

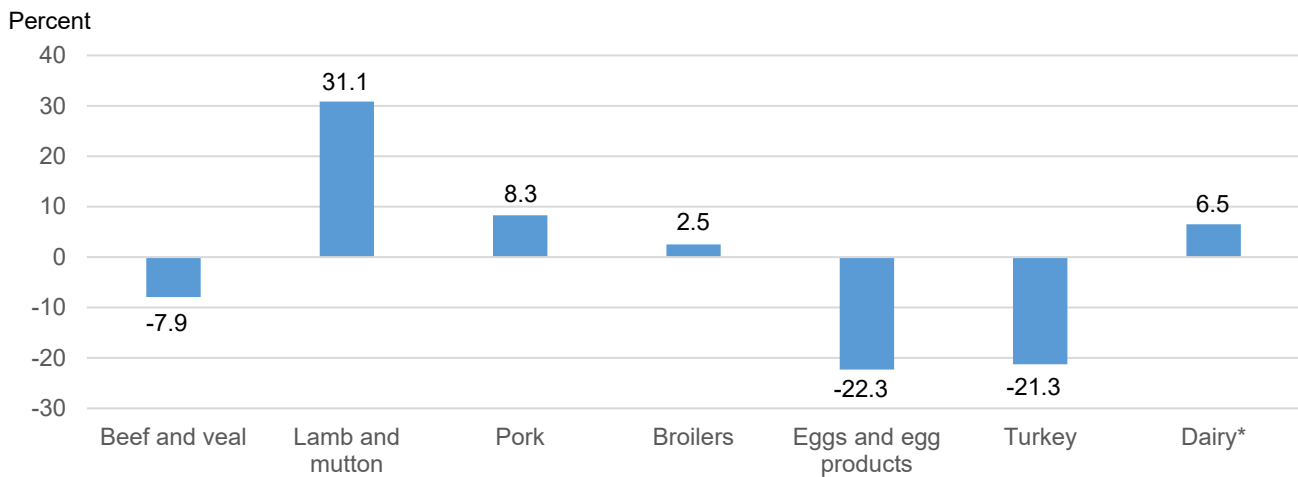


Livestock, Dairy, and Poultry Outlook: May 2023

First-Quarter 2023 Animal Products Export Volumes Largely Favorable Compared to Volumes in First-Quarter 2022

A comparison between first-quarter 2023 exports of seven animal products with the exports of the same products in the same period last year show that four products were year-over-year greater and three were lower in 2023. In the first quarter of this year, more lamb and mutton (+31.1 percent), pork (+8.3 percent), broilers (+2.5 percent), and dairy products (+6.5 percent) were exported compared with a year earlier, due mostly to favorable prices and the depreciating value of the U.S. dollar. Lower first-quarter 2023 exports of beef and veal (-7.9 percent) are attributable to lower production due to drought conditions in major U.S. cattle production regions as well as higher prices and competition with Australia and New Zealand. Shipments of eggs and egg products (-22.3 percent) and turkey (-21.3 percent) were also lower, both due to export restrictions related to high pathogenic avian influenza.

Comparison of export volumes, first-quarters 2023 and 2022: Year-over-year percent changes



*Percent change for dairy is on a skim-solids milk equivalent basis.

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

Summary

Beef/Cattle: Tighter supplies of cattle will continue to pull down U.S. beef production in 2024, an 8-percent decline year over year to 24.7 billion pounds. As a result, aggregate domestic beef disappearance in 2024 is expected to decline more than 7 percent to the retail-equivalent basis of 52.8 pounds per capita, the lowest since records began in 1970. In 2023, a temporal shift in expected feeder calf placements and stronger cow slaughter lifts the production forecast to 26.9 billion pounds. Cattle prices are projected to reach new highs in 2024, and the 2023 forecast was raised as well. The 2024 trade forecast is raised for imports on lower expected cow slaughter, but 2024 exports will see another year of decline as domestic production shrinks.

Dairy: The all-milk price forecast for 2023 is \$20.50 per cwt, \$0.15 lower than last month's forecast. The all-milk price forecast for 2024 is \$19.90 per cwt, \$0.60 lower than the projection for 2023. For 2023, wholesale price forecasts for all Cheddar cheese and dry whey were adjusted down, while prices for butter and nonfat dry milk were adjusted higher. With more milk production projected in 2024, milk prices and wholesale price forecasts for all major dairy products are forecast to be lower than 2023.

Pork/Hogs: U.S. pork production is expected to be down 0.1 percent in 2024 to 27.35 billion pounds. Hog prices next year are forecast to average about \$62 per hundredweight, almost 9 percent above expected prices in 2023. Exports for 2023 are raised 90 million pounds to 6.503 billion pounds, 2.6 percent above a year ago on the assumption that low U.S pork prices, combined with U.S dollar weakness, will persist through 2023 to drive export flows higher.

Poultry/Eggs: Broiler production is adjusted up overall in 2023. Second-quarter production is lowered on recent hatchery data, but second-half production is increased on the strength of the broiler-supply flock. Broiler exports are increased on recent data in 2023 and expected to grow along with production in 2024. Broiler prices are increased in the second quarter on recent data and expected to fall in 2024 on higher production. The second-quarter table-egg production forecast is revised slightly upward to account for the current production data. The wholesale egg price forecasts for the current and outlying quarters are revised downward following sharp price decreases in April. The current-year egg import and export forecasts are updated to reflect the first-quarter reported values. Going forward, the 2024 outlook projects year-over-year higher table-egg production (+3.6 percent) and exports (+19 percent) but lower imports (-21 percent). Wholesale prices for eggs in 2024 are projected to be 23 percent lower than in 2023. Turkey production is lowered in 2023 on hatchery indicators but is expected to increase in 2024. Projected turkey exports for the outlying quarters of 2023 are unchanged, with exports expected to increase along with production in 2024. Projected turkey prices for 2023 are unchanged from last month but prices are expected to fall in 2024 as production continues to recover from Highly Pathogenic Avian Influenza (HPAI).

Beef/Cattle

Russell Knight and Hannah Taylor

Drought Improves but Impact Lingers for Beef Producers

Since October 2022, drought conditions have improved for much the United States to the point where U.S. Drought Monitor data notes that less than 24 percent of the United States is under drought conditions.¹ Until February 2023, at least 40 percent of the United States was experiencing some level of drought every week since September 2020. However, a core portion of the U.S. beef herd remains under severe drought conditions in the Southern Plains. Although conditions have improved for many producers, the impact lingers. On May 12, 2023, USDA National Agricultural Statistics Service (NASS) estimated hay stocks on farms on May 1 were 13 percent below those of last year, the lowest in a decade. Despite recent rains, for some producers, the very low hay supplies may not be sufficient to offset poor pastures to sustain herds this summer and allow producers to retain breeding stock to rebuild their herds. As a result, the culling of beef cows continues at a relatively high rate. Based on USDA, Agricultural Marketing Service reports for weekly slaughter under federal inspection, the pace of monthly beef cow slaughter remains relatively high despite dropping to below the pace for the last 2 years in March and April. This has the potential to weaken the outlook for calf crops in late 2023 and 2024, further reducing potential cattle placements year over year in 2024. On the bright side, feed prices are forecast to decline, likely improving returns for producers.

2024 Beef Production To Drop 8 percent From 2023

The relatively strong pace of beef cow slaughter and relatively large placements of heifers in feedlots in 2022 and into early 2023 will likely yield a smaller year-over-year calf crop in 2023, tightening future cattle supplies. Further, this will likely lead to fewer cows and bulls in the slaughter mix in 2024, both as absolute numbers are lower and—assuming a return to normal pasture conditions—producers hold back animals for herd expansion.

In addition, due to tighter forage supplies heading into summer 2023 and lower feed prices, placements of calves in feedlots are likely to be larger than previously expected, potentially drawing cattle that would have been placed in the first part of 2024. With these anticipated placement patterns and lower expected cow slaughter, 2024 beef production is forecast to decline 8 percent from 2023 to 24.7 billion pounds. In the chart below, annual beef production, cattle slaughter volume, and average carcass weights are indexed on the year 2000 to demonstrate the sharp decline after 7 years of rising beef production volumes. 2024 will mark the second year of lower production following the record-large volume set in 2022 and will be lowest production year since 2015 when the sector began to rebuild following the drought of 2011-14.

