



Livestock, Dairy, and Poultry Outlook: January 2023

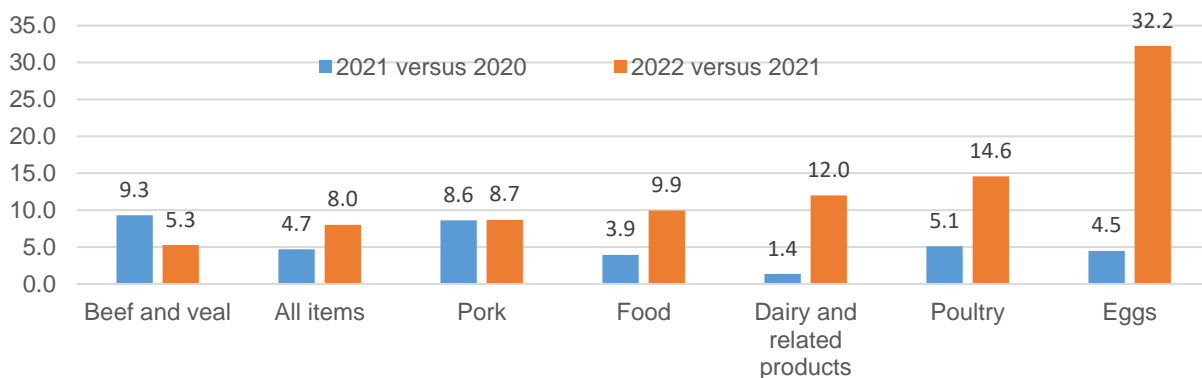
Inflation for all items, food, and selected animal products

The U.S. Department of Labor’s Bureau of Labor Statistics released consumer price indexes, CPI, for 2022 on January 12, 2023. The chart uses annual average CPI to calculate inflation rates and compares the inflation rates in 2021 and 2022 for all products, food, beef, pork, poultry, eggs, and dairy products.

The CPI for beef and veal is the only item in the chart with a lower inflation in 2022 than in 2021. Beef and veal inflation was 9.3 percent in 2021 and 5.3 percent in 2022. All-items inflation was 4.7 percent in 2021 and 8.0 percent in 2022. Pork prices increased by 8.7 percent in 2022. The 2022 CPI for food increased by 9.9 percent. 2022 inflation for dairy, poultry, and eggs exceeded that for 2022 food in general. Eggs had the largest inflation rate, 32.2 percent.

Annual inflation for selected items

Percent increase over last year



Source: U.S. Department of Labor, Bureau of Labor Statistics.

Summary

Beef/Cattle: Based on slaughter data through December, a slower-than-expected pace of fed cattle slaughter and lighter carcass weights more than offset higher reported cow slaughter. As a result, expected fourth-quarter 2022 production has been lowered by 115 million pounds. A temporal shift in fed cattle marketings and an outlook for higher cow slaughter raised projected beef production in 2023 by 170 million to 26.3 billion pounds. Fed cattle and feeder steer prices in 2023 are raised on firm demand. Beef imports for 2022 are unchanged, but the import forecasts for 2023 are raised on early customs data. Export projections for 2022 are lowered on recent data but they are left unchanged in 2023.

Dairy: The all-milk price estimate for 2022 and the forecast for 2023 have been lowered based on recent downward trends in domestic and international prices and weaker-than-expected demand in the domestic market. The 2022 all-milk price estimate is lowered to \$25.55 per hundredweight (cwt), down 10 cents from the previous month's forecast, while the 2023 all-milk price forecast is lowered to \$21.60 per cwt, down \$1.10. The milk production estimate for 2022 is lowered from last month due to lower expected milk per cow. The 2023 milk production forecast is lowered due to smaller forecast dairy herd size as producers respond to lower prices. With competitive domestic prices expected for dairy products, export-volume estimates are higher in both 2022 and 2023.

Pork/Hogs: The information in the December *Quarterly Hogs and Pigs* report broadly implies that 2023 pork production is likely to increase 1.8 percent over production in 2022. Hog prices are expected to average about \$68 per cwt, down almost 5 percent compared to prices last year. Pork export projections for 2023 are increased 70 million pounds to 6.35 billion pounds, 0.3 percent higher than last year, on lower 2023 U.S. pork prices and moderating increases of the exchange rate value of the U.S. dollar.

Poultry/Eggs: Broiler production, exports, and ending stocks are adjusted up for 2022 on strong November data. Forecast production for 2023 is adjusted down on recent hatchery numbers, and broiler exports are adjusted down in 2023 on weakened competitiveness. Broiler price forecasts are also lowered in 2023 reflecting strong supply, averaging 12 cents less than 2022. The forecast table-egg production is revised downward to account for December Highly Pathogenic Avian Influenza (HPAI) discoveries, as well as for over softness in upstream production indicators. The wholesale egg price forecast (New York, Grade A, large) for 2023 is increased due to record-high December prices that to some extent carried over into 2023. Trade expectations for 2022 and the forecast for 2023 are revised to reflect November data: the total egg export forecast is revised downward and the total egg import forecast is revised upward. Turkey production is adjusted up slightly in the fourth quarter of 2022 and in the first quarter of 2023 based on strong November production and placement data. Estimated 2022 turkey imports are adjusted down on weak shipments from Chile, while forecast exports are adjusted down on weak competitive strength in international markets.

Beef/Cattle

Russell Knight and Hannah Taylor

2023 Beef Production Raised

Based on the most recent *U.S. Drought Monitor* data, the impact of drought continues to be a theme into the new year even as rains bring relief to beef cattle producers in parts of the West. However, pasture and forage availability in the Central and Southern Plains likely remain tight as drought continues there. The impact can be seen in the hay stocks estimate released in the USDA, National Agricultural Statistics Service (NASS) report. Hay stocks on December 1, 2022, were 72 million tons, 9 percent below a year ago and the lowest for this period since 1954. This likely supports higher-than-expected cow slaughter in December, suggesting producers are still hampered by limited forage and higher associated costs. For the week ending January 10, the *U.S. Drought Monitor* reported that over 69 percent of the United States is experiencing some level of drought, about 4 percent less than a year ago. According to the USDA World Agricultural Outlook Board, approximately 58 percent of the U.S. cattle herd is located in drought-stricken areas. This is an increase of 8 percentage points from a year ago.

Clarification concerning the drought impact over last year will be revealed when USDA, NASS releases the semi-annual *Cattle* report on January 31. This report will provide estimates of cows and heifers available for breeding and an insight into the number of cattle that producers may be planning to place during 2023.

The latest USDA, NASS *Cattle on Feed* report showed a December 1 feedlot inventory of 11.673 million head, about 3 percent below 11.985 million head in the same month last year. Feedlot net placements¹ in November were down 2 percent year over year at 1.868 million head, higher than industry analysts' expectations. Marketings in November were 1.891 million head, up more than 1 percent year over year. On December 1, the number of cattle on feed over 150 days dipped 5 percent below year-ago levels, the lowest since 2018 for the month. Tighter market-ready supplies from a year ago in Iowa, Kansas, and Nebraska more than offset larger volumes of cattle on feed over 150 days in Texas.

Based on actual and estimated data for December, the pace of fed and nonfed cattle slaughter according to the number of weekdays in the month was down about 5 percent and 1 percent, respectively, from last year. However, the share of cows in the slaughter mix was up more than 2 percentage points, likely pushing down average carcass weights. Winter weather conditions likely played a factor in fewer fed cattle slaughtered at lighter weights in the last 2 weeks of the month.

From last month's forecast, fourth-quarter 2022 production is lowered 115 million pounds based on December weekly slaughter reports and daily estimates. Lower reported steer and heifer and bull slaughter, as well as lower carcass weight data, more than offset higher cow slaughter. Total 2022 beef production is projected at 28.3 billion pounds, an increase of about 1 percent from 2021.

As suggested by the December *Cattle on Feed* data, tighter market-ready supplies of fed cattle are expected to slow down anticipated marketings in first-quarter 2023. However, larger-than-expected placements in November raised the outlook for marketings in the second and third quarters. The anticipated cow slaughter outlook for 2023 was raised on early January slaughter

¹ Net placements are placements minus other disappearance.

data and persistent poor forage conditions. Lighter carcass weights in fourth-quarter 2022 are carried over into early 2023. As a result, the increase in expected marketings and cow slaughter in 2023 more than offset lighter anticipated weights, raising the outlook for 2023 beef production by 170 million pounds to 26.4 billion pounds.

Cattle Prices Raised on Tightening Supplies

In December, prices for feeder steers 750–800 pounds at the Oklahoma City National Stockyards recorded a weighted average of \$179.88 per hundredweight (cwt), which was \$14 above December 2021. This raised the quarterly average to \$177.06 per cwt and the average annual price for 2022 to \$165.94 per cwt, up \$19, or 13 percent, from last year.

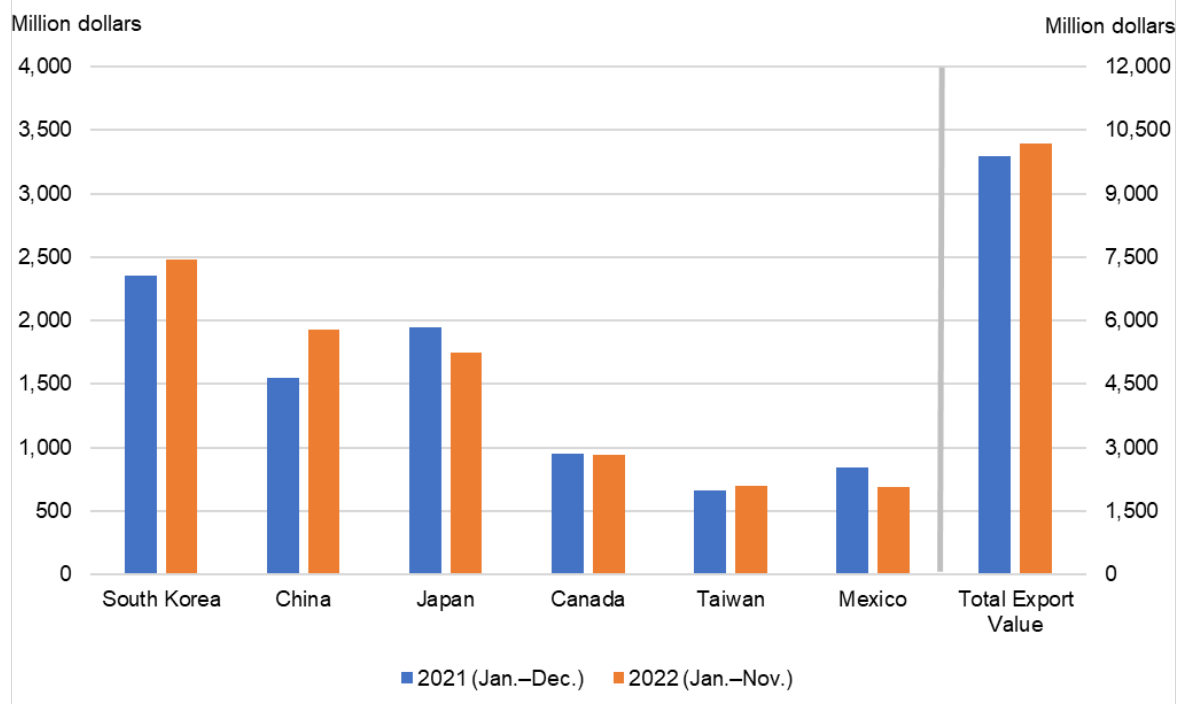
The first feeder steer prices of 2023 were reported on January 9 and 16 at \$178.19 and \$180.93 per cwt, almost \$22 and \$19 above the same weeks last year. Based on higher-than-expected November feedlot placements rising and tighter anticipated supplies of cattle available for placement in early 2023, the forecasts for feeder steer prices in the first two quarters of 2023 are raised to \$182 and \$192, an increase of \$5 and \$2, respectively. This raises the 2023 annual feeder steer price forecast to \$203.00 per cwt, a year-over-year increase of 22 percent.

Prices for fed steers in December averaged \$156.53 per cwt, more than \$17 above December 2021, which raised the fourth-quarter average price to \$152.99 per cwt. Fed cattle prices have continued steady into the new year. As reported for the weeks ending January 8 and 15, the negotiated prices for fed steers in the 5-area marketing region were \$157.74 and \$156.78 per cwt, respectively. Based on tighter supplies and expected strength in boxed-beef prices during the year, fed steer prices are raised in each of the quarters for an annual projection of \$158.50 per cwt in 2023.

Export Values Through November Exceed Record 2021 Full-Year Value

Exports in November totaled 277 million pounds, 6 percent below November 2021 but 3 percent higher than the 5-year average. The value of exports in November fell by over 100 million dollars from 2021, but the year-to-date value of exports increased 13 percent year over year. The total value of beef exports through November topped 10 billion dollars, already surpassing the full-year value from 2021, the previous annual record. As shown in the chart below, export values through November have topped the annual values in 2021 in several key markets, including South Korea, China, and Taiwan.

