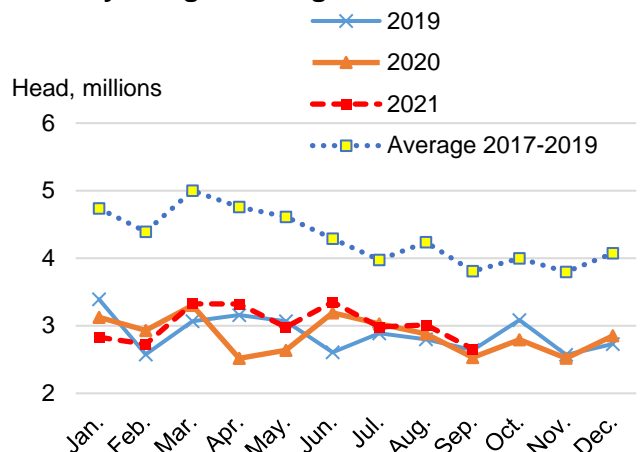
Average lay rate per 100 layers



Percent of flock in molt



Monthly slaughter of light hens

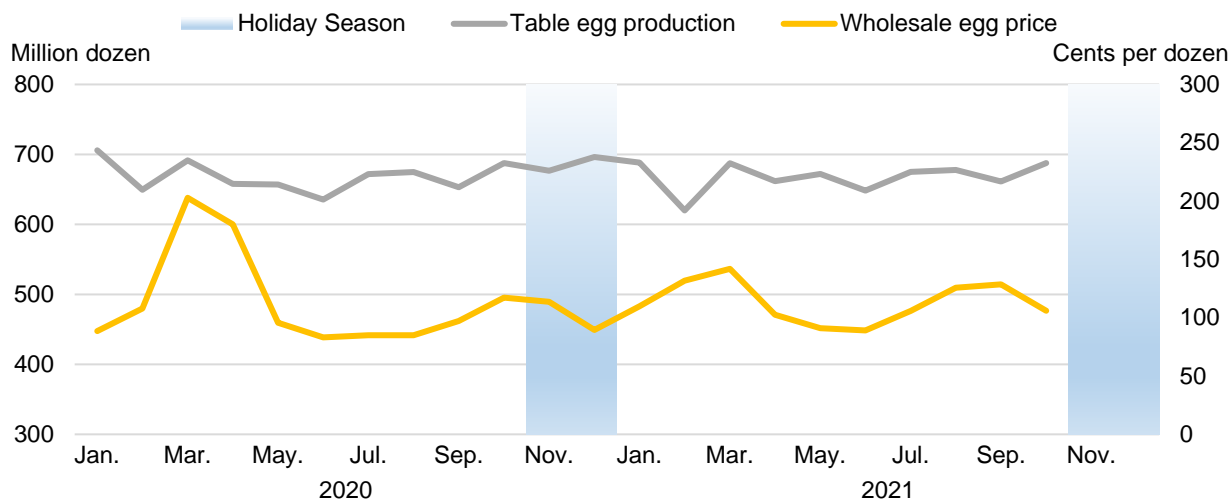


Source: USDA, National Agricultural Statistics Service.

Wholesale Egg Prices Revised Down

Following 4 months of year-over-year increases, October wholesale egg prices (New York, Grade A, Large) were 9.6 percent down from last year, averaging 106 cents per dozen. October prices followed the expected seasonal pattern in the first half of the month. However, prices moved counter-seasonally lower toward the end of month and during the first week of November, when prices are typically expected to increase due to higher demand stemming from the holiday baking season.