Although beef imports are forecast to increase and exports are forecast to decline year over year in 2024, lower expected beef production will have a large impact on available domestic disappearance. Total disappearance in 2024 is forecast to be the lowest since 2015, but on a per capita² retail weight basis it is expected to decline year over year by more than 7 percent

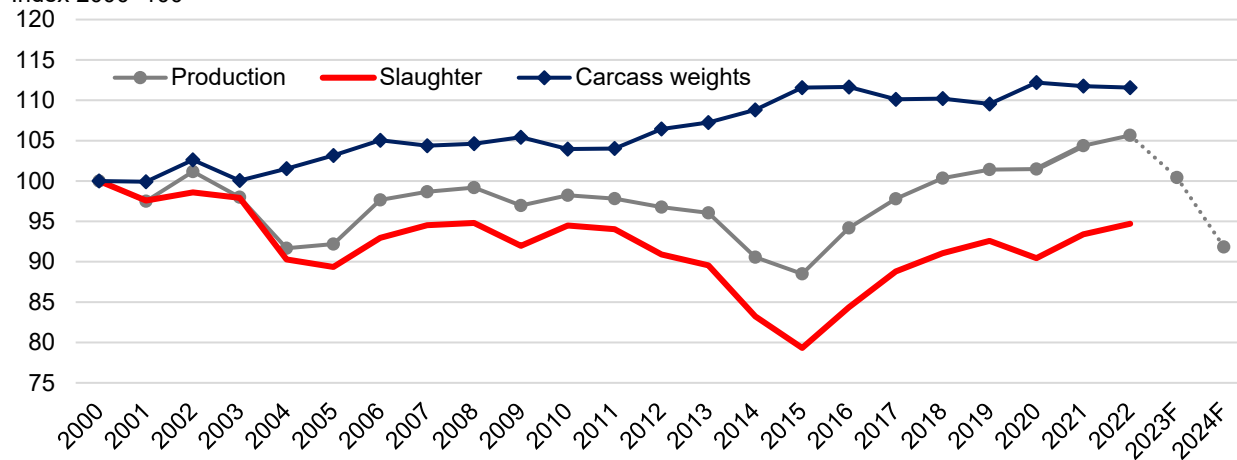
¹ Includes U.S. Drought Monitor categories of D1-D4.

² Retail weight equivalent.

to 52.8 pounds. This will be the lowest per capita beef available domestically since records began in 1970.

2024 production down from 2023 on tightening cattle supplies

Index 2000=100



Source: USDA, ERS calculations using data from U.S. Department of Agriculture, National Agricultural Statistical Service.

2023 Beef Production Raised on Higher Cattle Slaughter

The latest *Cattle on Feed* report published by USDA, National Agricultural Statistics Service (NASS), showed the April 1 feedlot inventory at 11.612 million head, over 4 percent below 12.145 million head in the same month last year. Feedlot net placements³ in March were less than only 1 percent lower year over year at 1.939 million head. Although reported placements in March were lower year over year, they did not decline as much as expected. Marketings in March were 1.977 million head, down about 1 percent year over year. On April 1, the number of cattle on feed over 150 days fell below year-ago levels for the first time this year. However, as a percent of total cattle on feed, this grouping still tops year-ago levels. The unexpected high placement levels in March—combined with poor forage and small grains pastures—suggest an increase in anticipated placements in second-quarter 2023. This is further supported in higher cumulative feeder and stocker receipts in April and early-May 2023 shown in the USDA, Agricultural Marketing Service weekly *National Feeder and Stocker Cattle Summary* reports.

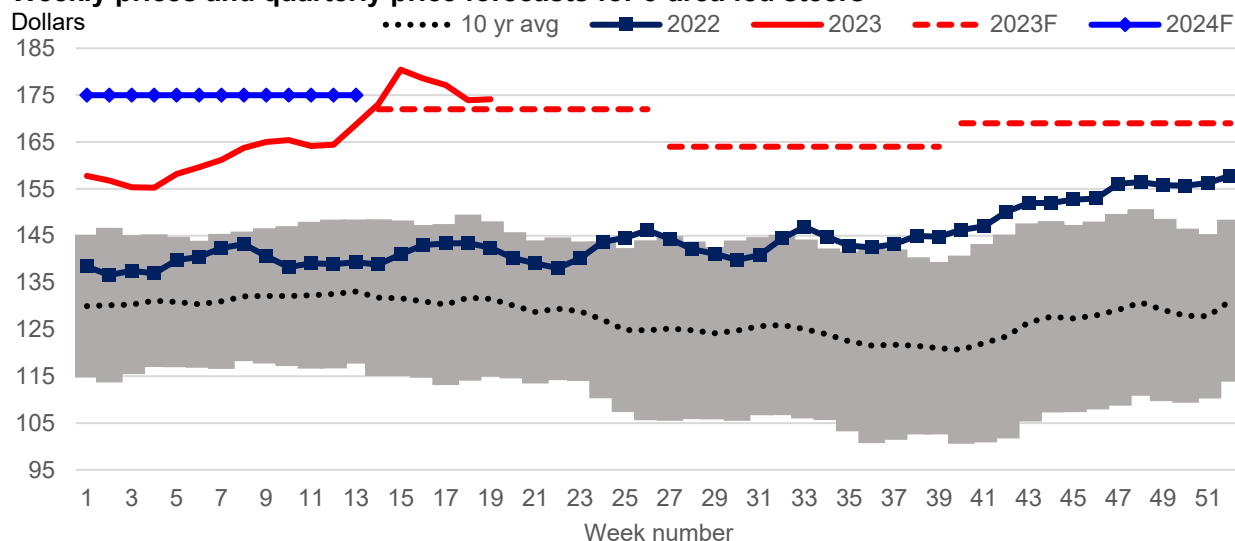
The forecast for second-quarter beef production is little changed from last month as an increase in expected cow slaughter is more than offset by lower anticipated carcass weights. Third-quarter production forecast is lowered 40 million pounds on a slower pace of fed cattle slaughter and on lower expected average carcass weights more than offsetting more cows in the slaughter mix. However, in the fourth quarter, the production outlook is higher than last month by 190 million pounds as more fed cattle are expected to be marketed based on higher first-half placements. In addition, more cows are expected in the slaughter mix, and average carcass weights are lowered. For the year, more fed cattle and cows in the slaughter mix more than offset lower expected carcass weights, raising the outlook for 2023 beef production by 146 million pounds to 26.9 billion pounds.

³ Net placements are placements minus other disappearance.

Tighter Cattle Supplies To Push Cattle Prices Higher in 2024

Typically, fed steer prices climb higher in the spring as demand for slaughter-ready cattle increases from packers looking to fill orders for the impending grilling season. This spring, reported fed steer prices in the 5-area marketing region⁴ for the week ending April 16 (week 14) set a record at \$180.44 per cwt, and the month averaged \$177.00 per hundredweight (cwt) in April 2023, over \$35 above April of last year. The strong move in cattle prices was likely supported by packers trying to fill orders at record wholesale beef prices for the month of April.

Weekly prices and quarterly price forecasts for 5-area fed steers



Note: Error bars equal one standard deviation from the 10-year average.

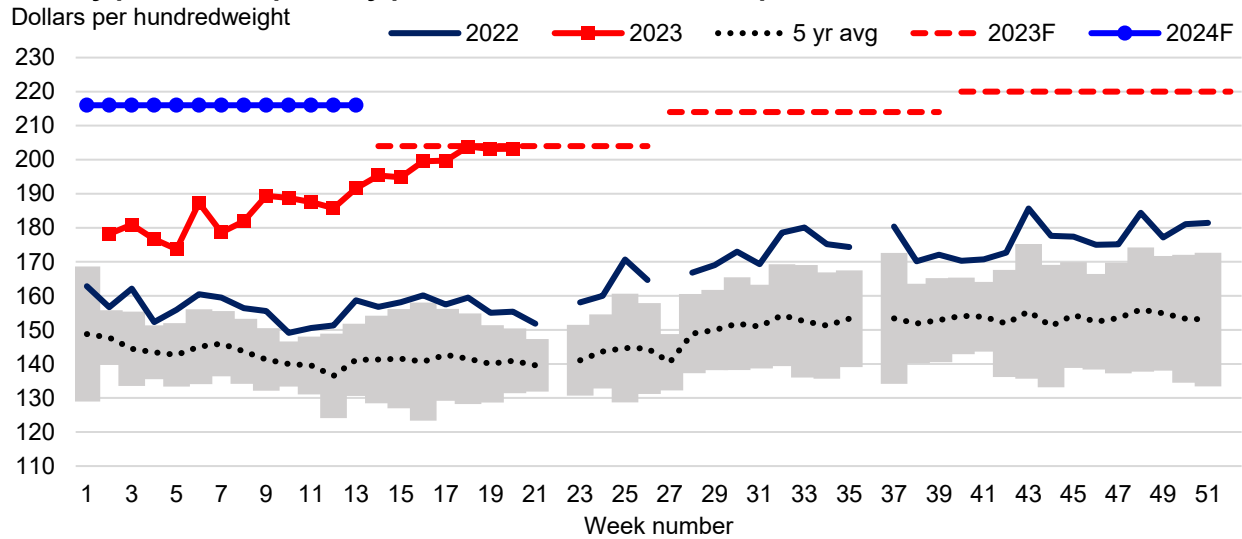
Source: USDA, ERS calculations using data from USDA, Agricultural Marketing Service (AMS).