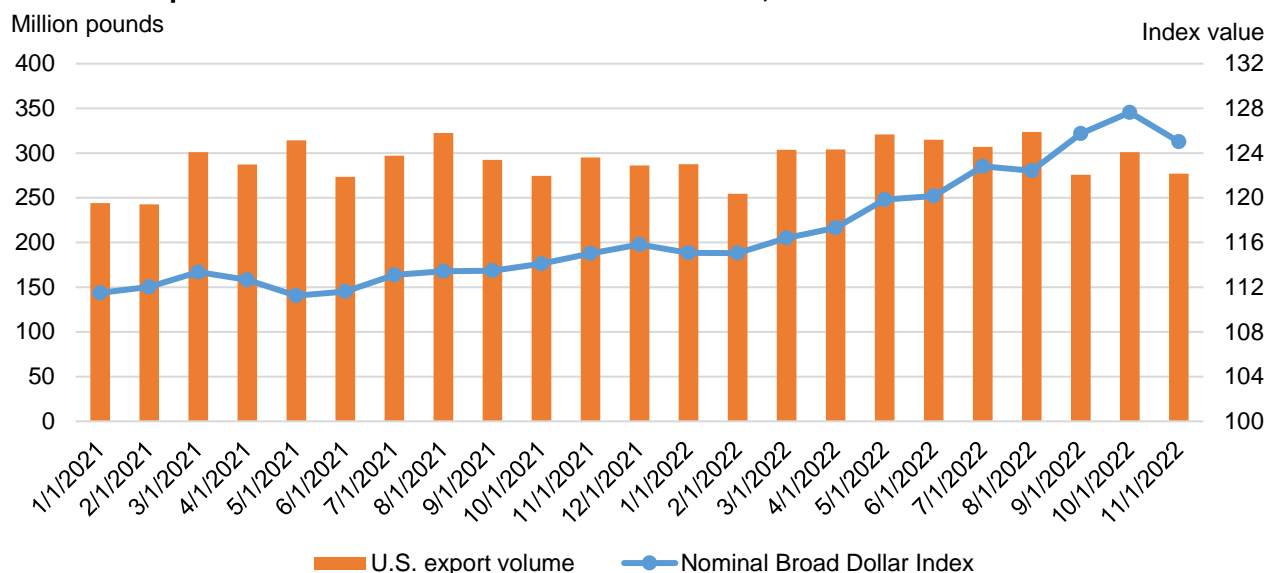
Cumulative beef export values, 2021 and 2022



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

Despite higher prices that have been bolstered by a strengthening U.S. dollar, global demand for U.S. beef has remained strong. The Nominal Broad Dollar Index, calculated by the Federal Reserve as an indicator of the exchange rates of the U.S. dollar against selected foreign currencies, has increased substantially since January 2021. The chart below shows how exports remained strong through August even as the index rose 6 percent from the start of 2022. Limited available supplies from other major beef suppliers such as Australia and New Zealand have supported the strong exports by the United States. The index fell again in December, but limited beef supplies next year from lower production will continue to support the price of U.S. beef, making it less competitive on the global market, especially as Australia recovers from the supply chain issues causing fewer exports from that country this year.

U.S. beef export volume and Nominal Broad Dollar Index, 2021–22



Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census, and Board of Governors of the Federal Reserve System.

Cumulative exports through November are shown in the table below. Exports continue to outpace last year due to strength in the first 8 months. However, cumulative exports for September through November are 1 percent below last year. Based on recent trade data, the beef export estimate for fourth-quarter 2022 is lowered 20 million pounds to 850 million, 6 million pounds below fourth-quarter 2021. The estimate for annual exports in 2022 is 3.542 billion pounds. The 2023 annual forecast is unchanged at 3.090 billion pounds.

U.S. beef exports by volume, January–November 2021 and 2022

Country	November 2022 exports	Year-to-date exports				Share of YTD exports, percent	
		2021	2022	Year-over-year volume change	Year-over-year percent change	2021	2022
Japan	61.6	757.7	745.0	-12.7	-2	24	23
South Korea	64.1	723.4	738.5	15.1	2	23	23
China	43.7	490.3	599.5	109.1	22	16	18
Mexico	26.8	287.8	254.2	-33.5	-12	9	8
Canada	23.9	247.8	251.9	4.1	2	8	8
Taiwan	13.5	176.0	186.8	10.7	6	6	6
ROW	43.5	461.3	494.3	33.0	7	15	15
Total	277.0	3144.3	3270.2	125.8	4		

Notes: Top six countries based on 2022 year-to-date exports; YTD = year-to-date; ROW = rest of world.

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

Stronger Imports From South America Expected To Frontload 2023

Beef imports in November were 241 million pounds, a year-over-year decrease of about 19 percent. Imports from nearly all major suppliers were lower year over year in November except for imports from Canada, which were 3 percent higher. The largest decline in shipments was from Brazil, down 63 percent; however, year-to-date imports from Brazil continue to outpace last year, up 42 percent. Year-to-date imports from Australia and New Zealand combined are down 14 percent from 2021.

U.S. beef imports by volume, January–November 2021 and 2022

Country	November 2022 imports	Year-to-date imports				Share of YTD imports, percent	
		2021	2022	Year-over-year volume change	Year-over-year percent change	2021	2022
Canada	82.8	877.9	887.2	9.3	1	29	28
Mexico	58.2	618.4	684.8	66.4	11	20	22
Brazil	15.0	317.8	451.4	133.6	42	10	14
Australia	30.5	380.8	367.8	-13.0	-3	12	12
New Zealand	18.2	476.4	367.1	-109.3	-23	15	12
ROW	36.3	402.4	385.4	-17.0	-4	13	12
Total	241.0	3073.6	3143.6	69.9	2		

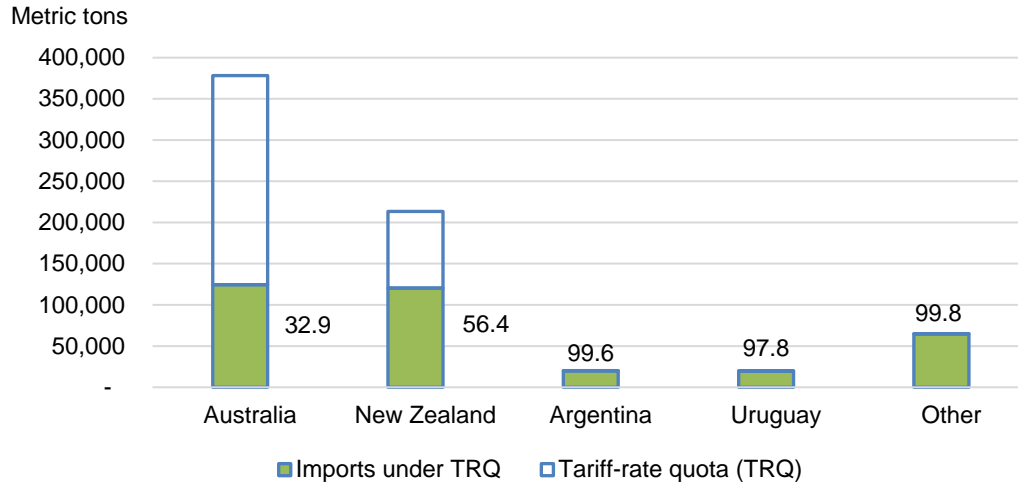
Notes: Top five countries based on 2022 year-to-date imports; YTD = year-to-date; ROW = rest of world.

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

The chart below shows the fill rates from the tariff-rate quotas (TRQ) in 2022. Once a quota is filled, imports entering under that quota are subject to a higher tariff. Imports from countries that do not have a specific quota or free trade agreement are counted under the “Other” quota. A majority of the product that filled the Other TRQ by April of 2022 was from Brazil. The 2022 TRQs ended on December 31 and were reset on January 1. Thus, the countries with a full quota in 2022 can once again send beef to the United States under the lower in-quota tariff. As of January 6, the Other quota for 2023 was already almost 34 percent full according to the U.S. Customs and Border Protection Quota Status Report. This is likely due to beef from Brazil, which sent nearly 100 million pounds in January 2022. While some of the spike in early 2022 was caused by China’s temporary ban on Brazilian beef, it appears that importers are again taking early advantage of the reset quota this year.

Due to this faster expected pace of imports in the first quarter, there was a temporal shift of imports from each of the later quarters of 2023, plus an additional 50 million pounds added, to raise the first-quarter forecast to 850 million pounds. Accordingly, the second-quarter forecast is decreased to 850 million, the third quarter to 890 million, and the fourth quarter to 810 million. This still leaves the second half of the year above 2022 by 11 percent, when production is expected to decline year over year at an increasing rate. The 2023 annual forecast is raised by a total of 50 million pounds to 3.400 billion, reflecting increased imports from South America and Oceania. Expectations for imports in 2022 are unchanged at 3.376 billion pounds.

2022 tariff-rate quota fill rates as of December 27, 2022



Note: Data labels indicate percent of quota filled.
Source: USDA, Economic Research Service, Livestock and Meat International Trade Data.

Dairy

Angel Terán

Recent Wholesale Dairy Product Prices

From the week ending December 10, 2022, to the week ending January 7, 2023, all wholesale dairy product prices reported in the USDA *National Dairy Products Sales Report* (NDPSR) decreased, as shown in the table below. Notably, butter had the deepest price decline of all dairy products, decreasing 45.9 cents per pound. Meanwhile, the price for 40-pound blocks of Cheddar cheese declined 7.5 cents per pound, while 500-pound barrels (adjusted to 38-percent moisture) decreased 8.3 cents per pound. The price of nonfat dry milk (NDM) and dry whey declined 6.9 cents and 2.4 cents per pound, respectively.

Dairy wholesale product prices, December 10, 2022–January 7, 2023

Dollars per pound

	For the week ending		Change
	Dec 10	Jan 7	
Butter	2.9527	2.4936	-0.4591
Cheddar cheese			
40-pound blocks	2.1891	2.1145	-0.0746
500-pound barrels *	1.9457	1.8632	-0.0825
Nonfat dry milk	1.4761	1.4074	-0.0687
Dry whey	0.4669	0.4430	-0.0239

* Adjusted to 38-percent moisture.

Source: USDA, Agricultural Marketing Service, *National Dairy Products Sales Report*, January 11, 2023.

Recent Chicago Mercantile Exchange (CME) weekly average spot prices for most reported dairy products were below the NDPSR prices for the week ending January 7. For the trading week² ending on January 13, the CME weekly spot prices averaged \$2.4270 per pound for butter, \$1.2795 for NDM, and \$0.3570 for dry whey. For Cheddar cheese, the weekly average price for 40-pound blocks was \$2.1300 per pound (higher than the NDPSR price) while the price for 500-pound barrels was \$1.7715 (lower than the NDPSR price).

From November to December 2022, directions of changes in Oceania and Europe average export prices³ for most products reported by USDA *Dairy Market News* were mixed. December export prices for Oceania Cheddar cheese, Oceania skim milk powder (SMP), and European dry whey increased from November, while prices for European SMP and butter for both Oceania and Europe declined. U.S. domestic wholesale prices for Cheddar cheese, NDM, and dry whey remain competitive compared to international prices. Although the domestic U.S. butter price is above the December Oceania butter price, it is still below the Western European butter price.

² While the end of each week for NDPSR average prices falls on a Saturday, the trading week for CME usually ends on a Friday.

³ The source for Oceania and Western Europe prices is USDA, *Dairy Market News*. International prices are in U.S. dollars, free on board (F.O.B.) port. Prices listed in this report are at the midpoints of the ranges.

Dairy product export prices for Oceania and Europe, November–December, 2022

Dollars per pound

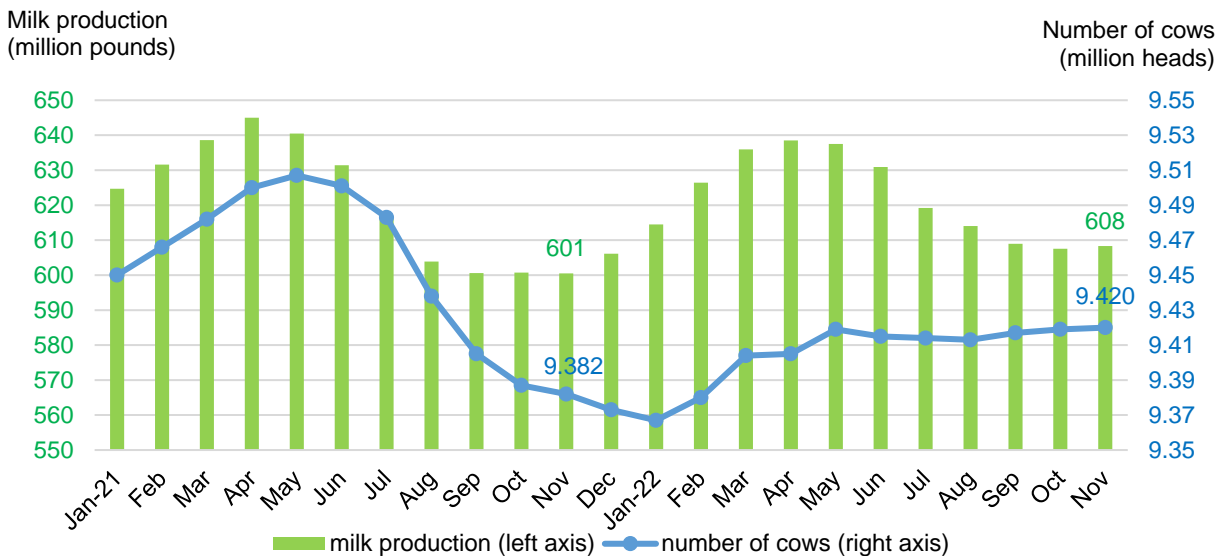
Product	Region	November 2022	December 2022	Change
Butter	Oceania	2.197	2.131	-0.066
	Western Europe	2.961	2.838	-0.123
Cheddar cheese	Oceania	2.228	2.246	0.017
Skim milk powder	Oceania	1.377	1.392	0.015
	Western Europe	1.466	1.414	-0.052
Dry whey	Western Europe	0.487	0.454	0.006

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

Recent Dairy Supply and Use Data

In the most recent *Milk Production* report published by USDA, National Agricultural Statistics Service (NASS), the estimate for November U.S. milk production was 18.250 billion pounds, up 1.3 percent from November 2021. NASS estimates that the number of milk cows in November was 9.420 million head, 1,000 higher than the previous month and 38,000 higher than November 2021. The milk per cow estimate for November was 1,937 pounds, 17 pounds per cow above November 2021.

Milk production per day and number of dairy cows from January 2021 to November 2022



Source: USDA, Economic Research Service calculations using information from USDA, National Agricultural Statistics Service.