Table egg production and wholesale egg prices¹

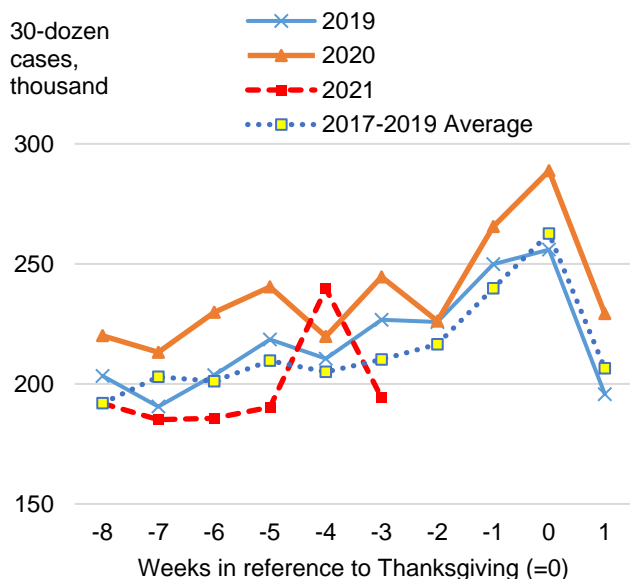


Source: USDA, Economic Research Service using data from USDA, Agricultural Marketing Service and National Agricultural Statistics Service.

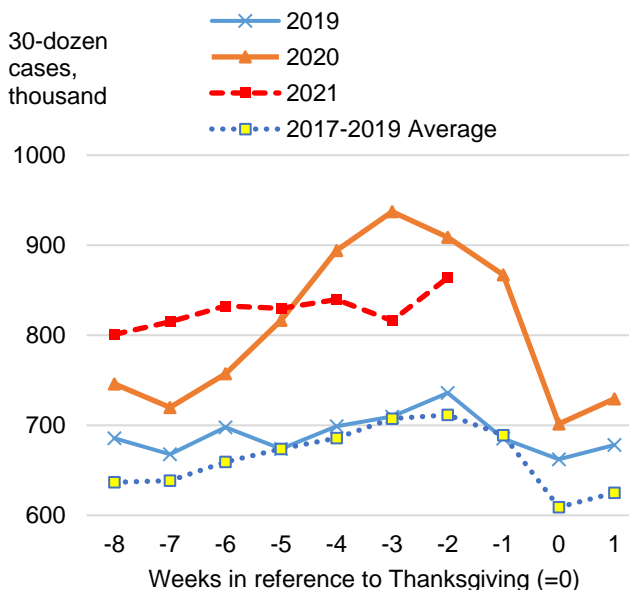
¹ New York, Grade A, Large. Monthly averages of mid-point daily values.

The softer prices ahead of the holiday season might be explained by an abundant supply and continued uncertainties in demand that has not yet achieved pre-pandemic levels (see chart). The wholesale egg price forecast for the fourth quarter was lowered to 125 cents per dozen.

Weekly national retail egg purchases



Weekly large shell egg inventory



Source: USDA, Economic Research Service using data from USDA, Agricultural Marketing Service.

Shell-Egg Equivalent Export Forecasts Revised Up

At 39.9 million dozen of shell-egg equivalent, September exports of eggs and egg products reached another historic high. September shipments represented a 35.7-percent year-over-year-increase. Total egg exports in the first three quarters totaled 307 million dozen shell-egg equivalent — an 18.7 percent year-over-year increase.