Based on recent price data in early May and expected firm demand, the forecast for steers in the 5-area marketing region is raised \$3 in the second quarter and \$2 in the third and fourth quarters. The annual fed steer price is raised about \$2 for a projection of \$166.50 per cwt in 2023, which is 15 percent above last year. In 2024, packers will likely have to bid higher for the shrinking slaughter-ready cattle supply. Prices are projected to average \$172.00 per cwt for the year.

Demand for feeder calves has shown significant strength this spring. In April, the weighted-average price for feeder steers between 750–800 pounds at the Oklahoma City National Stockyards was recorded at \$198.06 per cwt, almost \$40 above April 2022. The feeder steer price reported on May 8 reached \$203.15 per cwt, over \$48 above the same week last year. Based on recent price data and declines in forecast corn season average prices, the second-quarter forecast is raised by \$5 to \$204 per cwt for an annual feeder steer price of \$205.40 per cwt, a 24-percent increase from last year. In 2024, demand for feeder calves will continue with fewer calves and lower feed input prices for an annual forecast of \$221.00 per cwt, an increase year over year of 7 percent.

⁴ The 5-area marketing region includes Colorado, Iowa, Kansas, Nebraska, New Mexico, Oklahoma, and Texas.

Weekly prices and quarterly price forecasts for 750–800 pound feeder steers

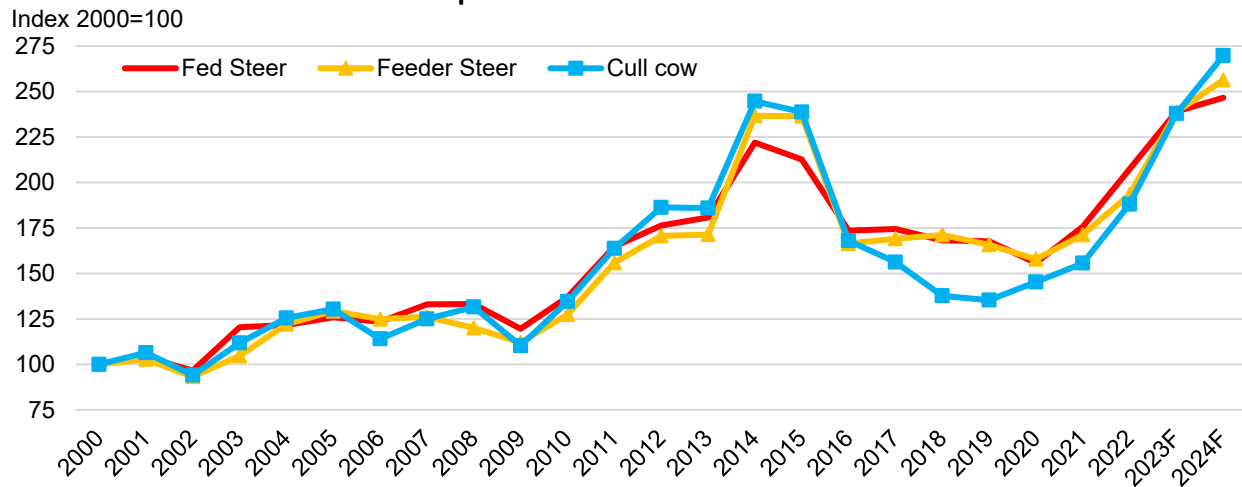


Note: Error bars equal one standard deviation from the 5-year average.
 Source: USDA, ERS calculations using data from USDA, Agricultural Marketing Service (AMS).

Last, cull cow⁵ prices in 2023 are forecast to be \$99.20 per cwt, an increase of 26 percent from 2022. In 2024, a decline in cull cow slaughter is expected to lift prices to \$113.00 per cwt, a year-over-year increase of 13 percent.

To give perspective on all three price forecasts for 2023 and 2024, below is a chart where the actual and forecast annual prices are indexed to prices in 2000. The year 2000 is a good period from which to index as it is recent and before major disruptions in the cattle industry took place in late 2003.

Actual and forecast annual cattle prices indexed to 2000



Source: USDA, ERS calculations using data from USDA, Agricultural Marketing Service (AMS).

⁵ Cull cow prices are estimated from USDA, AMS weekly prices for cutter cows (90-percent lean) on a dressed basis, 500 pounds and up. Prices are converted to a live basis by multiplying the reported price by 0.495.

Stronger-Than-Expected First-Quarter Exports Raise 2023 Forecast; Exports To Continue Lower in 2024

Beef exports in March were 286 million pounds, 6 percent lower year over year but 4 percent higher than the 5-year average. Monthly exports to Mexico were up 18 percent and exports to Hong Kong were more than double the previous year. However, these increases were more than offset by decreases in exports to Canada (-17 percent), China (-15 percent), and Japan (-11 percent).

First-quarter beef exports were 779 million pounds, about 8 percent lower than last year's record for the quarter but 2 percent higher than the 5-year average. The table below shows that for January through March, only exports to Mexico and Japan increased year over year. Exports to China, while lower year over year, represent a large portion of the increase over the 5-year average. Exports to South Korea and Taiwan were also relatively strong compared to previous years despite the year-over-year decrease from a record quarter last year.

U.S. beef exports by volume, January–March 2022 and 2023

Country	March 2023 exports	Year-to-date exports				Share of YTD exports, percent	
		2022	2023	Year-over-year volume change	Year-over-year percent change	2022	2023
Japan	60.4	186.0	186.4	0.4	0	22	24
South Korea	69.8	208.9	175.4	-33.4	-16	25	23
China	46.0	145.4	124.5	-20.9	-14	17	16
Mexico	26.8	65.9	77.6	11.7	18	8	10
Canada	20.2	65.3	57.5	-7.7	-12	8	7
Taiwan	17.7	56.8	45.6	-11.2	-20	7	6
ROW	44.7	117.6	112.1	-5.5	-5	14	14
Total	285.7	845.8	779.1	-66.7	-8		

Note: The rating of the top six countries shown here is based on 2023 year-to-date exports; YTD = year-to-date; ROW = rest of world.

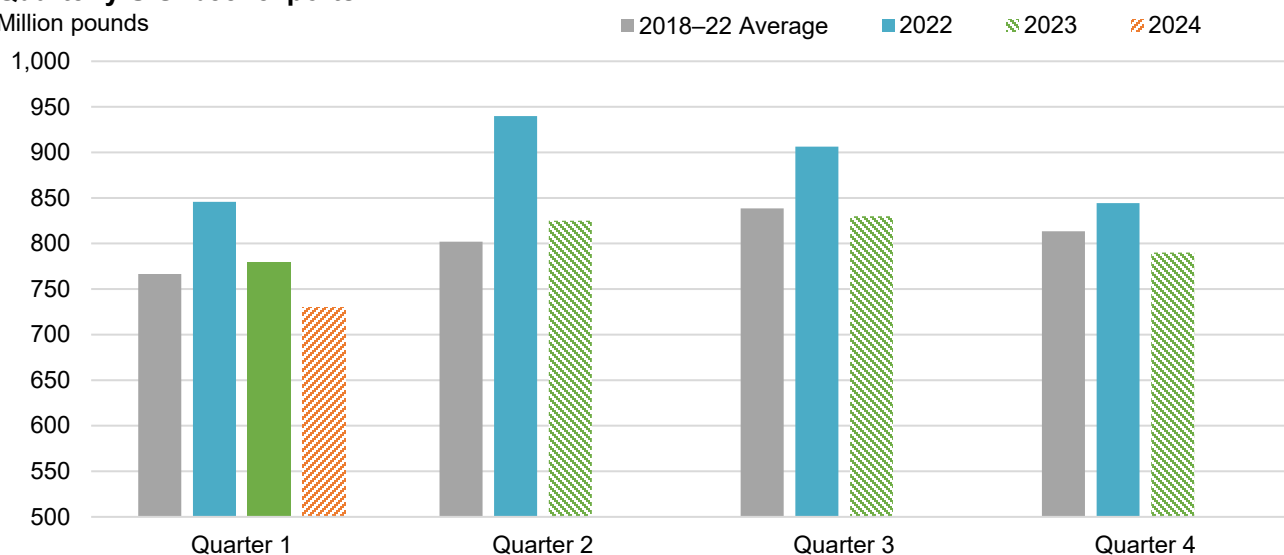
Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census.

Although lower year over year, first-quarter exports were stronger than earlier anticipated, especially to Asia and Mexico. The forecast for second-quarter 2023 is raised 40 million pounds to 825 million. As shown in the chart below, this would be significantly lower when compared to last year's record for the quarter, although slightly higher than the 5-year average. The forecasts for third and fourth quarters are raised 25 and 10 million pounds, respectively, but are still expected to remain below last year and the 5-year average. The annual forecast for 2023 is 3.224 billion pounds, which if realized would be a year-over-year decrease of about 9 percent.