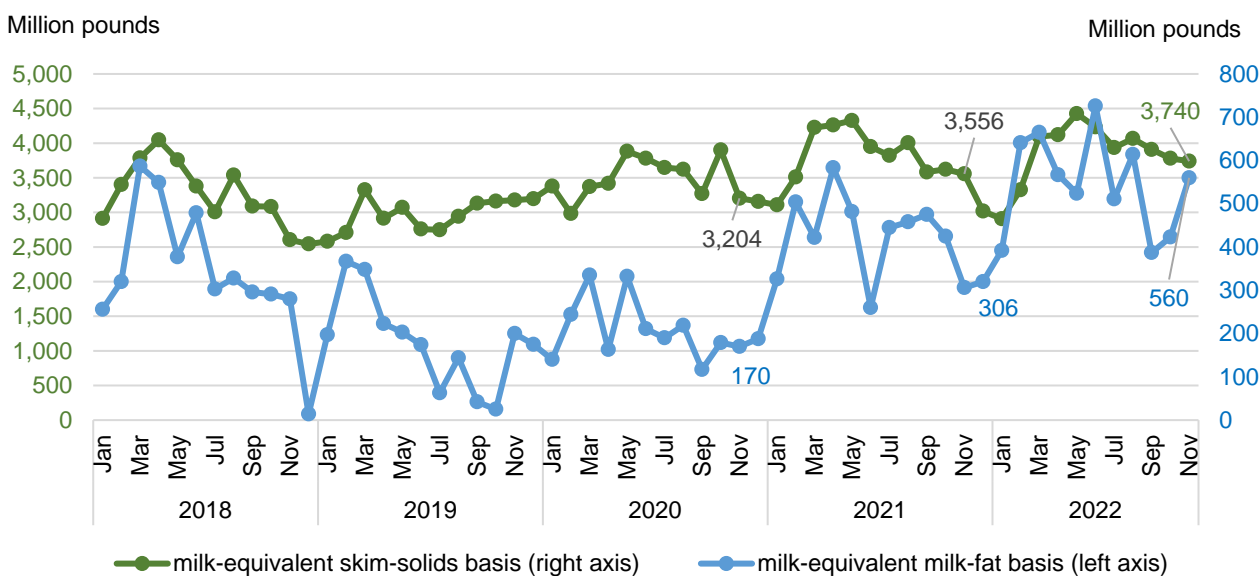
As reported by NASS in the *Agricultural Prices* report, the all-milk price in November 2022 was \$25.60 per hundredweight (cwt), up \$4.90 from November 2021. Price indexes for feed grains and concentrates also increased from the previous year. The November corn price was \$6.49 per bushel in November, up \$1.23 from November 2021. The price for alfalfa hay was \$267 per short ton in November, up \$54 from November 2021. The 5-State weighted-average price for premium alfalfa hay in November was \$331 per short ton, \$77 higher than November 2021. The soybean meal price (reported by USDA, Agricultural Marketing Service) was \$436.75 per short

ton in November, up \$78.02 from November 2021. The milk-feed price ratio reported by NASS was 1.93 in November, only 0.01 points higher than November 2021.

In November 2022, dairy product exports were higher than the same month a year ago. On a milk-fat milk-equivalent basis, they totaled 1.153 billion pounds, 264 million higher than November 2021. On a skim-solids milk-equivalent basis, they totaled 4.360 billion pounds, 248 million higher than November 2021. Dairy products with a notable increase in export volumes from November 2021 to November 2022 included cheese, butter, whey products, and lactose. Exports of NDM in November were down 4.8 million pounds from November 2021.

In November 2022, dairy product imports were higher than the same month a year ago. They totaled 595 million pounds on a milk-fat milk-equivalent basis, 10 million higher than November 2021. On a skim-solids basis, November imports totaled 620 million pounds, 64 million above November 2021. From November 2021 to November 2022, dairy products with a notable increase in import volumes were infant formula, fluid milk and cream, milk protein concentrate, and butter products. There were notable import volume declines of other-than-American type cheese and whey products. As shown in the figure below, cumulative U.S. net exports (exports less imports) of milk in all dairy products have been increasing in the past couple of years as 2022 registered monthly record highs of dairy export volumes. In November 2022, net exports on a milk-equivalent milk-fat basis were 560 million pounds, 254 million above November 2021, while on a milk-equivalent skim-solids basis they were 3,740 million pounds, 184 million above November 2021.

U.S. net exports of milk in all dairy products

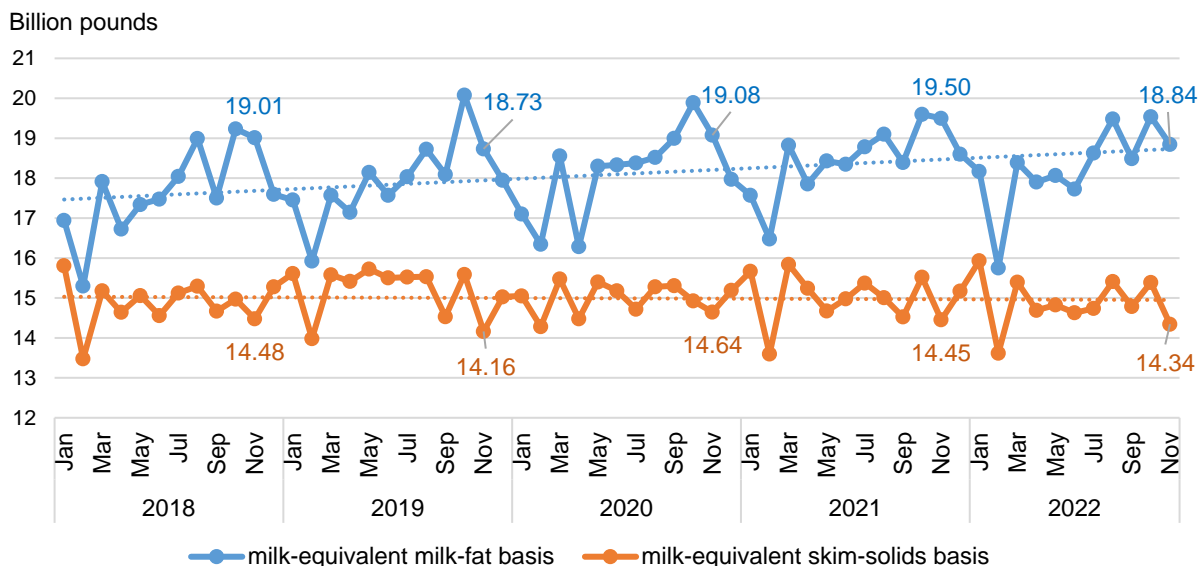


Sources: USDA, Economic Research Service calculations using information from USDA, Foreign Agricultural Service; U.S. Department of Commerce, Bureau of the Census.

In November 2022, domestic use of dairy products was below domestic use in November 2021. On a milk-equivalent milk-fat basis, domestic use totaled 18.845 billion pounds in November, 654 million pounds below the same month in 2021. On a milk-equivalent skim-solids basis November domestic use totaled 14.344 billion pounds, 109 million lower than November 2021. As shown in the chart below, for the past 5 years, the average domestic use on a milk-fat basis

has been trending slowly upward, while the trend for domestic use on a skim-solids basis has been declining very slowly, remaining almost stationary.

Domestic disappearance of milk in all dairy products



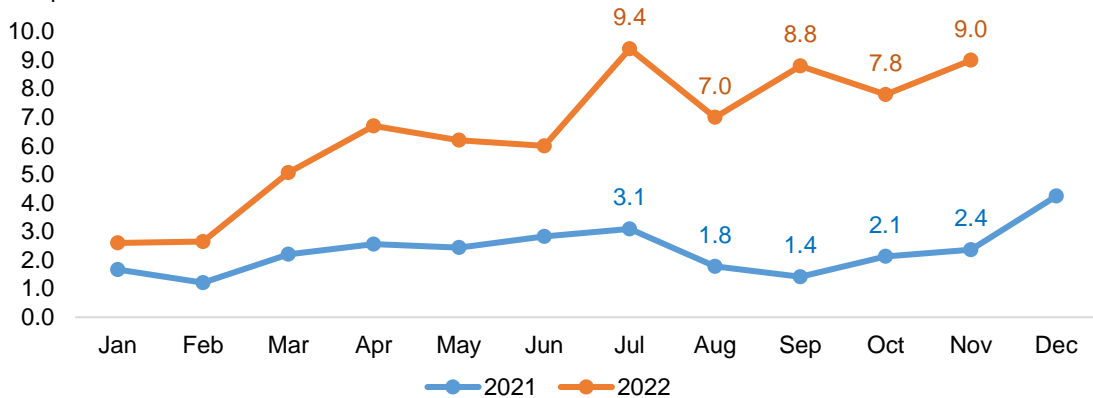
Sources: USDA, Economic Research Service calculations using USDA, National Agricultural Statistics Service; USDA, Foreign Agricultural Service; U.S. Department of Commerce, Bureau of the Census.

November Infant Formula Imports Increased from October

In November, imports of “preparations suitable for infant and young children, put up for retail sale,” which includes infant formula, increased from the previous month. Excluding certain nondairy products that are in this category, imports of these products totaled 9.0 million pounds in November 2022, as shown in the graph below. This marked a 1.2-million-pound increase from October and a 6.6-million-pound year-over-year increase from November 2021. The Formula Act (signed into law by the President on July 21, 2022) temporarily suspended import tariffs on most infant formula imports through December 31, 2022, likely contributing to elevated imports during the second half of 2022.

United States imports of preparations suitable for infants and young children, put up for retail sale*

Million pounds



*Includes most products imported under Harmonized Tariff Schedule number 1901.10. Does not include products that are specifically designated as nondairy products.

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

International Outlook for Dairy

Based on projections in the December publication of *Dairy: World Markets and Trade*, by USDA, Foreign Agricultural Service (FAS) and the latest projection for U.S. milk production in the USDA *World Agricultural Supply and Use Demand Estimates* report, milk production for the top 5 major exporters is projected to total 636.0 billion pounds in 2023, a modest increase of 0.1 billion pounds from 2022. Argentina and the United States are the only two main dairy exporter countries expected to have an increase in cows' milk production in 2023. In 2023, milk production totals for Australia, New Zealand, and the European Union (EU) are expected to decline, as shown in the table below.

Milk production forecasts for major dairy exporters

(Billion pounds)

	2022 expected	2023 forecast	Change
Argentina	26.2	26.5	0.3
Australia	19.0	18.7	-0.3
European Union*	317.2	315.3	-1.9
New Zealand	46.5	46.3	-0.2
United States	227.0	229.2	2.2
Major exporter total	635.9	636.0	0.1

Sources: USDA, Economic Research Service calculations based on USDA, Foreign Agricultural Service.

Dairy Estimates for 2022

In the following forecast analysis, any changes discussed are adjustments from the previous month's forecasts unless otherwise specified.

Based on recent milk production data, the expected number of cows for the last quarter of 2022 (2022-Q4) remained unchanged at 9.420 million head. The yield per cow estimate for 2022-Q4 has been adjusted lower by 15 pounds per cow to 5,965 pounds. The milk production estimate for 2022 is 226.8 billion pounds (-0.2 billion).

Dairy export volume estimates are up for 2022-Q4. On a milk-equivalent milk-fat basis, the 2022-Q4 estimate is 3.5 billion pounds, and the estimate for the 2022 annual total is 13.6 billion pounds (+0.1 billion). On a milk-equivalent skim-solids basis, the 2022-Q4 estimate has been raised to 12.8 billion pounds, and the estimate for 2022 has been raised to 52.6 billion pounds (+0.2 billion). Expectations are higher for exports of cheese, butterfat products,⁴ milk protein products,⁵ whey protein concentrate, and lactose.

On a milk-equivalent milk-fat basis, the 2022 estimate for dairy import volume remained unchanged at 7.3 billion pounds. On a skim-solids basis, 2022 imports are estimated at 6.6 billion pounds (+0.1 billion). Expectations are higher for imports of butterfat products, milk protein products, infant formula, and fluid cream.

The estimate for 2022-Q4 domestic use of dairy products is lower. On a milk-equivalent milk-fat basis, the 2022-Q4 forecast is 57.2 billion pounds, and the annual estimate is 219.8 billion pounds (-0.3 billion, annual). On a skim-solids basis, the estimate for 2022-Q4 domestic use is 45.2 billion pounds, and the annual estimate is 179.3 billion pounds (-0.7 billion).

While dairy supply and use official information is not yet available for December, complete price data for 2022 is available except for the all-milk price. For the year, average prices for Cheddar cheese, dry whey, butter, and NDM were \$2.1122, \$0.6035, \$2.8665, and \$1.6851 per pound, respectively. The Class III and IV milk prices averaged \$21.94 and \$24.47 per hundredweight (cwt), respectively. The all-milk price estimate for 2022-Q4 is \$25.40 per cwt, \$0.40 lower, while the annual all-milk price estimate for 2022 is \$25.55 per cwt, \$0.10 lower.

Dairy Forecasts for 2023

As with the estimates for 2022, any changes discussed in this section are adjustments from the previous month's forecasts unless otherwise specified.

Based on expectations of lower milk prices, and steady to higher feed costs, the number of milk cows is projected lower in 2023 at 9,405 million head (-15,000 head). The next USDA Cattle report, to be released on January 31, is expected to provide a better sign of future changes in the dairy herd size. In 2023, the average yield per cow projection is unchanged at 24,370 pounds per cow. The milk production forecast for 2023 is 229.2 billion pounds, 0.3 billion lower.

Dairy export projections for 2023 have been increased as domestic prices for dairy product are expected to be competitive compared to international prices. On a milk-fat basis, the dairy export forecast for 2023 is 13.3 billion pounds, 0.3 billion higher. On a skim-solids basis, the

⁴ Butterfat products include butter, anhydrous milk fat, butteroil, and high-fat dairy spreads.