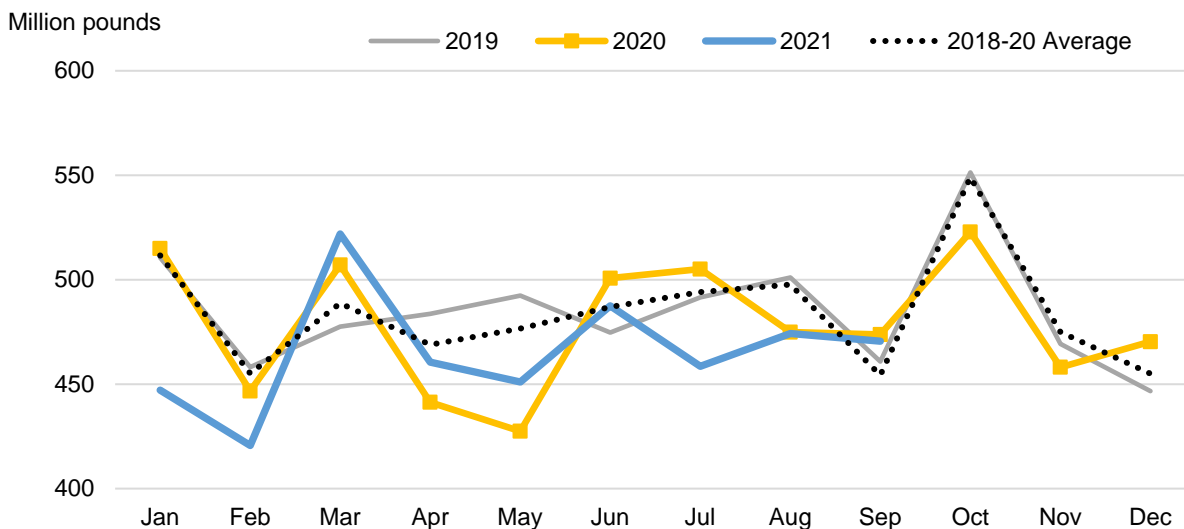
The January-to-September increase in total egg exports was the result of higher shipments of shell eggs (36 percent) that more than compensated for a reduction in shipments of egg products (-4.4 percent). Year-over-year changes in total egg exports over the January-to-September period were dominated by significant increases in shipments to Canada (+4,064 thousand dozen), South Korea (+52,856 thousand dozen), Japan (+8,989 thousand dozen), and Hong Kong (+4,637 thousand dozen). These increases more than compensated for decreases in shipments to traditional markets such as Mexico, the Caribbean region (Bahamas, Trinidad and Tobago), Denmark, and United Arab Emirates.

Given the expectation of robust foreign demand—especially from South Korea, which is recovering from the recent Highly Pathogenic Avian Influenza (HPAI) outbreaks during the last winter and spring season and softer-than-expected domestic prices—the fourth-quarter export forecast was revised up to 110 million dozen shell-egg equivalent. The new forecast revision projects 2021 total egg exports to 417 million dozen, a 21.2-percent year-over-year increase. The strength in exports is forecast to continue in the first half of 2022, with forecasts for the first two quarters revised up to 100 million dozen and 95 million dozen, respectively.

Turkey Production Adjusted Up in 2022

Turkey production in September totaled 470.5 million pounds, less than a percent below September production in 2020. While slaughter for the month was nearly flat with last year, average weights were slightly below last year, and September 2021 also had one fewer slaughter day than September 2020. The third quarter totaled 1.403 billion pounds, a decrease of about 3 percent from the third quarter of 2020.