In 2024 beef production is expected to decrease about 8 percent. With fewer exportable supplies and at higher price levels, U.S. beef will likely be less competitive in the global market. The annual forecast for 2024 is 2.950 billion pounds, which would be a year-over-year decrease of about 9 percent. The first-quarter forecast is 730 million pounds.

Quarterly U.S. beef exports

Million pounds



Note: 2023 quarters 2,3 and 4 and 2024 quarter 1 are forecasts.

Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census; USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates*.

2023 Import Forecast Raised Slightly; Imports To Increase Marginally in 2024

Beef imports in March were 308 million pounds, nearly 13 percent lower year over year. Lower shipments from Brazil, New Zealand, and Mexico more than offset slightly higher imports from Canada, Australia, and Uruguay. Imports for the quarter totaled 956 million pounds, 3 percent below a year ago but 22 percent higher than the 5-year average. As shown in the chart below, from January to March only imports from Canada and Australia have increased year over year. Imports from Brazil have not been as high as last year but are still significantly above the 5-year average. The tariff-rate quota under which fresh beef imports from Brazil enter the United States was filled for the year as of May 2.

U.S. beef imports by volume, January–March 2022 and 2023

Country	March 2023 imports	Year-to-date imports				Share of YTD imports, percent	
		2022	2023	Year-over-year volume change	Year-over-year percent change	2022	2023
Canada	83.0	227.6	245.6	18.1	8	23	26
Brazil	50.5	230.2	203.7	-26.5	-11	23	21
Mexico	60.4	200.1	171.1	-29.0	-14	20	18
New Zealand	48.3	126.3	120.6	-5.7	-5	13	13
Australia	28.5	93.3	106.0	12.7	14	9	11
ROW	37.5	107.2	109.4	2.2	2	11	11
Total	308.2	984.6	956.5	-28.1	-3		

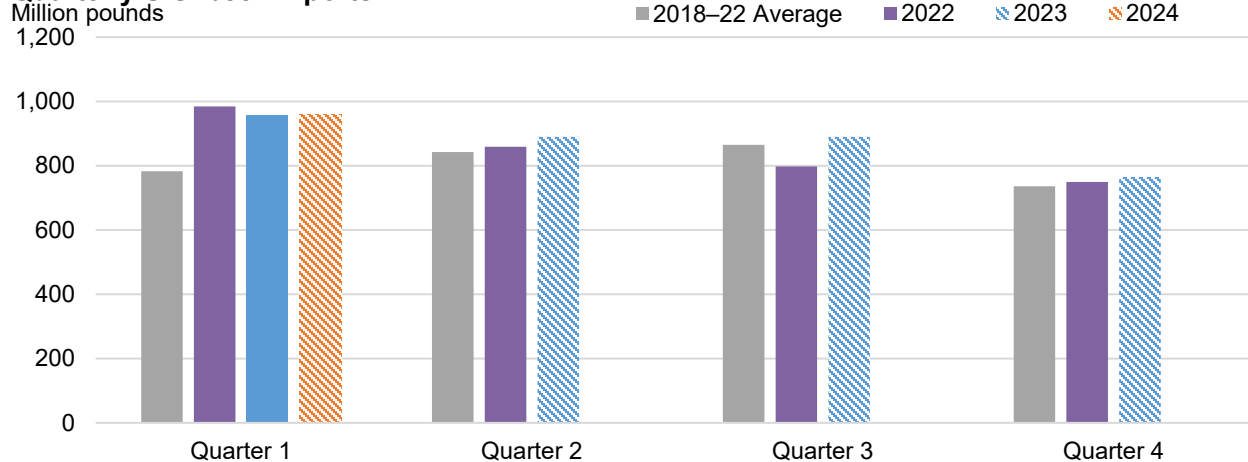
Note: The rating of the top six countries shown here is based on 2023 year-to-date imports; YTD = year-to-date; ROW = rest of world.

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

The import forecast for second-quarter 2023 is raised 20 million pounds to 890 million. The third and fourth quarters are unchanged at 890 and 765 million pounds, respectively. The annual forecast for 2023 is 3.501 billion pounds, a year-over-year increase of about 3 percent.

Lower expected production in 2024, especially from lower expected cow slaughter, will increase the need for imports. Greater availability of exportable supplies from Oceania and South America will support a forecast increase in imports of less than 2 percent, marking the seventh consecutive year-over-year increase, and averaging just below the growth rate from 2018–22. The quarterly import pattern in 2022 and 2023 has been heavily front-loaded in the first and second quarters. This was mostly due to large early shipments from Brazil until the tariff-rate quota was filled for the year. This pattern is expected to continue in 2024; the first-quarter forecast is 960 million pounds.

Quarterly U.S. beef imports



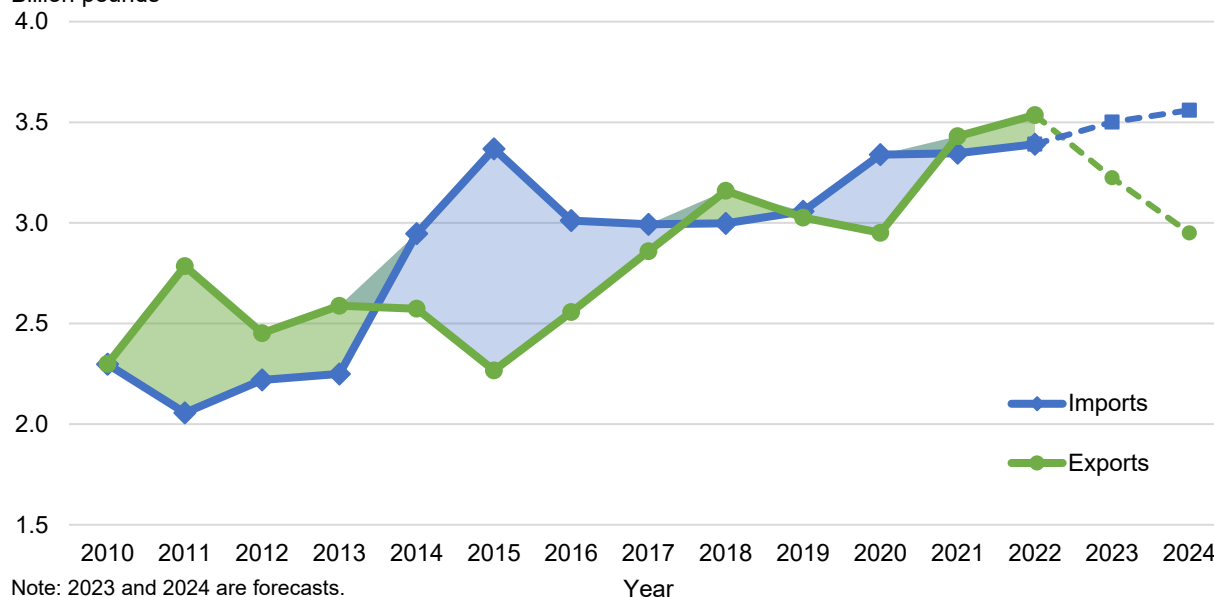
Note: 2023 quarters 2,3 and 4 and 2024 quarter 1 are forecasts.

Source: USDA, Economic Research Service calculations using data from U.S. Department of Commerce, Bureau of the Census; USDA, World Agricultural Outlook Board. *World Agricultural Supply and Demand Estimates*.

After 2 years of beef trade surplus, imports are forecast higher than exports in 2023 and 2024. The chart below shows the beef trade balance from 2010 to 2024. Over the last few years, the United States has alternated between being a net-importer and net-exporter of beef. Domestic beef production largely drives the amount of beef exported and imported. With the contraction in beef production forecast in 2023 and 2024, the United States is expected to remain a net-importer of beef for at least the next couple of years until production is able to expand again.

U.S. beef trade, 1990–2024

Billion pounds



Note: 2023 and 2024 are forecasts.

Year

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

U.S. Cattle Import and Export Forecasts

The U.S. cattle import forecast for 2023 is 1.800 million head due to a much slower pace of feeder cattle imports from Canada so far this year. The annual forecast for cattle imports in 2024 is 1.950 million head on expected demand for feeder and slaughter cattle. The 2023 forecast for cattle exports is 300,000 head on stronger exports to Canada so far this year. The annual forecast for cattle exports in 2024 is 200,000 head.