⁵ Milk protein products include milk protein concentrate, milk protein isolate, and casein products.

2023 dairy export forecast has been increased 0.3 billion pounds to 52.6 billion due to stronger expected NDM exports.

The dairy import projection for 2023 is unchanged on a milk-equivalent milk-fat basis at 7.2 billion pounds. On a milk-equivalent skim-solids basis, the 2023 forecast is 6.3 billion pounds (+0.2 billion) as strength in demand for milk protein products is expected to carry over from 2022 into 2023.

Projections for domestic demand in 2023 have been lowered. The forecast for 2023 domestic use on a milk-equivalent milk-fat basis is 221.3 billion pounds (-0.7 billion). On a skim-solids basis, the forecast for domestic use is 182.0 billion pounds (-0.2 billion).

Due to the recent decreases in dairy product prices, weaker-than-anticipated demand, and competition with international prices, forecasts for 2023 have been lowered for Cheddar cheese, dry whey, butter, and NDM to \$1.930, \$0.415, \$2.330, and \$1.340 per pound, respectively. With lower dairy product prices expected across the board, Class III and IV milk price forecasts for 2023 have been lowered to \$18.85 per cwt and \$19.25 per cwt, respectively. The all-milk price 2023 forecast has been decreased by \$1.10 to \$21.60 per cwt.

Pork/Hogs

Mildred Haley

December *Hogs and Pigs* Information Likely To Be Affected by Strong Exogenous Risk Factors

For the U.S. pork industry and pork consumers, the information reported the *Quarterly Hogs and Pigs* report issued by USDA on December 23, 2022, is more of a mixed bag than usual, largely due to a number of exogenous risk factors. Major among them are persistent swine disease, volatile national and international macroeconomic conditions, and the expected ruling in *National Pork Producers Council vs Ross*⁶ by the Supreme Court in the late spring, each with the potential to impact producer decisions. Nevertheless, the report did indicate that the category of all hogs and pigs was 2 percent smaller on December 1, 2022, than a year ago. Weight class distributions—all 2 percent lower year-over-year—suggest limited first-half 2023 slaughter hog availability. Lower market hog numbers were contrasted in the report by a somewhat larger inventory of breeding animals. For 2023, the broad lines of the report, coupled with expectations of modest growth in pigs per litter in 2023, suggest a 1.8- percent year-over-year increase in pork production. Such a supply scenario would likely yield 2023 prices of live equivalent 51-52 percent lean hogs averaging about \$68 per cwt, almost 5 percent lower than last year.

It is notable that information in the report showed a small increase in the number of breeding animals present on December 1, after nine quarters of year-over-year reductions. At 6.154 million head on December 1, the breeding inventory was about 29 thousand head greater than a year ago, with most of the increase showing up in Illinois. Such a small increase is probably not sufficient to pronounce the industry's breeding inventory contraction "over" and an industry expansion underway: "One data point does not a trend make." It is also possible that breeding inventory decisions will be driven by, or at least sensitive to, pending judicial decisions and subsequent State-level rule changes that follow the Court's decision.

The weight classes set out in the report are uniformly lower than a year ago, with each of the four classes falling 2 percent below their respective December 1, 2021, levels. The clear implication is that there are fewer animals presently on the ground, due to lower second-half 2022 pig crops. However, first-quarter 2023 hog slaughter numbers may be greater than those implied by the heavier weight categories in the report, due to inclusion of hogs whose fourth-quarter 2022 processing was delayed by harsh Midwestern weather conditions. First-quarter pork production—about 7 billion pounds—is expected to be 2 percent higher than production of a year ago, with a component of that increase attributable to higher expected dressed weights from the held-over animals. First-quarter hog prices are likely to average \$63 per cwt, unchanged from a year earlier, with held-over animals from the last weeks of 2022 weighing on prices.

Second-quarter pork production draws from the 2022 fall pig crop (which was estimated at 98.7 percent of a year earlier) and is expected to be about 6.6 billion pounds, 1 percent below a year

⁶ The National Pork Producers Council and the American Farm Bureau Federation filed a suit in the U.S. Ninth Circuit Court of Appeals, attempting to strike down a California sales ban on pork from animals raised under conditions not compliant with California law. Many non-compliant production conditions are widely employed by American pork producers in other States. The case was dismissed in July 2021. However, in March 2022, the Supreme Court announced it would review the challenge. The Court heard oral arguments on October 11, 2022. A decision is expected in the second half of 2023.

earlier. Higher forecast average dressed weights are expected to limit second-quarter production declines. Hog prices in the April–June quarter are expected to average \$72 per cwt, about 5 percent below a year earlier. Lower hog prices for reduced numbers of slaughter animals implies weakening pork demand, which may derive from expected weakness in first-quarter 2023 real disposable income and from lower 2023 retail poultry prices.

The December report indicated that producers intend to farrow more sows in the first half of 2023 compared with the same period of 2022, suggesting greater slaughter hog availability in the second half of the year. For the December–February quarter, producers’ stated second intentions—about 2.9 million head—were about 1 percent greater than a year earlier. Producers’ stated first intentions for the March–May quarter—approximately 3 million head—are about 0.5 percent higher than last year’s spring quarter first intentions. If producers follow through on their first-quarter intentions, and expectations for fractionally improved first-half litter rates compared with first-half 2022 are realized, third-quarter pork production is likely to be about 6.7 billion pounds, almost 2 percent higher than a year earlier. Under these circumstances prices of live equivalent 51-52 percent lean hogs would be expected to average \$73 per cwt, about 9 percent below prices in the same period last year.

Producers’ fractionally-higher first farrowing intentions for the spring (March–May) quarter combine with assumptions for marginal litter rate increases to yield a fourth-quarter pork production volume of about 7.2 billion pounds, more than 4 percent higher than a year earlier. Here, a component of the large year-over-year percent increase is attributable to the weather-related reduction in fourth-quarter 2022 production. Hog prices in the final quarter of 2023 should average about \$64 per cwt, about 1 percent higher than prices a year earlier.

For 2023, total pork production is expected to be almost 27.5 billion pounds, about 1.8 percent higher than last year. Quarterly hog prices average to \$68 per cwt, almost 5 percent lower than prices in 2022.

November Pork Exports Fractionally Lower Than a Year Ago

U.S. pork exports for November were 578 million pounds, about 0.4 percent lower than volumes of a year ago. It is notable that shipments to both Mexico and Japan were year-over-year lower, while stronger shipments to China\Hong Kong—about 65 million pounds—offset the declines from Mexico and Japan. Export volumes of the 10 largest foreign destinations of U.S. exported pork are set out below, along with export shares, whose total indicates that these countries accounted for 94 percent of U.S. pork exports in November.

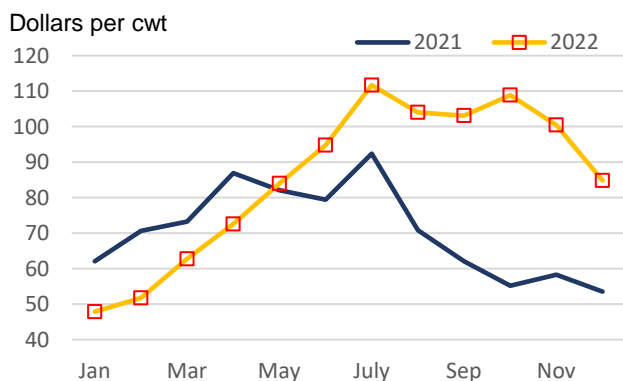
U.S. pork exports: Volumes and export shares of the 10 largest foreign destinations in November 2021 and 2022

Country	Exports	Exports	Percent change (2022/2021)	Export share	Export share
	Nov. 2021	Nov. 2022		Nov. 2021	Nov. 2022
	(Million pounds)	(Million pounds)		Percent	Percent
World	580	578	-0.4		
Mexico	215	214	-0.4	37.1	37.0
Japan	99	84	-15	17.0	14.5
China\Hong Kong	47	65	37	8.2	11.2
Canada	52	53	2	8.9	9.1
South Korea	42	46	9	7.3	8.0
Dominican Republic	18	30	63	3.2	5.2
Colombia	42	23	-44	7.2	4.0
Honduras	15	14	-5	2.6	2.5
Guatemala	7	8	23	1.1	1.4
Philippines	3	6	81	0.6	1.1

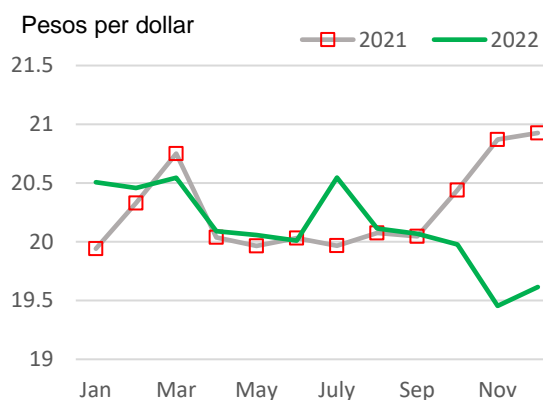
Source: USDA, Economic Research Service.

It is notable that exports to Mexico have been year-over-year lower since September. Given that a favored cut of Mexican buyers of U.S. pork is fresh bone-in hams, high second-half 2022 U.S. ham prices provide some explanation for lower Mexican exports. High U.S. ham prices in 2022 are primarily attributable to 2.5 percent lower pork production compared with 2021. Moreover, late-summer ham prices spiked as HPAI outbreaks reduced turkey numbers, threatening holiday availability and increasing turkey prices. In many instances hams functioned as a substitute for turkeys, accelerating already-high ham prices. Mexican demand likely slowed as a result, despite a relatively strong peso.

Trimmed Selected Hams, 23-27 pounds



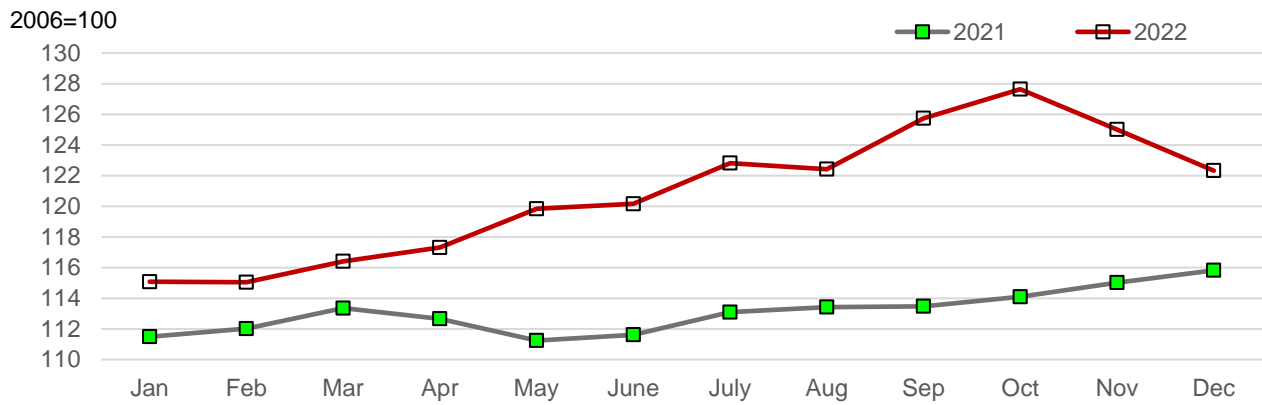
Mexican peso-U.S. dollar exchange rate



In 2023, higher U.S. pork production, lower pork prices and a moderating U.S. dollar exchange rate—as indicated by the slowing the Fed's nominal broad dollar index—are likely to enhance the competitive profile of U.S. pork in foreign markets. Consequently, U.S. pork exports are raised 70 million pounds to total 6.350 billion pounds, 0.03 percent greater than export volumes forecast for 2022. Forecasts for 2023 commercial pork production and U.S. pork exports imply

that 23.1 percent of pork production will be exported. By contrast, 23.5 percent of production was exported in 2022.

Nominal broad dollar index



Source: Board of Governors of the Federal Reserve System.

When changes in 2023 commercial pork production and pork trade are combined with forecast changes in 2023 pork stocks, the residual—pork disappearance—calculates to about 51.4 pounds per capita retail weight, after accounting for U.S. population and converting to retail weight. This compares to last year’s per capita disappearance of 51.2 pounds per person, an increase of about 0.4 percent for 2023.

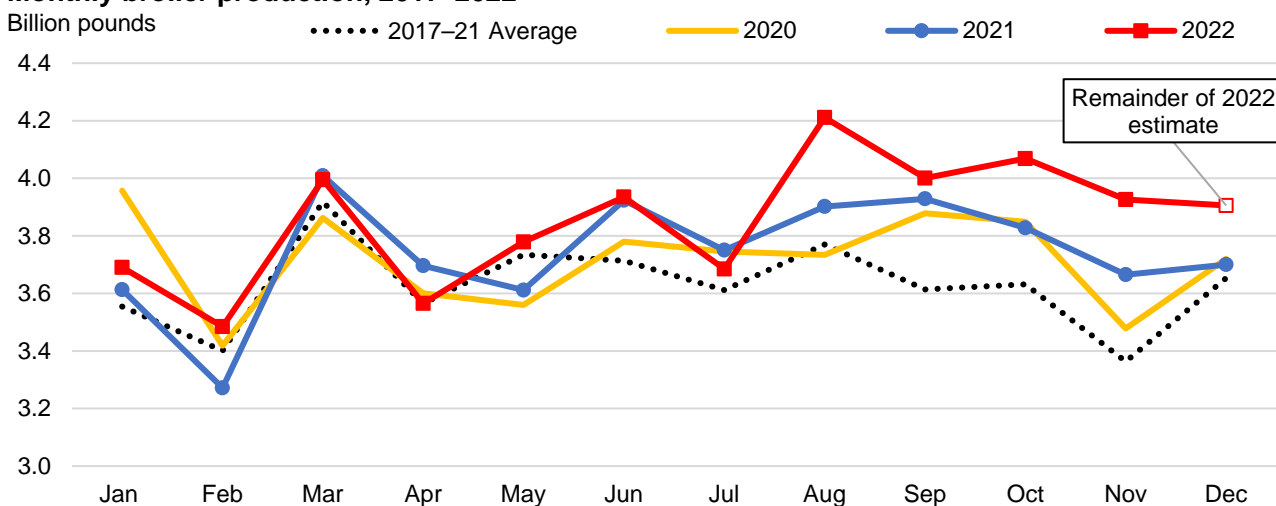
Poultry

Grace Grossen and Adriana Valcu-Lisman

Broiler Production Estimate Adjusted Up in 2022

November broiler production totaled 3.926 billion pounds, down from October but 7 percent more than last November. This marks the fourth consecutive month of year-over-year increases. Based on November production and strong preliminary weekly data in December, the fourth-quarter production forecast is adjusted up to 11.9 billion pounds. This would bring the 2022 total to 46.245 billion pounds, an increase of 3 percent over 2021.