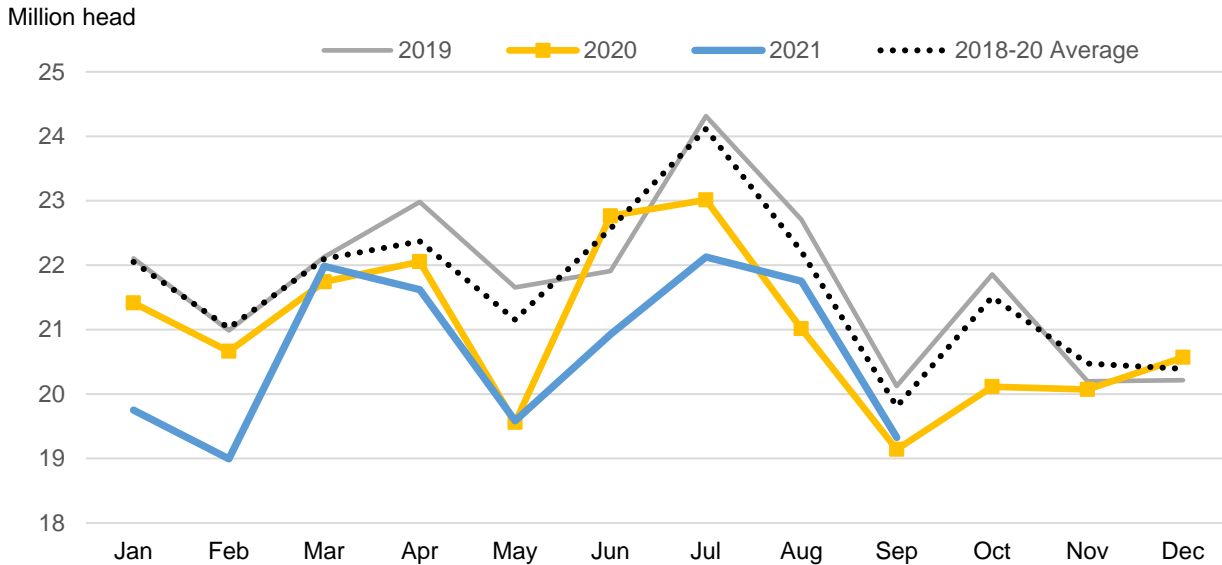
Monthly turkey production



Source: USDA, National Agricultural Statistics Service.

Poult placements increased year over year in both August and September, by 4 and 1 percent respectively. However, they remained below 2019 levels and the 3-year average. With increasing placements indicating possible expansion of production, the first-quarter 2022 production forecast was increased by 5 million pounds to 1.4 billion pounds. Annually, production is forecast to grow by almost 2 percent from 2021 to 2022.

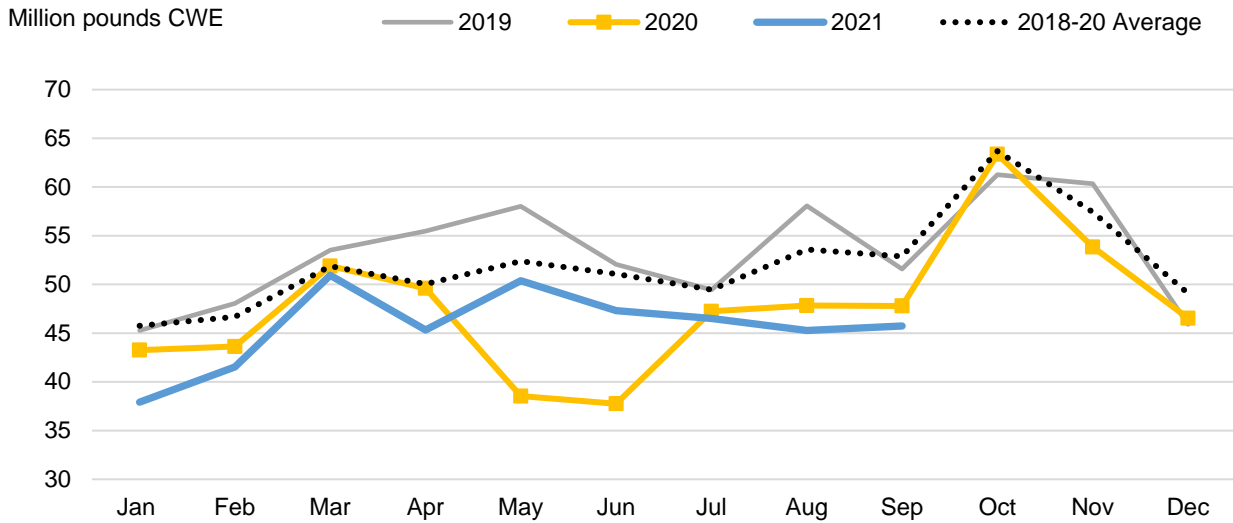
Monthly turkey placements



Source: USDA, National Agricultural Statistics Service.

Turkey exports totaled 45.7 million pounds in September, down 4 percent from 2020. Third-quarter exports totaled 137.5 million pounds, a 4-percent decrease from third-quarter 2020. The fourth-quarter export forecast was adjusted up by 5 million pounds to 155 million pounds based on expectations for strong October shipments. In addition to the strong production typical in October, shipments to Mexico have peaked in October in recent years, as well as shipments to other countries, including Guatemala and Colombia. The 2022 export forecast was also increased by 10 million pounds to 570 million pounds, an increase of 1 percent over 2021 and 10 percent of forecast production in 2022.