Dairy

Angel Terán

Recent Developments in U.S. Dairy Markets

From the week ending April 8 to the week ending May 6, 2023, all wholesale dairy product prices reported in the USDA *National Dairy Products Sales Report* (NDPSR) declined. The price for 40-pound blocks of Cheddar cheese decreased 23.07 cents, while the price for 500-pound barrels (adjusted to 38-percent moisture) declined 34.18 cents. The prices for dry whey, nonfat dry milk (NDM), and butter decreased by 5.07, 3.25, and 0.59 cents per pound, respectively.

Dairy wholesale product prices

Dollars per pound

	For the week ending		Change
	April 8	May 6	
Butter	2.4244	2.4185	-0.0059
Cheddar cheese			
40-pound blocks	2.0230	1.7923	-0.2307
500-pound barrels *	1.9393	1.5975	-0.3418
Nonfat dry milk	1.2006	1.1681	-0.0325
Dry whey	0.4617	0.4110	-0.0507

* Adjusted to 38-percent moisture.

Source: USDA, Economic Research Service calculations using information from USDA, Agricultural Marketing Service, *National Dairy Products Sales Report*.

For the trading week⁶ ending May 12 at the Chicago Mercantile Exchange (CME), the average spot prices for Cheddar cheese 40-pound blocks and 500-pound barrels averaged \$1.6085 and \$1.5115 per pound, respectively. CME prices for butter, NDM, and dry whey averaged \$2.4055, \$1.1795, and \$0.3090 per pound, respectively.

Most Oceania and Europe average dairy product export prices reported by USDA *Dairy Market News* declined from March to April 2023, but the Western Europe butter price increased.

⁶ While the end of each week for National Dairy Products Report average prices falls on a Saturday, the trading week for the Chicago Mercantile Exchange usually ends on a Friday.

Dairy product export prices for Oceania and Europe

Dollars per pound

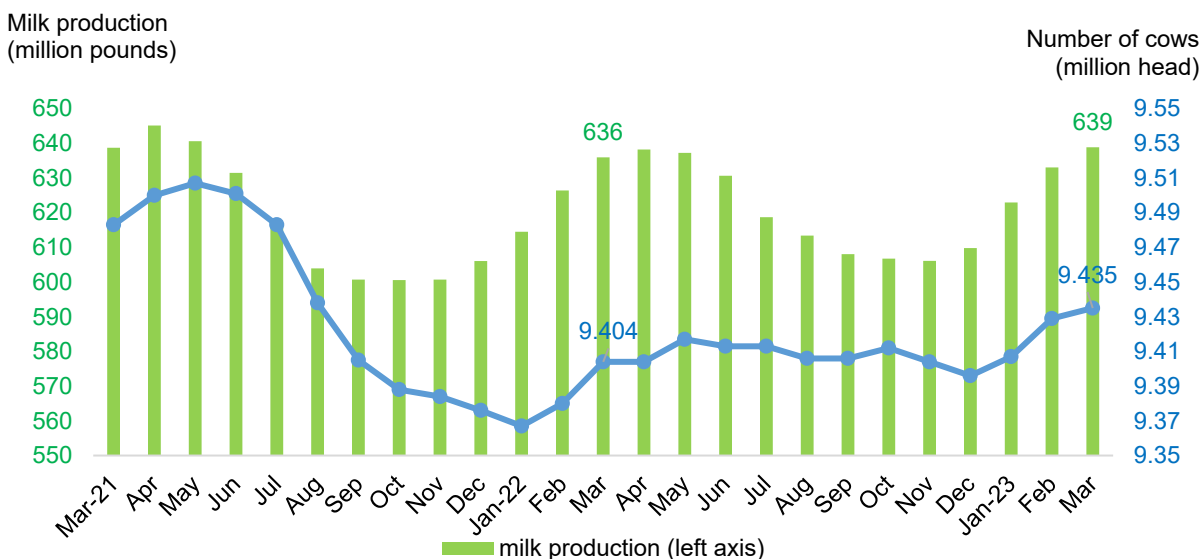
Product	Region	March 2023	April 2023	Change
Butter	Oceania	2.204	2.149	-0.054
	Western Europe	2.336	2.373	0.037
Cheddar cheese	Oceania	2.067	2.002	-0.066
Skim milk powder	Oceania	1.240	1.233	-0.006
	Western Europe	1.248	1.191	-0.057
Dry whey	Western Europe	0.389	0.380	-0.009

Sources: USDA, Economic Research Service (ERS) calculation using information from USDA, Agricultural Marketing Service, *Dairy Market News*.

Recent Dairy Supply and Use Data

According to USDA National Agricultural Statistics Service (NASS), March milk production in the United States totaled 19.805 billion pounds, 0.5 percent above March 2022. Milk cows numbered 9.435 million head, 31,000 head higher than March 2022. Milk per cow averaged 2,099 pounds per head in March, 3 pounds higher than March 2022. For the first quarter of the year (2023-Q1), U.S. milk production totaled 56.8 billion pounds, up 1.0 percent from 2022-Q1. The average number of milk cows during 2023-Q1 averaged 9.424 million head, 40,000 head higher than 2022-Q1.

Milk production per day and number of dairy cows



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

As reported by USDA, NASS in the *Agricultural Prices* report, the all-milk price in March 2023 averaged \$21.10 per cwt, down \$4.50 from March 2022. The March 2023 corn price was \$6.67 per bushel, up \$0.11 from March 2022. The price for alfalfa hay was \$267 per short ton, up \$39 from March 2022. The 5-State weighted-average price for premium alfalfa hay was \$314 per short ton, \$45 higher than March 2022. The soybean meal price (reported by USDA, Agricultural

Marketing Service) was \$484.4 per short ton in March, down \$9.58 from March 2022. The milk-feed price ratio reported by NASS was 1.56 in March, down 0.46 points from March 2022.

In 2023-Q1, dairy exports on a milk-equivalent skim-solids basis totaled 12.6 billion pounds, 770 million pounds higher than 2022-Q1. Meanwhile, on a milk-equivalent milk-fat basis, dairy exports totaled 2.7 billion pounds in 2023-Q1, 304 million pounds lower than 2022-Q1. As shown in the following table, dairy products with notable increases in export volumes from 2022-Q1 to 2023-Q1 were dry skim products, total cheese, and dry whey. Meanwhile, dairy products with significant decreases in export volumes from 2022-Q1 to 2023-Q1 were butter and whey protein concentrate.

Exports of milk and major dairy products

Product	Units	2022 First quarter	2023 First quarter	Change	Percent change
Milk in all products					
Milk-fat basis	Billion pounds	3.0	2.7	-0.3	-10.0
Skim-solids basis		11.8	12.6	0.8	6.5
Dairy products					
Cheese		229.5	239.0	9.6	4.2
Butter	Million pounds	32.5	23.8	-8.7	-26.8
Dry skim milk products		447.4	461.3	13.9	3.1
Dry whey		102.6	111.5	9.0	8.7
Whey protein concentrate		84.7	76.2	-8.5	-10.0

Sources: USDA, Economic Research Service (ERS) calculation using information from USDA, National Agricultural Statistics Service; USDA, Foreign Agricultural Service; and U.S. Dept. of Commerce, Bureau of the Census. Numerous sources were used for conversion factors. For more information, see the ERS Dairy Data Documentation webpage.

Imports of dairy products, particularly cream, butter, and cheese, were strong in the first quarter of 2023. In 2023-Q1, imports on a milk-fat basis totaled 1.8 billion pounds, 458 million higher than 2022-Q1. On a skim-solids basis, 2023-Q1 imports were also 1.8 billion pounds, 278 million above 2022-Q1.

During 2023-Q1, domestic use on a milk-fat basis totaled 53.7 billion pounds, 2.7 percent higher than 2022-Q1, but remained virtually unchanged at 44.9 billion pounds on a skim-solids basis. In 2023-Q1, domestic uses of cheese, butter, and whey protein concentrate were higher than 2022-Q1, but domestic use of dry skim milk products declined.

Domestic use of milk and dairy products

Product	Units	2022 First quarter	2023 First quarter	Change	Percent change
Milk in all products					
Milk-fat basis	Billion pounds	52.3	53.7	1.4	2.7
Skim-solids basis		44.9	44.9	0.0	0.1
Dairy products					
American type cheese		1,363.8	1,383.7	19.9	1.5
Other-than-American type cheese		1,950.8	1,966.4	15.6	0.8
Butter	Million pounds	485.5	524.0	38.5	7.9
Dry skim milk products		184.5	156.3	-28.2	-15.3
Dry whey		103.2	112.6	9.4	9.1
Whey protein concentrate		39.2	50.7	11.6	29.6

Sources: USDA, Economic Research Service (ERS) calculation using information from USDA, National Agricultural Statistics Service; USDA, Foreign Agricultural Service; and U.S. Dept. of Commerce, Bureau of the Census. Numerous sources were used for conversion factors. For more information, see the ERS Dairy Data Documentation webpage.