Monthly broiler production, 2017–2022

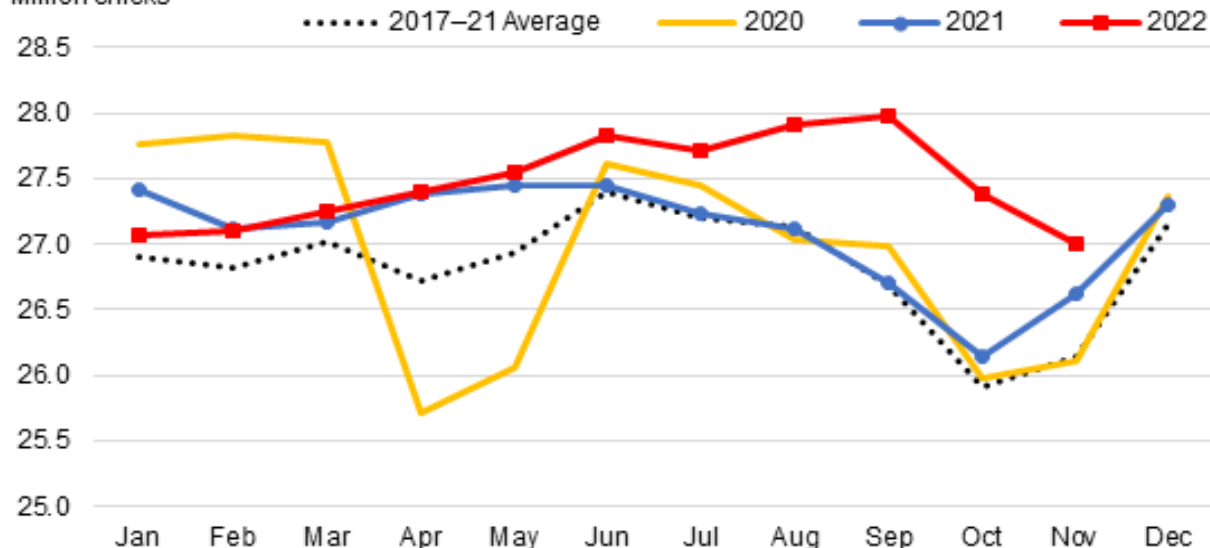


Source: USDA, National Agricultural Statistics Service.

The number of broiler-type chicks hatched in November fell from October. A decline in the inventory of broiler-type layers at the start of December, indicates slowing production intentions, possibly in response to weaker wholesale chicken prices. At the same time, however, average bird weights were higher for the month than they have ever been, averaging 6.64 pounds in October and 6.57 pounds in November. Similar strength in weights is indicated in the preliminary weekly data from December. The first-quarter 2023 production forecast is adjusted down by 25 million pounds to 11.475 billion pounds on recent hatchery data. The forecasts for the remaining quarters of 2023 are unchanged from last month, making the 2023 total production forecast 46.9 billion pounds, an increase of 1.4 percent from the 2022 estimate.

Broiler-type chicks hatched per calendar day

Million chicks



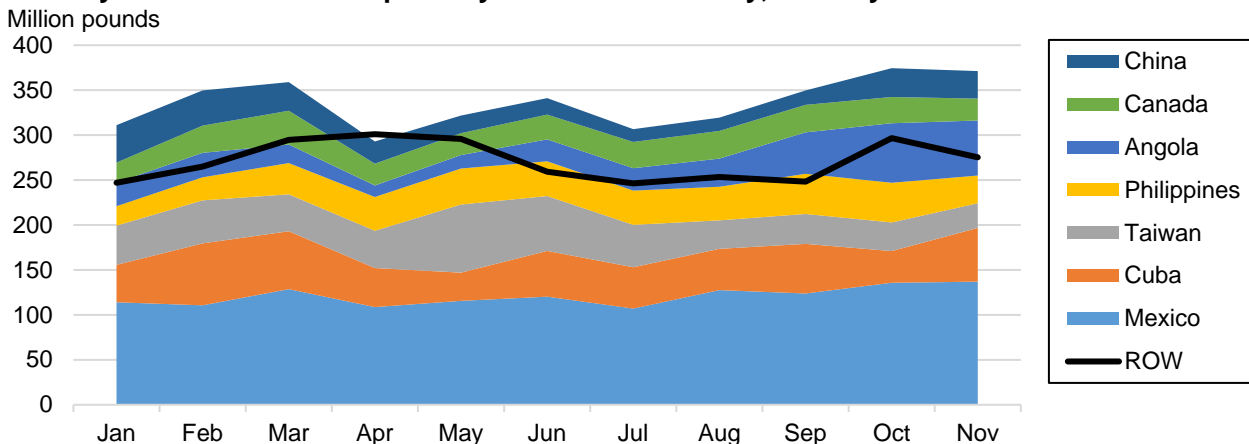
Source: USDA, National Agricultural Statistical Service.

Broiler meat in cold storage continued to increase in November, ending the month at 869.5 million pounds, an increase of 22.6 percent from last November. A major driver of that increase was breast meat, with stocks that have climbed 56.5 percent since the end of 2021. Breast meat made up 27.6 percent of all broiler meat in cold storage at the end of November. The 2022 ending stocks estimate was adjusted up to 850 million pounds, an increase of 21 percent over the end of 2021.

Broiler Export Estimate Is Raised in Fourth Quarter of 2022 and Forecasts Are Lowered for 2023

Broiler exports for November 2022 totaled 646.5 million pounds, an increase of 4.4 percent from November 2021. This increase is largely attributable to year-over-year increases in shipments to Mexico (+12.1 million pounds), Angola (+29.6 million pounds), the Philippines (+15.0 million pounds), Vietnam (+8.0 million pounds), and Georgia (+15.7 million pounds). Markets with smaller shipments compared to last year include Cuba (-4.2 million pounds), Taiwan (-9.0 million pounds), Haiti (-11.7 million pounds), Kazakhstan (-15.8 million pounds), and China (-1.9 million pounds). For January through November 2022, broiler exports to China totaled 283.4 million pounds, a decrease of 18 percent from the same period in 2021 and less than half of the volume exported in the same period in 2020. Demand for poultry products in China is expected to weaken in 2023.

Monthly U.S. broiler meat exports by destination country, January–November 2022



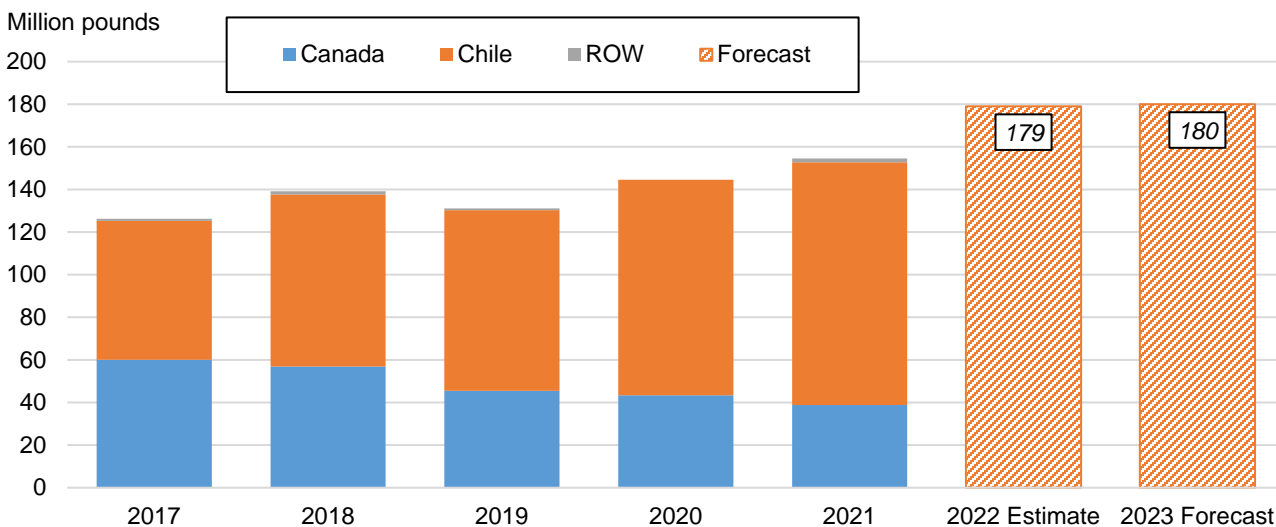
Note: ROW = Rest of World.

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

Based on strong shipments in November, the 2022 total export estimate was adjusted up by 20 million pounds to 7.282 billion pounds, which is still a 1-percent decrease from 2021. In 2023, forecast exports are adjusted down by 30 million pounds to 7.315 billion pounds. This would be an increase of only half of 1 percent from 2022. While domestic broiler production is forecast to grow in 2023, U.S. prices are not competitive compared to other key suppliers. In addition, HPAI-related trade restrictions are expected to continue slowing down exports.

Broiler imports in November totaled 11.955 million pounds. This is 20 percent below last November and the first monthly year-over-year decrease in imports in 2022. The decrease was primarily in shipments from Chile, which has accounted for the majority of U.S. broiler imports since 2017. The 2022 broiler imports estimate was lowered 8 million pounds to 179 million pounds, still an increase of 24 million pounds over 2021. Forecast 2023 imports are unchanged at 180 million pounds.

Broiler meat imports by country, 2017–2021, and estimated/forecast total imports in 2022–2023



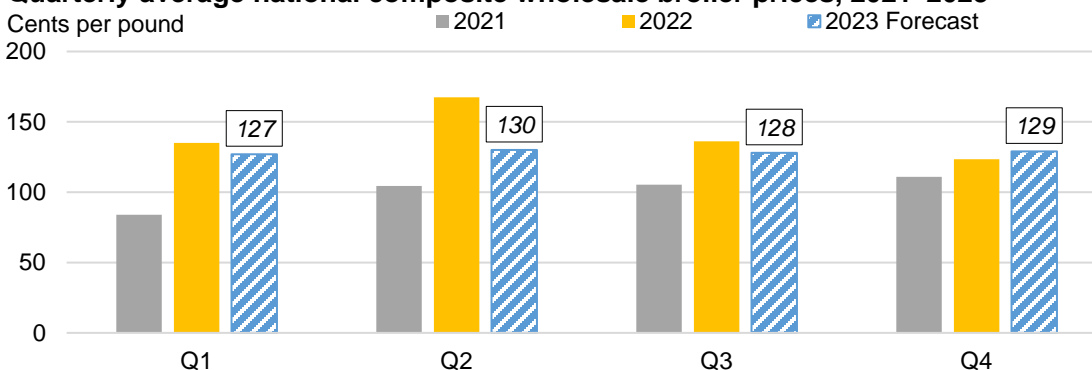
Note: ROW = Rest of World.

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

Broiler Prices Adjusted Down in 2023

The national composite whole broiler price averaged 123.69 in December, making the fourth-quarter average 123.5 cents per pound. This December price was also the second-lowest monthly average price of 2022, after October (121.94 cents per pound). Monthly prices peaked at 169.67 cents per pound in May. Wholesale prices for parts, including wings, drumsticks, breasts, and thighs, have also fallen in recent months. In 2023, more product is expected to be available domestically as production increases and exports stay at similar levels. Reflecting these factors, 2023 forecast national composite whole broiler prices are adjusted down to 127 cents per pound in the first quarter, 130 in the second, 128 in the third, and 129 cents per pound in the fourth quarter. The forecast average for 2023 is 128.5 cents per pound, a decrease of 12 cents from the 2022 average.