Monthly turkey exports

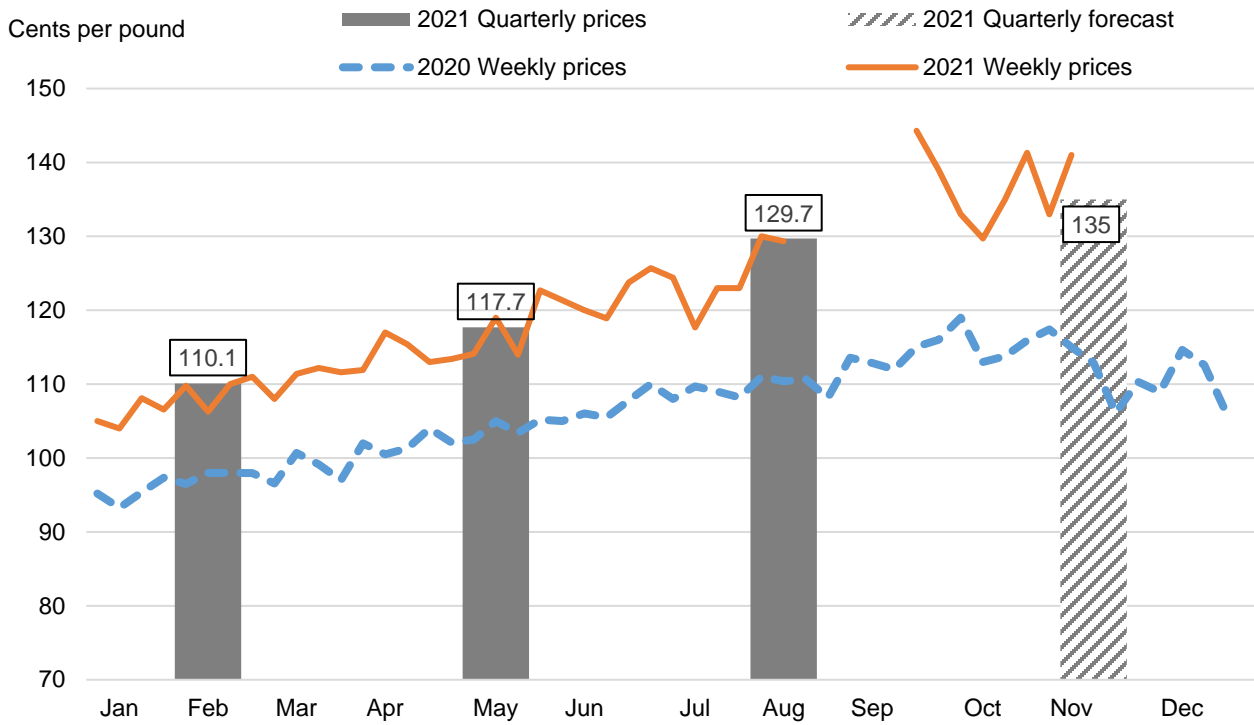


Note: CWE = Carcass Weight Equivalent.
 Source: USDA, National Agricultural Statistics Service.

Turkey Prices Adjusted Up

October weekly turkey prices were very volatile, ranging from a low of 129.7 cents per pound in the week ending October 8th to a high of 141.31 cents per pound in the week ending October 22nd. The October average price was 135.13 cents per pound. In the first week of November, the average price increased to 141 cents per pound. The fourth-quarter price forecast was adjusted up by 6 cents to 135 cents per pound. This would bring the annual average to 123 cents per pound. The first- and second-quarter price forecasts in 2022 were adjusted up to bring the annual average to 122 cents per pound.

Wholesale whole-hen frozen turkey prices



Source: USDA, Agricultural Marketing Service, and USDA, *World Agricultural Supply and Demand Estimates*.