2023 Dairy Forecasts

For 2023, the U.S. milking herd is projected to average 9.415 million head, 15,000 head higher than last month's forecast. The milk per cow forecast for 2023 is 24,280 pounds, 55 pounds lower than last month's forecast due in part to lower-than expected growth in milk per cow in the first quarter. With lower yield per cow more than offsetting the expected increase in dairy cow numbers, the milk production forecast for 2023 has been adjusted to 228.6 billion pounds, 0.1 billion lower than last month's projection.

On a milk-fat basis, the annual dairy export forecast for 2023 is 12.1 billion pounds, 0.1 billion lower than last month's forecast. On a skim-solids basis, the dairy export projection was raised to 51.3 billion pounds, 0.6 billion above the last month's forecast. Higher exports are expected for dry skim milk products and cheese, but lower exports are expected for butter, butterfat products, and whey products.

The 2023 forecast for dairy imports on a milk-fat basis remained unchanged from last month's forecast at 7.7 billion pounds. On a skim-solids basis, the dairy import forecast is 6.8 billion pounds, 0.1 billion lower than last month's projections.

On a milk-fat basis, domestic use in 2023 is forecast at 223.1 billion pounds, 0.3 billion higher than last month's forecast. On a skim-solid basis, 2023 domestic use was lowered by 0.5 billion pounds from last month's forecast to 182.8 billion pounds.

The 2023 price forecasts for Cheddar cheese and dry whey are lowered to \$1.825 (-3.0 cents) and \$0.395 (-3.0 cents) per pound, respectively. The 2023 butter and NDM price forecasts have been raised to \$2.430 (+1.0 cents) and \$1.185 (+2.0 cents) per pound, respectively.

With lower expected prices for cheese and dry whey, the Class III milk price forecast for 2023 was adjusted to \$17.75 per hundredweight (cwt), down \$0.50 from last month's forecast. With a higher expected price for butter and NDM in 2023, the Class IV milk price forecast has been increased by \$0.20 to \$18.30 per cwt. The all-milk price forecast for 2023 is \$20.50 per cwt, \$0.15 lower than last month's forecast.

2024 Dairy Forecasts

Normally, dairy forecasts are compared to the previous month's projections. However, since these are USDA's first dairy forecasts for 2024, the projections will be compared to the 2023 annual forecasts.

The U.S. milking herd is projected to average 9.395 million head in 2024, 20,000 head fewer than from the 2023 projection. There is an additional milking day in 2024 due to leap year. Adjusted for leap year, milk per cow is projected to average 24,570 pounds per head, a year-over-year increase of 1.2 percent. Adjusted for leap year, the milk production forecast for 2024 is 230.8 billion pounds, 1.0 percent higher than the 2023 projection.

Dairy exports on a milk-fat basis are projected to total 12.8 billion pounds in 2024, 0.7 billion higher than the forecast for 2023. On a skim-solids basis, exports are projected to total 53.9 billion pounds, 2.6 billion higher than the 2023 projection. In 2024, exports of butter, butterfat products, dry skim milk products, cheese, whey products, and lactose are expected to increase.

Dairy imports on a milk-fat basis are projected to total 7.7 billion pounds in 2024, unchanged from the 2023 forecast. On a skim-solids basis, 2024 imports are projected to total 7.0 billion pounds, 0.2 billion higher than 2023.

The 2024 domestic use forecast on a milk-fat basis is 224.7 billion pounds, 1.6 billion higher than 2023. On a skim-solids basis, the 2024 projection is 182.9 billion pounds, 0.1 billion higher than 2023.

In 2024, the Cheddar cheese price is projected at \$1.820 per pound, only 0.5 cent lower than 2023, while the price of dry whey is projected at \$0.370 per pound (-2.5 cents) as more milk is expected to be used for cheese manufacturing throughout 2024. In 2024, the NDM price is projected at \$1.120 (-6.5 cents). The 2024 butter price is projected at \$2.335 per pound (-9.5 cents), as more cream volumes are expected to move into churns in 2024 on a soft export demand.

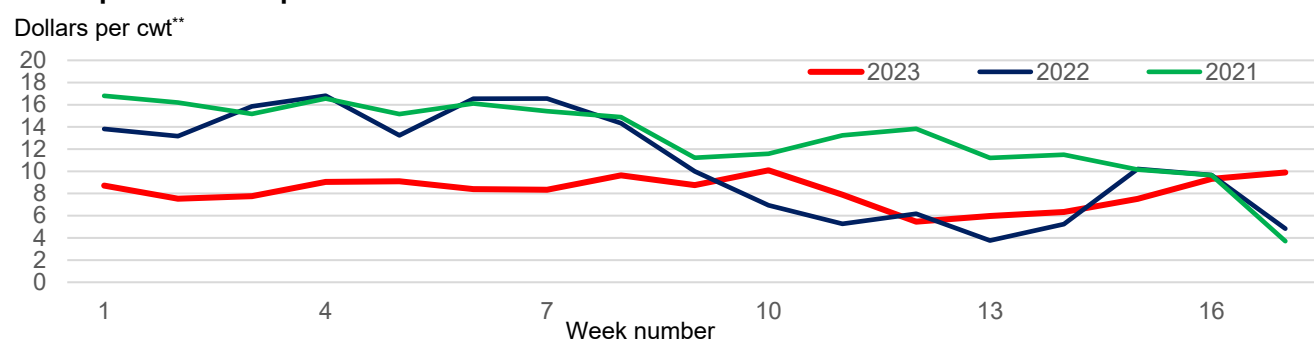
The Class III milk price forecast for 2024 is \$17.50 per cwt, \$0.25 lower than the projection for 2023. The Class IV milk price projection for 2024 is \$17.35 per cwt, a year-over-year decline of \$0.95. The all-milk price forecast for 2024 is \$19.90 per cwt, \$0.60 lower than the projection for 2023.

Pork/Hogs

Mildred Haley

Four months into 2023, price and volume data for the U.S. pork supply chain show that important components of the industry are operating at-or-near below year-earlier prices and margins. Average prices of live equivalent 51-52 percent lean hogs averaged \$54.04 per cwt through April, 20 percent below the same 4 months last year. The average value of the wholesale pork carcass cutout through April was \$81.29 per cwt, 20.4 percent below the same period last year. The gross processors' spread—the difference between the wholesale pork carcass cutout values less hog prices—declined more than 23 percent, from an average of \$10.73 per cwt last year to an average of \$8.22 per cwt through April of this year.

Gross processors' spread*

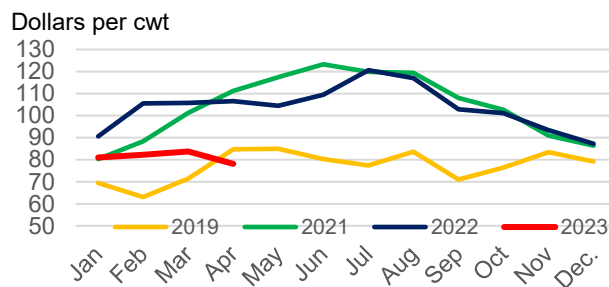


*Gross processors' spread = Wholesale Pork Carcass Cutout - 51–52% lean hog price.

**cwt = hundredweight.

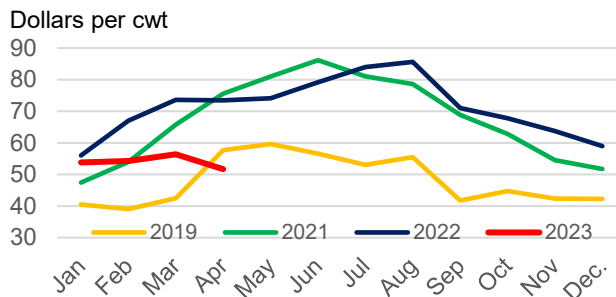
Source: USDA, Agricultural Marketing Service data with USDA, Economic Research Service calculations.

Wholesale pork carcass cutout



Source: USDA, Agricultural Marketing Service.

Live equivalent 51–52 percent lean hog prices



Lower January to April hog prices could have been a consequence of increased supplies of available slaughter hogs. USDA slaughter data show that estimated federally inspected (FI) hog slaughter for January–April 2023—with one less slaughter day than the same period last year—was about 42.1 million head, almost 3 percent more than for the same period of 2022 when FI slaughter was almost 41.5 million head. January–April 2023 estimated pork production was about 9.2 billion pounds, more than 2 percent above the same period last year. Thus, it is possible that at least some component of the sharp 20-percent decline in January–April 2023 hog prices was due to somewhat larger availability of slaughter hog supplies.