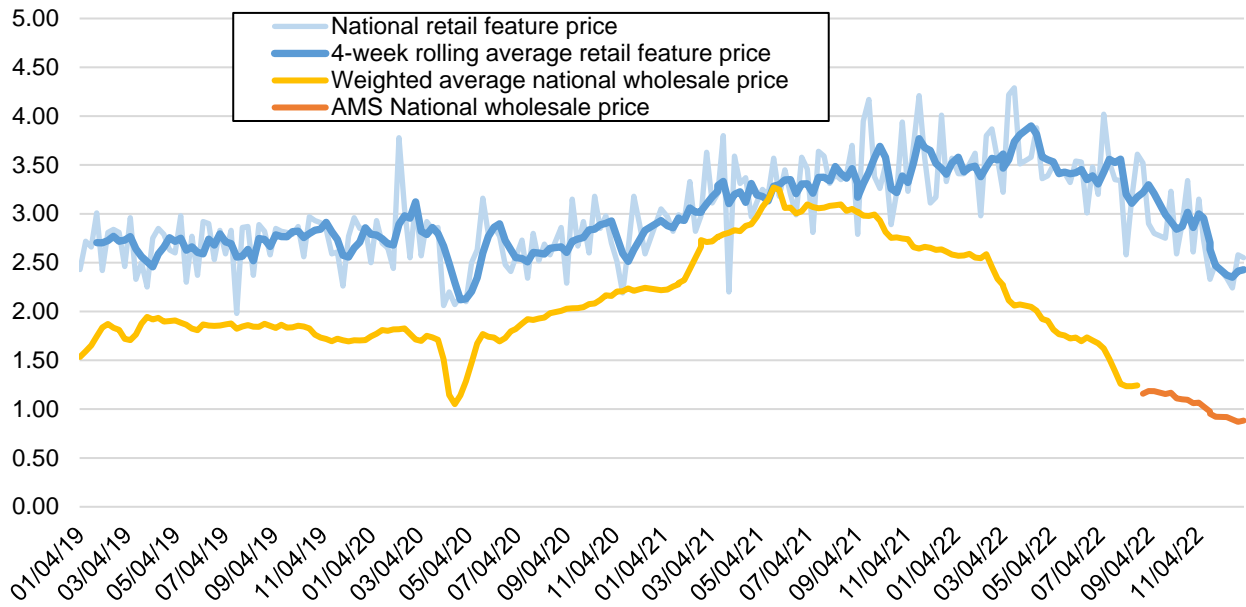
Quarterly average national composite wholesale broiler prices, 2021–2023



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

Wholesale prices for whole chicken wings reached a peak of \$3.25 per pound in late May of 2021. A combination of limited supplies on hand and strong demand led to the historic runup in prices. Retail prices continued to climb, eventually peaking in March of 2022. Retail feature prices (prices advertised in grocery fliers) reached a high point the week of March 18, 2022—just at the start of the annual college basketball tournament (March Madness)—with a national average of \$4.29 per pound. The decline in wholesale prices began as the level of chicken wings in cold storage began to recover from an early-2021 low. In 2022, both retail and wholesale wing prices have been declining, with wholesale prices falling below the price levels that were typical before 2020. The average wholesale price for whole wings in December was 89 cents per pound.

Weekly wholesale and retail prices for whole chicken wings, 2019–2022

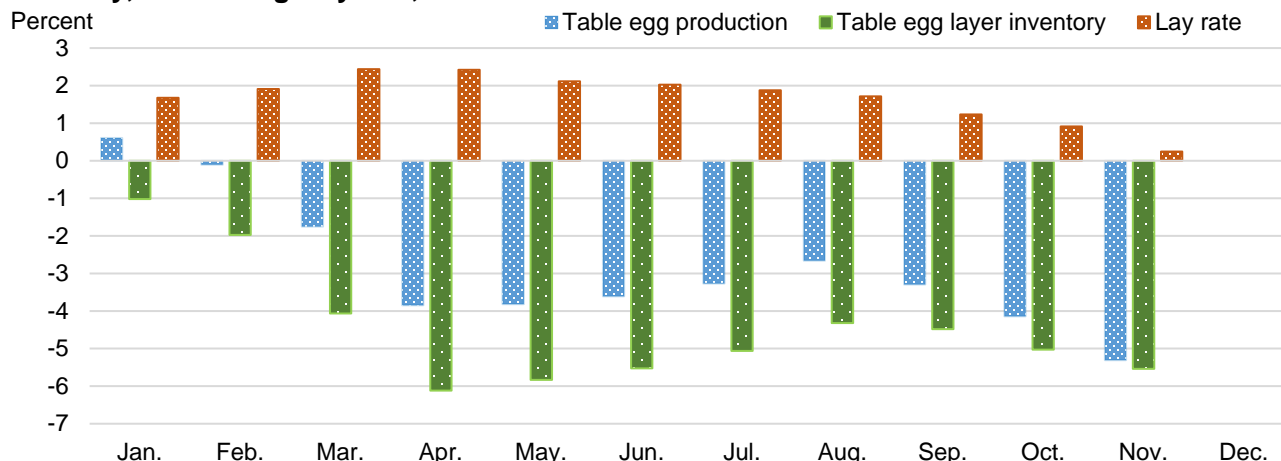


Note: The AMS national wholesale price began in September of 2022. The national wholesale price recorded prior to this is a weighted average of the Northeast and Southeast prices, which were discontinued in September 2022.
Source: USDA, Agricultural Marketing Service.

Table-Egg Production Forecast Reduced on December HPAI Discoveries

Table-egg production was estimated at 635.0 million dozen in November. This represents a 5.3-percent decrease from last November. The average size of the table-egg flock supporting this production was estimated at 308.8 million layers, down 5.5 percent from last year. The layers' productivity, as defined by the average lay rate, was estimated at 82.3 eggs per 100 layers per day, slightly above last year. Since the first HPAI discovery was reported in February 2022, the monthly size of the egg-type layer flock has been, on average, 4.8 percent year-over-year lower, while table-egg production was, on average, 3.2 percent year-over-year lower. The difference was partially offset by an average increase of 1.7 percent in the average lay rate.

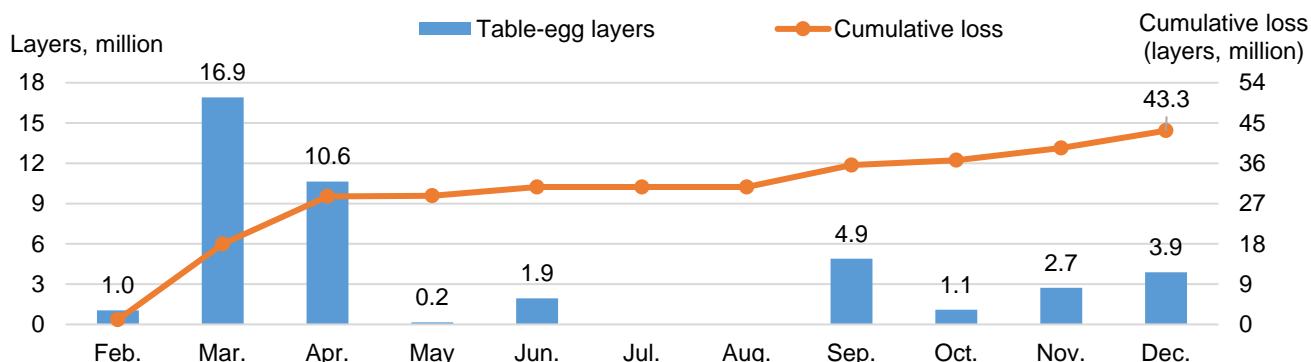
Year-over-year percent change in monthly table-egg production, average table-egg layer inventory, and average lay rate, 2022/2021



Source: USDA, Economic Resource Service using data from USDA, National Agricultural Statistics Service.

The December 1 table-egg layer flock was estimated at 308.3 million layers. This is only 0.8 million layers lower than the November 1 estimate, despite 2.72 million layers being lost to HPAI during November, implying that producers are working on building back their egg-laying flocks. However, another 3.9 million layers were lost to the same disease through December. The total number of table-egg layers lost to HPAI in 2022 increased to 43.3 million birds.

Commercial table-egg layer losses to HPAI in 2022



Note: HPAI: Highly Pathogenic Avian Influenza.

Source: USDA, Economic Research Service using data from USDA, Animal and Plant Health Inspection Service.

Recent data on upstream production indicators suggests a more gradual and moderate expansion in the near-term production. The monthly data on eggs in incubators (egg-type) has been almost flat for the last 3 months. Moreover, the December estimate was below the previous-year levels—seasonally, this number increases as the layers hatched during this month will likely support production ahead of Easter. This trend is also supported by data on egg-type chicks hatched (young chicks that achieve peak productivity in 4 to 5 months). The lay rates or layers' productivity (eggs per 100 layers per day) have been higher year over year. However, since May, the monthly increases in layer's productivity have slowed, with the December 1 estimate suggesting an even lower year-over-year lay rate (see charts below).

Eggs-chick type in incubators at the beginning of the month

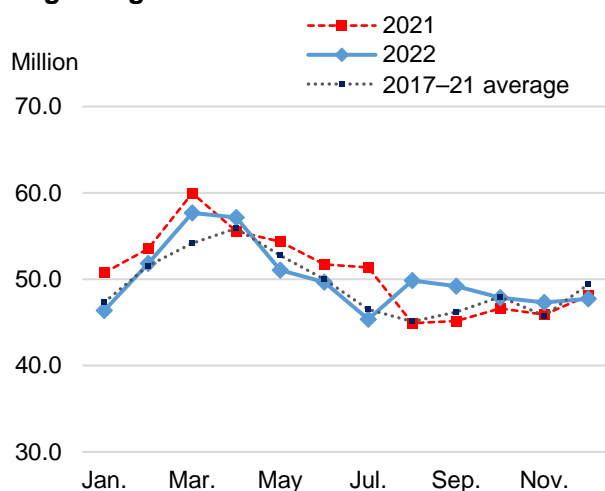
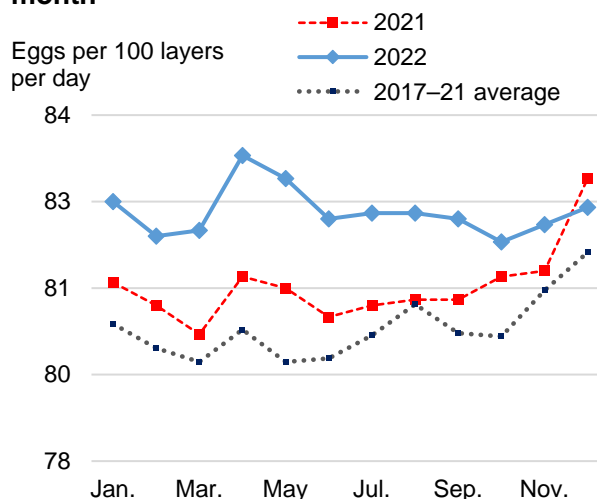


Table-egg lay rate at the beginning of the month



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

Given the additional HPAI losses in December, the table-egg production forecast for the fourth-quarter 2022 is lowered to 1,950 million dozen eggs. Total table-egg production for 2022 is expected to have been at 7,733 million dozen, about 3-percent lower than the estimated production for 2021. Reflecting the industry's cautious approach to expanding production, the 2023 table-egg production forecast is decreased to 8,115 million dozen, which is about 4.9 percent higher than the 2022 estimate.

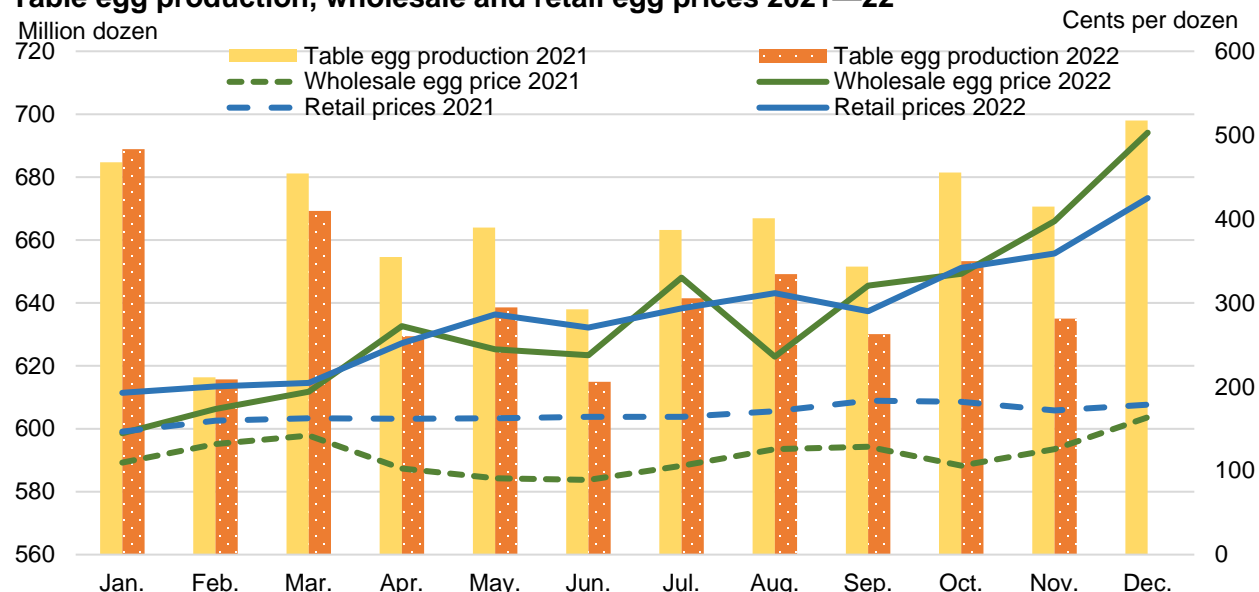
Wholesale Table-Egg Prices Peaked in December

December wholesale egg prices (large, grade A, New York) were the highest ever recorded. December prices averaged 503.0 cents per dozen, more than 207-percent higher than December 2021. The daily average prices peaked at 540 cents per dozen during the week leading to Christmas. Since then, following the post-holiday expectations, prices have been declining. As of January 11, at 412 cents per dozen, daily average price was more than one dollar lower than the highest daily price in late December.

Wholesale egg prices (large, grade A, New York) averaged 282.4 cents per dozen in 2022, 138.4 percent higher than last year. Although there were some monthly variations in price direction, prices in 2022 generally followed an upward trend. December 2022 wholesale prices were 247 percent higher than January 2022.

Retail egg prices (grade A, large) averaged 285.7 cents per dozen in 2022, 70.7 percent up from the 2021 average. The December retail egg prices were 425 cents per dozen, 120.3 percent higher than the prices at the beginning of the year. Retail egg prices are typically less volatile than wholesale prices, but also tend to lag the wholesale prices.

Table egg production, wholesale and retail egg prices 2021—22¹



¹ Wholesale prices are for New York, Grade A Large eggs (monthly averages of midpoint daily values). Retail prices (U.S. city average), not seasonally adjusted, are for grade A, large. December 2022 table egg production data not available.