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Dairy forecasts

	2020		2021					2022			
	IV	Annual	I	II	III	IV	Annual	I	II	III	Annual
Milk cows (thousands)	9,429	9,388	9,458	9,502	9,455	9,400	9,455	9,395	9,390	9,390	9,395
Milk per cow (pounds)	5,892	23,777	6,003	6,119	5,915	5,910	23,950	6,060	6,200	6,015	24,280
Milk production (billion pounds)	55.6	223.2	56.8	58.1	55.9	55.6	226.4	56.9	58.2	56.5	228.1
Farm use	0.3	1.1	0.3	0.3	0.3	0.3	1.1	0.3	0.3	0.3	1.1
Milk marketings	55.3	222.1	56.5	57.9	55.7	55.3	225.3	56.7	58.0	56.2	227.0
Milk-fat (billion pounds milk equiv.)											
Milk marketings	55.3	222.1	56.5	57.9	55.7	55.3	225.3	56.7	58.0	56.2	227.0
Beginning commercial stocks	17.7	13.6	15.6	18.1	20.0	18.0	15.6	14.9	17.0	18.7	14.9
Imports	1.6	6.8	1.3	1.8	1.8	1.6	6.4	1.4	1.6	1.8	6.5
Total supply	74.5	242.5	73.4	77.8	77.5	74.9	247.4	72.9	76.6	76.7	248.5
Commercial exports	2.1	9.3	2.6	3.1	3.2	3.0	11.9	2.7	3.2	3.0	11.4
Ending commercial stocks	15.6	15.6	18.1	20.0	18.0	14.9	14.9	17.0	18.7	17.0	14.7
Commodity Credit Corporation donations ¹	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic commercial use ²	56.7	217.4	52.7	54.6	56.2	57.0	220.6	53.3	54.7	56.8	222.3
Skim solids (billion pounds milk equiv.)											
Milk marketings	55.3	222.1	56.5	57.9	55.7	55.3	225.3	56.7	58.0	56.2	227.0
Beginning commercial stocks	10.4	10.2	10.9	11.6	12.0	11.0	10.9	11.0	11.2	11.2	11.0
Imports	1.3	5.6	1.4	1.5	1.4	1.4	5.7	1.3	1.4	1.4	5.5
Total supply	66.9	237.9	68.8	71.0	69.1	67.7	241.9	69.0	70.5	68.8	243.5
Commercial exports	11.6	47.2	12.4	14.1	12.9	12.1	51.4	12.6	14.1	13.2	51.8
Ending commercial stocks	10.9	10.9	11.6	12.0	11.0	11.0	11.0	11.2	11.2	10.2	10.9
Commodity Credit Corporation donations	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic commercial use ²	44.5	179.7	44.8	44.9	45.1	44.6	179.5	45.2	45.3	45.5	180.8
Milk prices (dollars/hundredweight) ³											
All milk	19.80	18.24	17.33	18.67	18.00	20.00	18.50	20.25	20.15	19.85	20.25
Class III	20.22	18.16	15.98	17.95	16.32	17.65	16.95	17.40	17.50	18.00	17.75
Class IV	13.38	13.49	13.71	15.98	16.09	18.30	16.00	18.70	18.80	18.90	18.70
Product prices (dollars/pound) ⁴											
Cheddar cheese	2.1296	1.9236	1.6146	1.7250	1.602	1.730	1.670	1.710	1.740	1.800	1.765
Dry whey	0.3827	0.3621	0.5064	0.6358	0.567	0.570	0.570	0.560	0.530	0.510	0.530
Butter	1.4746	1.5808	1.4677	1.7952	1.737	1.870	1.720	1.880	1.900	1.970	1.910
Nonfat dry milk	1.0812	1.0417	1.1226	1.2256	1.268	1.460	1.270	1.500	1.500	1.480	1.485

Totals may not add due to rounding.

¹ Commodity Credit Corporation donations include purchases made through the USDA Trade Mitigation program. They do not include products purchased under other programs.

² Domestic use for 2020 includes additional milk marketed but not processed.

³ Simple averages of monthly prices. May not match reported annual averages.

⁴ Simple averages of monthly prices calculated by the USDA, Agricultural Marketing Service, for use in class price formulas. Based on weekly USDA *National Dairy Products Sales Report*.

Sources: USDA, National Agricultural Statistics Service; USDA, Agricultural Marketing Service; USDA, Foreign Agricultural Service; and USDA, World Agricultural Outlook Board.

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