On the other hand, the fact that processors' demand for hogs derives from consumers' demand for pork offers a fuller explanation of the current dynamics of the U.S. hog/pork market. The above graph of monthly prices of wholesale pork prices suggests that wholesale values in 2023

have reverted to a pre-Covid dynamic. Not only has the U.S. economy reopened—with Covid-related restrictions lifted and Covid-related Government transfer payments suspended, factors likely having effects on consumer buying behavior—but inflation is currently a significant factor in most family food budgets, causing tradeoffs and reductions that may not have existed as recently as 1 to 2 years ago. These factors have probably contributed to reduced pork demand, meaning that at almost any pork price, consumers choose to buy lower volumes of pork. Eventually, dynamic markets adjust so that the effects of lower consumer demand feedback to wholesalers who offer processors lower bids for pork, who in turn offer lower prices for hogs to producers.

Most hog producers are “price takers” in the sense that they cannot pass off the effects of higher feed costs—for example—to an upstream component of the supply chain. A point comes where a 285-pound hog must be sold—even if a processor’s bid does not cover producers’ higher costs—because the live animal continues to rack up costs as it remains in the producer’s barn. This is likely where a significant component of the U.S. hog production sector finds itself in 2023. Indeed, Iowa State University’s Estimated Livestock Producers’ Returns from farrow-to-finish operations in Iowa show that producers have operated at losses since November 2022. The losses, taken together, average almost \$28 on a live equivalent basis per head, per month.

Industry losses accumulate until finances dictate downsizing, usually of production facilities that are older than average, fitted with outdated technology, or too small to take advantage of scale returns. This process appears to have begun in late April when a small Minnesota processor with a slaughter capacity of about 4,000 head per shift declared Chapter 11 bankruptcy. Further, on May 1, the largest pork producer in the United States announced the permanent closure of 37 sow farms in Missouri.

USDA forecasts for pork supply and hog prices for the balance of 2023 and for 2024 (totals for the year and the first quarter) reflect an accelerating decline in farrowings this year, before farrowings stabilize in early 2024 and then slowly begin a series of modest year-over-year increases during the year. With slow trend increases in litter rates both this year and next, total pork production in 2023 is expected to be 27.38 billion pounds, 1.4 percent above production last year. For 2024, total pork production is expected to be 27.35 billion pounds, fractionally less than the production forecast for 2023.

Hog slaughter numbers in the second quarter of 2023 are tracking well with the two heavier weight categories—180 pounds and over and 120–179 pounds—of the *March Quarterly Hogs and Pigs* report. Pork production for the quarter will likely result in production of 6.6 billion pounds, fractionally higher than a year ago, with prices of live equivalent 51-52 percent lean hogs averaging \$56 per cwt, about 26 percent below prices a year ago.

Third-quarter 2023 pork production is a product of the fractionally higher year-over-year December–February pig crop. Higher expected average dressed weights from anticipated declines in corn prices help to raise production to 6.6 billion pounds, more than 1 percent above the same period in 2022. Third-quarter prices should average \$60 per cwt, about 25 percent below a year earlier.

Fourth-quarter 2023 pork production is expected to be almost 7.1 billion pounds, more than 2 percent above the previous year’s same-quarter production. This level of production is the product of the year-over-year lower spring pig crop; here again, higher anticipated average dressed weights from anticipated-lower corn prices boost production significantly. Coupled with continued expected soft pork demand, hog prices take a hit; as a result, fourth-quarter hog prices are expected to average \$55 per cwt, more than 13 percent below same-period prices in 2022.

As the industry moves into 2024, the production effects of anticipated lower farrowings—the March *Hog and Pigs* report indicated that producers intend to farrow almost 3 percent fewer sows in the summer quarter 2023, likely in response to producer losses—should become apparent. First-quarter 2024 pork production is expected to be about 6.9 billion pounds, 2 percent below the first quarter of this year. It is notable that the effects of likely higher first-quarter average dressed weights are offset by the lower pig crop numbers that derive from lower expected summer 2023 farrowings. First-quarter 2024 hog prices should average \$60 per cwt, more than 9 percent higher than prices in the same period of this year.

For 2023, hog prices are expected to average about \$56 per cwt, almost 21 percent below prices in 2022, on a 1.4-percent increase in pork production. Next year, with pork demand expected to be relatively stable and supplies of beef tight, pork prices are expected to average about \$62 per cwt, about 9 percent above prices in 2023, on a fractional year-over-year decline in production.

Pork Exports Finish the First Quarter With a Bang

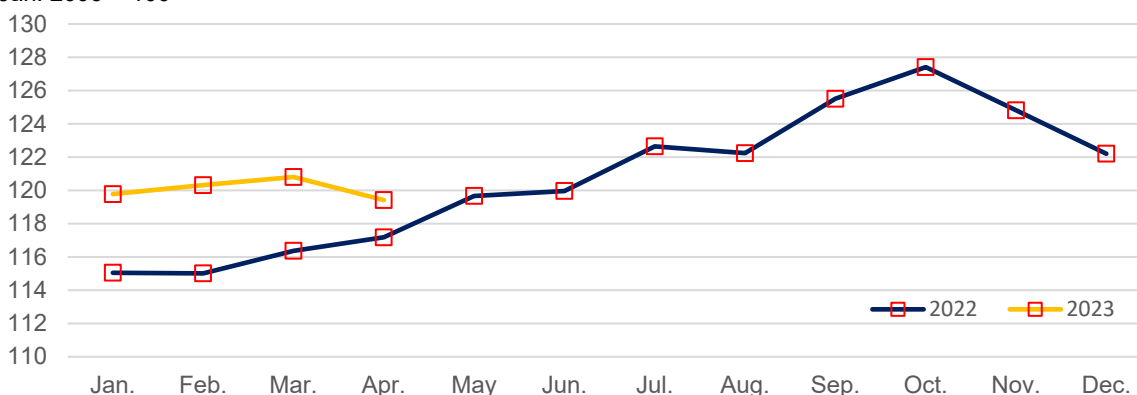
March exports were 608 million pounds, more than 25 percent greater than the same period a year ago. The table below listing the 10 largest foreign destinations for U.S. pork in March show the more-or-less usual set of countries. However, volumes shipped to Mexico, the Dominican Republic, China\Hong Kong, and Canada suggest that low U.S. pork prices, combined with a depreciating U.S. dollar, likely supported particularly strong export flows to these countries in March.

U.S. pork exports: Volumes and export shares of the 10 largest foreign destinations in March 2022 and 2023					
Country	Exports		Percent change (2023/2022)	Export share	
	March 2022 (Million pounds)	March 2023 (Million pounds)		March 2022 Percent	March 2023 Percent
World	486	608	25.1		
Mexico	181	225	24	37	37
Japan	99	103	4	20	17
China\Hong Kong	40	58	44	8	10
Canada	38	53	39	8	9
South Korea	42	46	10	9	8
Dominican Republic	16	37	132	3	6
Colombia	20	20	-1	4	3
Honduras	10	14	40	2	2
Australia	10	11	9	2	2
Guatemala	6	8	43	1	1

Source: USDA, Economic Research Service.

Nominal Broad Dollar Index, Monthly

Jan. 2006 = 100



Source: Board of Governors of the Federal Reserve System.

Strong March shipments pushed first-quarter exports to almost 1.7 billion pounds, more than 9 percent greater than volumes in the same period of 2022. The 10 major first-quarter buying countries of U.S. pork are listed below. Mexico and Japan alone accounted for more than half of the first-quarter’s export volume.

U.S. pork exports: Volumes and export shares of the 10 largest foreign destinations in first-quarter 2022 and 2023					
Country	Exports	Exports	Percent change (2023/2022)	Export share	Export share
	First-qtr. 2022 (Million pounds)	First-qtr. 2023 (Million pounds)		First-qtr. 2022 Percent	First-qtr. 2023 Percent
World	1529	1668	9		
Mexico	597	632	6	39	38
Japan	276	279	1	18	17
South Korea	127	152	20	8	9
Canada	122	140	15	8	8
China\Hong-Kong	134	139	3	9	8
Dominican Republic	49	89	81	3	5
Colombia	65	60	-8	4	4
Australia	30	34	15	2	2
Honduras	22	29	35	1	2
Guatemala	15	23	53	1	1

Source: USDA, Economic Research Service.

Factors that drove exports in the first quarter—low pork prices and a weakening dollar, as indicated by the Fed’s Broad Dollar Index depicted above—are likely to persist through 2023. Quarterly 2023 export forecasts are raised as follows: second quarter, 1.63 billion pounds, third quarter, 1.51 billion pounds, and fourth quarter, 1.7 billion pounds, totaling about 6.50 billion pounds for the year, 2.6 percent higher than shipments in 2022.

Exports in 2024 are likely to slip back some, to about 6.32 billion pounds on expected-higher hog and pork prices. First-quarter 2024 exports are forecast at 1.62 billion pounds, almost 3 percent below exports in the first quarter of 2023.

In the aggregate, export forecasts imply that 23.8 percent of U.S. commercial pork production will be exported in 2023. Next year, a somewhat lower rate—23.1 percent—accompanies the lower 2024 export forecast.