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

While the table-egg production was affected by repeated cases of HPAI, the demand for eggs remained strong throughout the year, adding additional pressure to prices. This is partially because eggs are a staple product with few substitutes. Moreover, for much of the year, they represented the lowest cost protein alternative. Per capita egg disappearance for 2022 is forecast at 277.5 eggs per person, 3 eggs fewer than last year.

While wholesale prices are expected to decline further, they will likely stay elevated as producers rebuild their egg-laying flock capacity. Based on higher-than-expected December average prices and lower production expectations, the quarterly wholesale egg price forecasts for 2023 are increased as follows: first-quarter to 285 cents, second-quarter to 195 cents, third quarter to 165 cents, and fourth quarter to 175 cents per dozen. This brings the 2023 average forecast prices to 205 cents per dozen, almost 27 percent down from the 2022 average price.

U.S. Egg Trade Forecast Revised on November Data

Exports of eggs and egg products in November totaled 18.0 million dozen (shell-egg) equivalent, a small increase from the prior month but 29.5-percent down from last year. This year-over-year decrease was driven by declines in both shipments of shell eggs (-31.7 percent) and egg products (-25.7 percent). Canada was the only major destination with year-over-year higher shipments. However, the larger shipments to Canada, together with modest increases in shipments to the Caribbean (Bahamas, Trinidad and Tobago, and Jamaica), were not substantial enough to offset year-over-year decreases in shipments to other traditional markets (Mexico, Hong Kong, Japan, South Korea, and United Arab Emirates). Given the overall softness in the egg export data and high wholesale prices in the later part of 2022, the fourth-quarter egg export estimate is revised down to 52 million dozen eggs. This brings the expected exports for 2022 to 223.8 million dozen shell-egg equivalent, 42.9-percent down from 2021. In addition, the 2023 total egg export forecast is revised downward to 240 million dozen egg equivalent. However, this is 7.2-percent higher than the expected level for 2022.

U.S. egg and egg products exports: Volume and export share, November 2021/22

Country	Volume (thousand-dozen)			Export share (percent)	
	2021	2022	Change in volume	2021	2022
Canada	7,114	8,476	1,361	28	47
Mexico	6,075	4,211	-1,864	24	23
Japan	2,069	1,389	-680	8	8
Jamaica	523	634	110	2	4
Bahamas	351	512	161	1	3
Trinidad and Tobago	382	488	106	1	3
Hong Kong	4,647	368	-4,280	18	2
South Korea	1,140	29	-1,110	4	0
United Arab Emirates	743	-	-743	3	-
ROW	2,522	1,917	-606	10	11
World	25,567	18,023	-7,544	100	100

Note: Largest markets are based on 2022 November export volumes. ROW: Rest of the world.

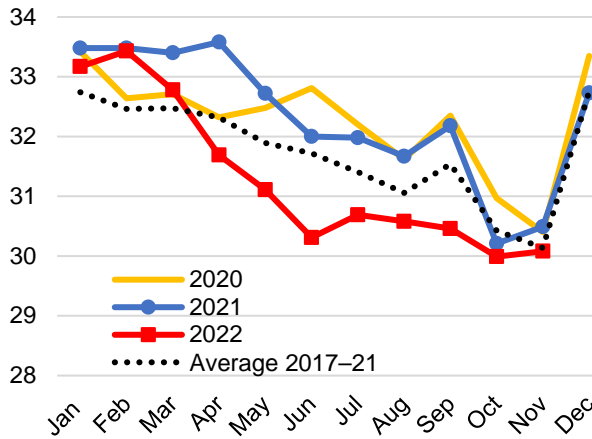
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

November egg imports totaled 3.0 million dozen, 87.9 percent up from last year. The first five major partners—supplying more than 90 percent of U.S. egg imports—were Turkey, Canada, Taiwan, China, and Thailand. Expected imports for fourth-quarter 2022 were increased to 7.5 million dozen. The total 2022 egg imports are estimated at 24.2 million dozen shell-egg equivalent, 33.4 percent up from 2021. The total egg import forecast for 2023 is also revised upward to 20.5 million dozen, 15.4 percent down from the 2022 estimate.

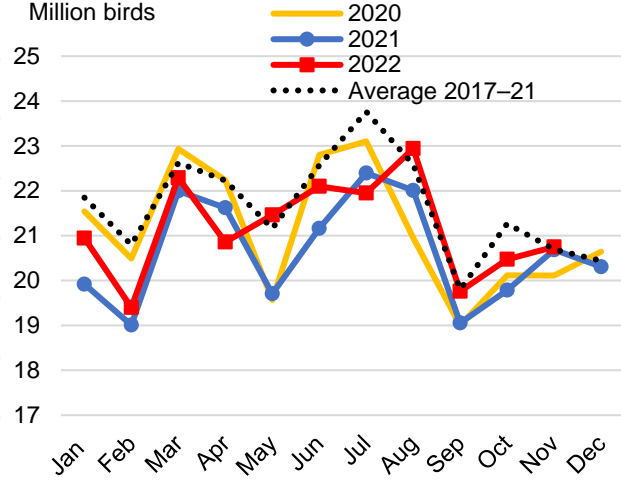
Turkey Production Raised Slightly in 2022 and 2023

Turkey production in November totaled 425.4 million pounds. This is a decline of 6 percent from last November. However, average live weights are showing signs of improvement; the November average weight was up slightly from October and was the closest to the 5-year average since weights began declining in March. Based on the strength of November production, including heavier weights, estimated fourth-quarter turkey production was adjusted up 10 million pounds to 1.310 billion pounds. This would make the 2022 annual total 5.223 billion pounds, a decrease of 6 percent from 2021. Turkey placements have also improved recently, increasing year over year in each month from August to October. November placements were nearly level with last year. Forecast production in the first quarter of 2023 is adjusted up 10 million pounds to 1.335 billion pounds on continued improvement in placements and average weights. This makes the 2023 total production forecast 5.56 billion pounds, an increase of about 6 percent from the 2022 estimate but nearly level with 2021 production.

Monthly average turkey live weight, 2017–2022



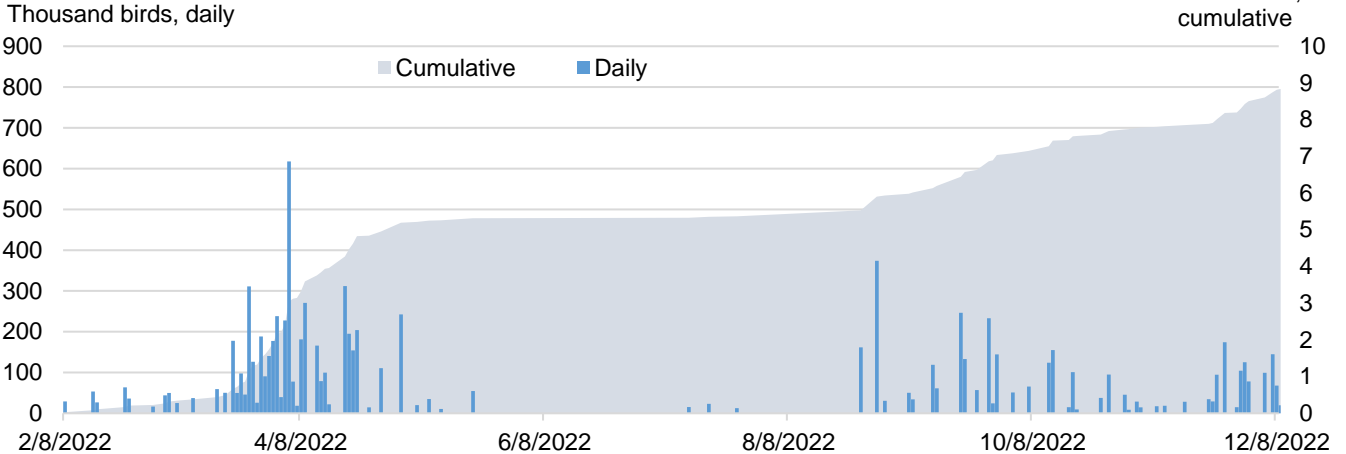
Monthly turkey placements, 2017–2022



Source: USDA, National Agricultural Statistics Service.

Turkey flocks suffered another blow from HPAI in December, with just over 1 million total depopulations in turkey meat birds. However, there has not been another case in a commercial turkey flock since the 20th of December.

Daily and cumulative depopulations of meat turkeys due to HPAI



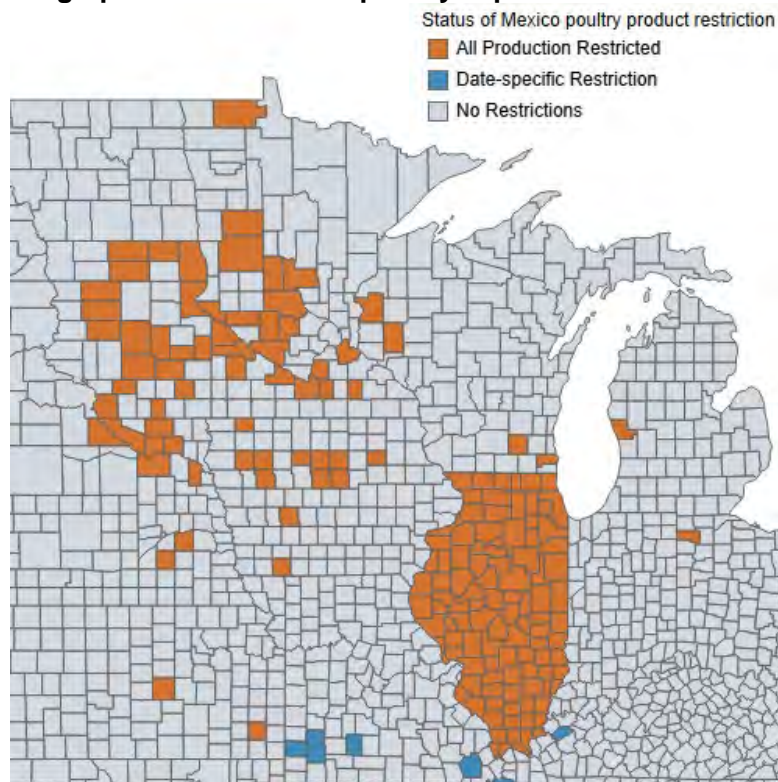
Source: USDA, Animal and Plant Health Inspection Service.

Turkey Exports Adjusted Down in 2022 and 2023; Imports Adjusted Down in 2022

November turkey exports totaled 30.35 million pounds, a decline of 5 million pounds from October and 16.7 million pounds less than last November. Exports for January through November are 25 percent lower than the same period in 2021. Although production is expected to increase in 2023, there are still barriers to exports due to the HPAI outbreak. Mexico, the largest destination for U.S. turkey exports, is still enforcing bans on all poultry products from multiple U.S. States and counties. According to the Food Safety and Inspection Service (FSIS) Import Export Library, these restrictions include the entire States of California, Colorado, Idaho, and Illinois. They also restrict product from 20 individual counties in Minnesota that account for

most of the turkey production in that State (based on the 2017 Census of Agriculture). Also restricted are many counties in North and South Dakota, as well as various individual counties across the country that have experienced HPAI outbreaks. The map below shows counties where all production is restricted from shipping to Mexico (orange), as well as counties where only poultry processed within a certain range of dates is restricted (blue).

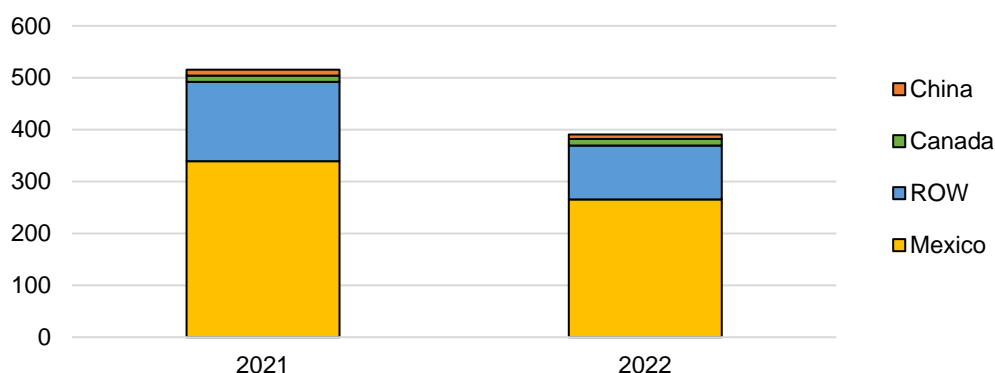
Geographic restrictions of poultry exports to Mexico as of December 22, 2022



Source: USDA, Food Safety and Inspection Service Import Export Library.

The 2022 turkey export estimate was adjusted down by 12 million pounds to 405 million pounds on November data. Based on expectations of continued barriers to turkey exports in the new year, 2023 forecast exports are adjusted down by 25 million pounds to 400 million pounds. In 2021, turkey exports accounted for nearly 10 percent of production, but they would be only 8 and 7 percent of production in 2022 and 2023, respectively, if current projections are realized.

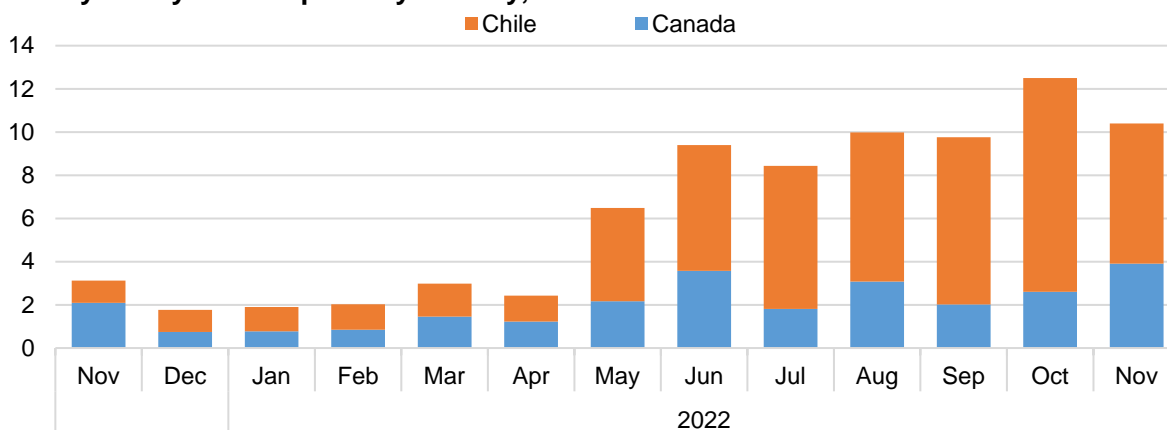
January–November turkey exports by country, 2021–2022



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

Turkey meat imports totaled 10.4 million pounds in November. This is down from October, but still the second-highest month of imports in 2022 and over 3 times the amount imported last November. This month's decrease in turkey imports, similar to broilers, was due to a decrease in shipments from Chile. Since the spring of 2022, Chile has become the dominant provider of imported turkey to the United States. Based on November data, estimated 2022 imports are adjusted down to 88 million pounds. The 2023 import forecast is unchanged at 120 million pounds, as Chile is expected to remain a consistently strong provider of turkey shipments in the new year.

Monthly turkey meat imports by country, November 2021–November 2022



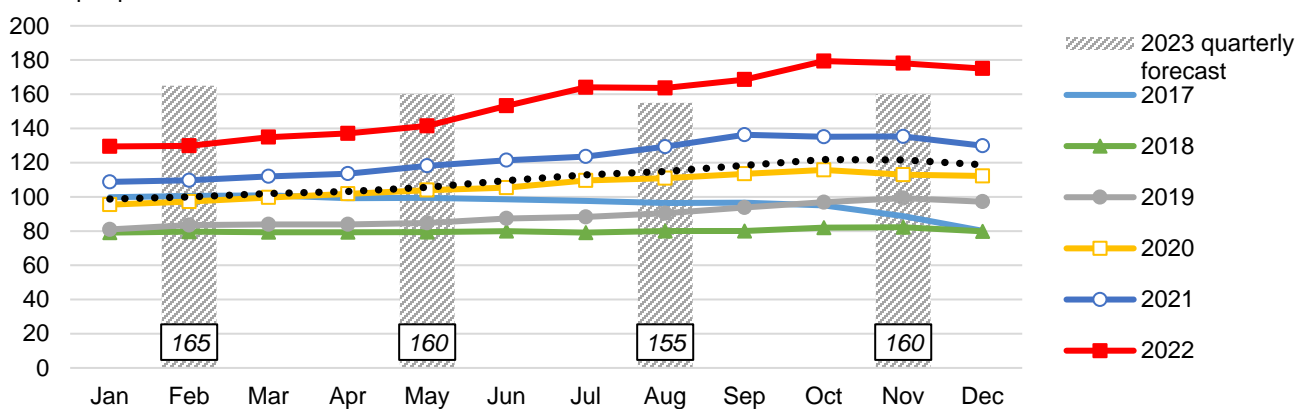
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

Turkey Prices Adjusted Up in 2023

The December average wholesale price for a whole frozen hen was 175 cents per pound. This is up about 46 cents from the January average price. It brings the fourth-quarter average price to 177.5 cents per pound and the annual average to 154.6 cents per pound. Despite stronger first-quarter production expectations, the price of turkey meat is expected to remain elevated in the first half of 2023 and to fall below 2022 levels in the second half of the year. Based on price strength at the end of 2022 and beginning of 2023, the forecast average price for 2023 is adjusted up 7 cents to 160 cents per pound, about 5 cents above the 2022 average.

Monthly average wholesale prices for frozen whole hens, 2017–2022, and forecast quarterly prices for 2023

Cents per pound



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

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U.S. red meat and poultry forecasts

	2020				2021				2022				2023					
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV	Annual	
Production, million pounds																		
Beef	6,931	6,059	7,115	7,069	6,900	6,963	6,979	7,106	27,948	7,022	7,069	7,147	7,065	6,690	6,685	6,530	6,540	26,445
Pork	7,426	6,313	7,048	7,515	7,292	6,668	6,530	7,165	27,675	6,904	6,639	6,533	6,920	7,040	6,575	6,550	7,215	27,480
Lamb and mutton	35	36	34	33	35	36	32	35	138	31	35	32	32	31	32	32	33	128
Beef and mutton	11,238	10,940	11,358	11,047	10,893	11,232	11,393	11,193	44,889	11,170	11,279	11,996	11,900	11,475	11,575	12,050	11,800	46,900
Bottlers	1,469	1,369	1,454	1,451	1,390	1,399	1,403	1,368	5,358	1,374	1,275	1,264	1,310	1,335	1,350	1,420	1,425	5,560
Turkeys																		
Total red meat and poultry	27,251	24,870	27,172	27,263	26,651	26,450	26,679	27,030	106,810	26,650	26,453	27,037	27,065	26,710	26,395	26,835	27,153	107,093
Table eggs, million dozen	2,050	1,957	2,008	2,051	1,982	1,957	1,982	2,050	7,971	1,974	1,883	1,921	1,955	1,960	2,000	2,050	2,105	8,115
Per capita disappearance, retail pounds 1/																		
Beef	14.6	13.5	15.5	14.5	14.5	14.9	14.6	14.8	58.9	15.0	14.8	14.8	14.6	14.4	14.4	13.8	13.7	56.3
Pork	13.1	11.5	13.2	13.9	13.1	11.8	12.3	14.0	51.1	13.1	12.4	12.4	13.1	13.1	12.1	12.6	13.7	51.4
Lamb and mutton	0.4	0.3	0.3	0.3	0.3	0.4	0.3	0.4	1.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	1.3
Bottlers	24.2	23.7	24.4	23.4	23.5	24.3	25.0	23.8	96.6	23.8	24.2	25.8	25.4	24.8	24.9	26.2	25.1	100.9
Turkeys	3.6	3.5	3.9	4.7	3.4	3.6	3.8	4.5	15.3	3.4	3.2	3.6	4.4	3.4	3.7	4.0	4.6	15.8
Total red meat and poultry	58.3	52.9	57.7	57.2	55.2	55.4	56.4	57.9	224.9	56.1	55.5	57.4	58.4	56.4	55.9	57.2	57.9	227.4
Eggs, number	72.1	69.3	71.1	72.8	69.8	68.8	69.3	72.7	280.5	70.4	67.8	69.0	70.2	69.9	71.4	72.5	74.8	288.6
Market prices																		
Sheep 5-area Direct, Total all grades, dollars/cwt	118.32	105.79	101.74	108.18	112.98	120.75	123.51	122.36	122.40	139.25	141.93	143.42	152.99	157.00	157.00	157.00	162.00	158.25
Feeder steers, Medium Frame No. 1, OK City, dollars/cwt	136.42	126.37	141.42	137.57	134.30	140.22	153.69	159.59	146.95	156.04	158.35	172.31	177.06	182.00	192.00	214.00	224.00	203.00
Cows, Live equivalent, Culler 90% lean, 500 lbs and up, National, dollars/cwt	59.38	63.14	64.97	54.93	59.63	67.54	69.21	63.24	64.91	72.65	83.41	84.01	73.69	85.00	95.00	105.00	105.00	97.50
Choice/Prime slaughter lambs, National, dollars/cwt	159.12	N/A	N/A	161.72	165.42	211.79	256.86	233.61	216.92	225.00	210.33	138.69	124.26	140.00	145.00	140.00	142.50	142.50
Barrows and gilts, National base cost, 51-52% lean, live equivalent, dollars/cwt	42.52	38.96	40.50	50.75	55.71	80.92	76.15	56.36	67.29	65.55	75.58	80.20	63.49	71.21	63.00	73.00	64.00	68.00
Bottlers, Wholesale, National composite, weighted average, cents/lb	83.5	67.0	66.7	75.7	84.0	104.4	105.4	110.9	101.2	135.1	167.5	136.1	123.5	127.0	130.0	128.0	129.0	128.5
Turkeys, National 8-16 lb hens, National, cents/lb	97.4	103.7	111.3	113.6	110.1	117.7	129.7	133.4	122.8	131.4	143.9	165.4	177.5	165.0	160.0	155.0	160.0	166.0
Eggs, Grade A large, New York, volume buyers, cents/dozen	133.1	119.6	89.0	107.2	127.8	94.2	120.1	131.8	118.5	170.8	251.6	295.6	411.7	285.0	195.0	165.0	175.0	205.0
U.S. trade, million pounds, carcass-weight equivalent																		
Beef and veal exports	769	605	739	819	798	875	912	856	3,441	846	940	906	850	760	775	785	770	3,090
Beef and veal imports	774	848	1,025	693	696	865	923	863	3,346	985	859	798	735	850	850	890	810	3,400
Lamb and mutton imports	102	67	62	70	69	93	100	103	364	88	88	94	85	95	85	90	95	385
Pork exports	2,021	1,773	1,627	1,858	1,922	1,903	1,550	1,652	7,026	1,541	1,609	1,509	1,675	1,605	1,600	1,480	1,665	6,350
Pork imports	206	220	226	252	247	260	308	364	1,180	358	369	317	300	240	245	250	270	1,005
Boiler exports	1,860	1,729	1,821	1,959	1,851	1,772	1,835	1,898	7,355	1,826	1,812	1,724	1,920	1,830	1,810	1,765	1,910	7,315
Turkey exports	139	126	143	164	130	140	138	140	548	107	109	96	93	95	100	100	105	400
Live swine imports (thousand head)	1,332	1,202	1,272	1,488	1,607	1,649	1,772	1,638	6,863	1,654	1,665	1,602	1,580	1,650	1,665	1,590	1,575	6,480

Note: Forecasts are in bold, cwt=hundredweight.
 1/ Per capita meat and egg disappearance data are calculated using the Resident Population plus Armed Forces Overseas series from U.S. Department of Commerce, Bureau of the Census.
 Source: World Agricultural Supply and Demand Estimates and Supporting Materials.
 For further information, contact: Mildred Haley, Economic Research Service, USDA.
 Updated 1/19/2023

Dairy forecasts

Years Quarters	2021	2022					2023				
	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual
Milk cows (thousands)	9,448	9,384	9,413	9,415	9,420	9,410	9,415	9,415	9,400	9,395	9,405
Milk per cow (pounds)	23,948	6,000	6,145	6,001	5,965	24,110	6,065	6,210	6,055	6,040	24,370
Milk production (billion pounds)	226.3	56.3	57.8	56.5	56.2	226.8	57.1	58.5	56.9	56.7	229.2
Farm use	1.0	0.3	0.3	0.3	0.3	1.1	0.3	0.3	0.3	0.3	1.1
Milk marketings	225.2	56.0	57.6	56.2	55.9	225.8	56.8	58.2	56.6	56.5	228.2
Milk-fat (billion pounds milk equiv.)											
Milk marketings	225.2	56.0	57.6	56.2	55.9	225.8	56.8	58.2	56.6	56.5	228.2
Beginning stocks	15.6	14.3	16.4	18.4	16.6	14.3	13.9	16.7	18.7	17.0	13.9
Imports	6.5	1.3	1.9	1.9	2.1	7.3	1.5	1.9	1.9	1.9	7.2
Total supply	247.4	71.7	75.9	76.6	74.6	247.4	72.2	76.8	77.3	75.4	249.2
Exports	11.5	3.0	3.7	3.4	3.5	13.6	3.0	3.6	3.4	3.3	13.3
Ending stocks	14.3	16.4	18.4	16.6	13.9	13.9	16.7	18.7	17.0	14.7	14.7
Domestic use ¹	221.5	52.3	53.7	56.6	57.2	219.8	52.5	54.5	56.9	57.4	221.3
Skim solids (billion pounds milk equiv.)											
Milk marketings	225.2	56.0	57.6	56.2	55.9	225.8	56.8	58.2	56.6	56.5	228.2
Beginning stocks	10.9	11.1	11.8	12.5	11.9	11.1	11.6	12.3	12.7	12.0	11.6
Imports	5.8	1.5	1.6	1.6	1.9	6.6	1.5	1.6	1.5	1.7	6.3
Total supply	241.9	68.6	71.0	70.3	69.6	243.4	70.0	72.1	70.9	70.1	246.1
Exports	50.8	11.8	14.4	13.5	12.8	52.6	12.0	14.4	13.5	12.7	52.6
Ending stocks	11.1	11.8	12.5	11.9	11.6	11.6	12.3	12.7	12.0	11.5	11.5
Domestic use	180.0	44.9	44.1	44.9	45.2	179.3	45.7	45.0	45.4	45.9	182.0
Milk prices (dollars/hundredweight) ¹											
All milk	18.53	24.93	27.10	24.80	25.40	25.55	22.55	21.20	20.70	22.00	21.60
Class III	17.08	21.25	24.65	20.81	21.06	21.94	19.10	18.55	18.70	19.00	18.85
Class IV	16.09	23.97	25.38	25.08	23.46	24.47	19.80	19.40	19.00	18.75	19.25
Product prices (dollars/pound) ²											
Cheddar cheese	1.6755	1.9531	2.3523	2.0428	2.1004	2.1122	1.945	1.900	1.920	1.950	1.930
Dry whey	0.5744	0.7610	0.6754	0.5143	0.4633	0.6035	0.430	0.410	0.410	0.410	0.415
Butter	1.7325	2.6686	2.8095	3.0136	2.9743	2.8665	2.365	2.350	2.300	2.300	2.330
Nonfat dry milk	1.2693	1.7242	1.8188	1.6831	1.5141	1.6851	1.385	1.350	1.330	1.300	1.340

Totals may not add due to rounding.

¹ Simple averages of monthly prices. May not match reported annual averages.

² Simple averages of monthly prices calculated by the USDA, Agricultural Marketing Service, for use in class price formulas. Products prices are 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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