Supply and demand forecasts for 2023 and 2024 imply a disappearance of 50.7 pounds per capita and 51.0 pounds per capita, respectively.

Poultry

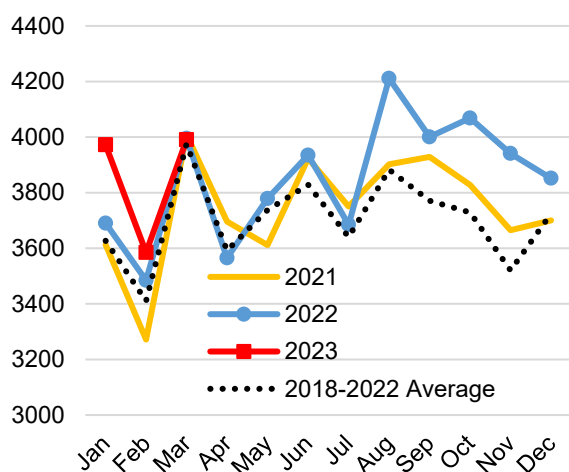
Grace Grossen and Adriana Valcu-Lisman

Overall Broiler Production Forecast Adjusted Up in 2023, Projected To Grow 1.6 Percent in 2024

Broiler production totaled 3.991 billion pounds in March, making the first-quarter production total 11.548 billion pounds. This is 3.4 percent over the first quarter of 2022. January was the strongest month in the quarter, with 7.6 percent higher production than the same month in 2022. January benefitted from the highest average weights of the quarter as well as from above-average hatchery indicators in November of last year. While first-quarter average weights have remained above last year, the increases were not as large in February and March. Broiler-type chicks hatched in February and March are the birds that are ready for slaughter in the second quarter. After climbing in the fall of last year, the number of broiler-type chicks hatched was closer to year-ago levels at the beginning of this year. The second-quarter production projection is lowered to 11.500 billion pounds on these less optimistic indicators. This would still represent 2-percent growth from the second quarter of last year.

Monthly broiler production, 2018–2023

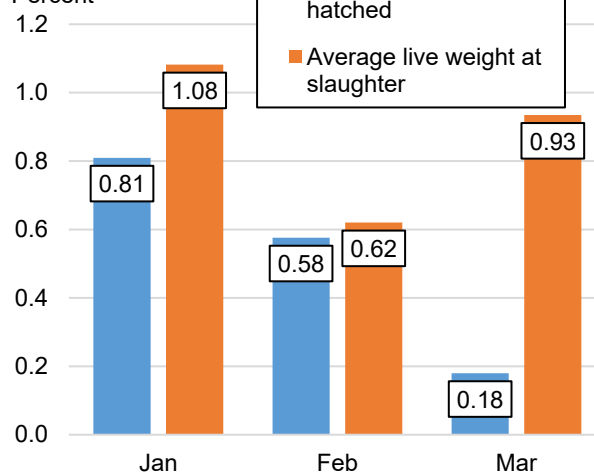
Million pounds



Source: USDA, National Agricultural Statistics Service.

Year-over-year percent change, January–March 2023

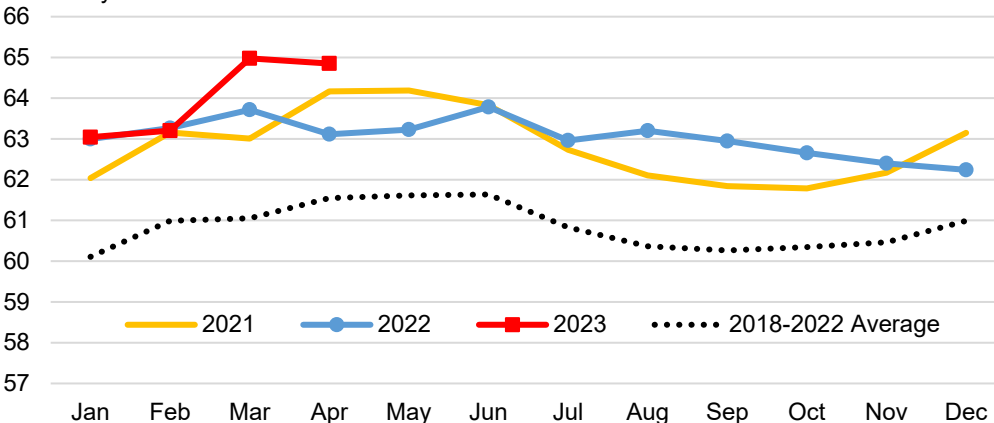
Percent



While the number of chicks hatched in the first quarter indicated slower production in the second quarter, the inventory of broiler-type layers points to likely stronger production in the latter half of the year as the laying flock expands. Layer inventory on the first of March reached a data series record of 64.98 million birds, and the flock declined only slightly to 64.85 million on the first of April. This indicates stronger production later in the year, as it takes a 21-day incubation period to hatch a chick and about 7 weeks to grow out a bird. Projected production in the third and fourth quarters is adjusted up by 100 million pounds in each quarter to 12.100 and 11.900 billion pounds, respectively. In total, the 2023 projection for federally inspected broiler production is raised to 47.048 billion pounds, an increase of 1.8 percent from last year.

Broiler-type layer inventory on the first of the month, 2018–2023

Million layers

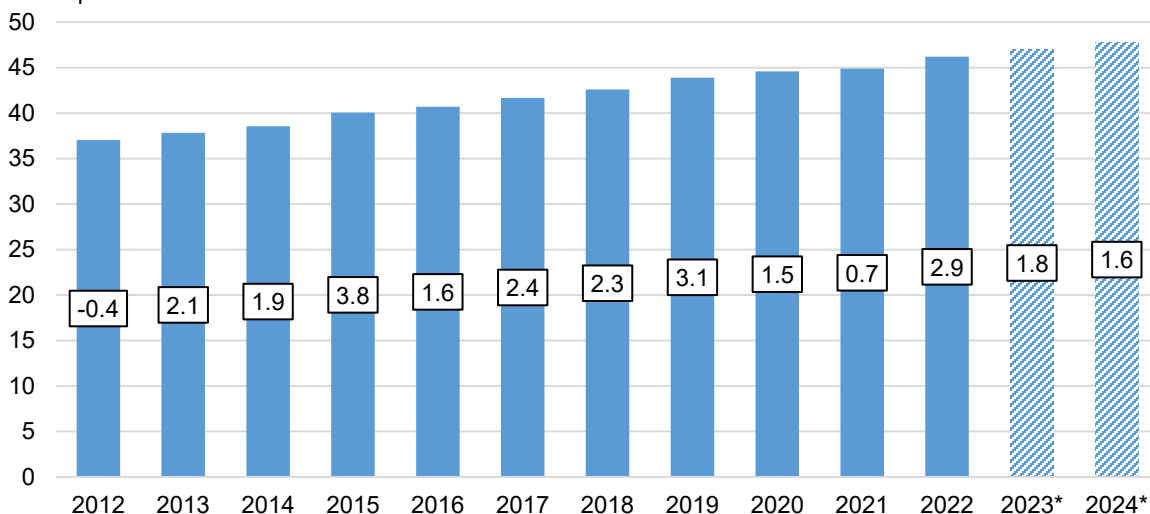


Source: USDA, National Agricultural Statistics Service.

In 2024, broiler production is expected to increase again, as feed prices are expected to ease and broiler prices decline only modestly. The 2024 federally inspected broiler production forecast is 47.820 billion pounds. This would be an increase of 1.6 percent from projected 2023 production and the 12th consecutive year of positive annual growth in broiler production.

Annual broiler production and year-over-year growth, 2012–2024

Billion pounds



Note: Asterisks indicate projected values.

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

Projected 2023 Broiler Meat Exports Adjusted Up

March broiler exports totaled 633.1 million pounds, a decrease of 3 percent from the previous March. Increases in shipments to major partners including Taiwan (+21.4 million pounds), Mexico (+7.1 million pounds), and China (+3.0 million pounds) were more than offset by decreases in shipments to Cuba (-24.2 million pounds), Canada (-11.1 million pounds), and South Africa (-14.9 million pounds). For the first quarter, exports totaled 1.873 billion pounds. This is an increase of 2.5 percent over the first quarter of 2022, thanks in part to strong January shipments. Exports represented 16.2 percent of domestic production in the first quarter. Based on stronger production expectations in the second half of this year, projected 2023 broiler

exports are adjusted up to 7.383 billion pounds. This would be a 1-percent increase over 2022 and represent about 15.7 percent of projected production. In 2024, broiler exports are projected to increase another 2.5 percent to 7.570 billion pounds as production also increases. If realized, this growth in exports would account for about 25 percent of the projected increase in production.

U.S. Exports of broiler meat to top 10 partners, March 2022 and 2023

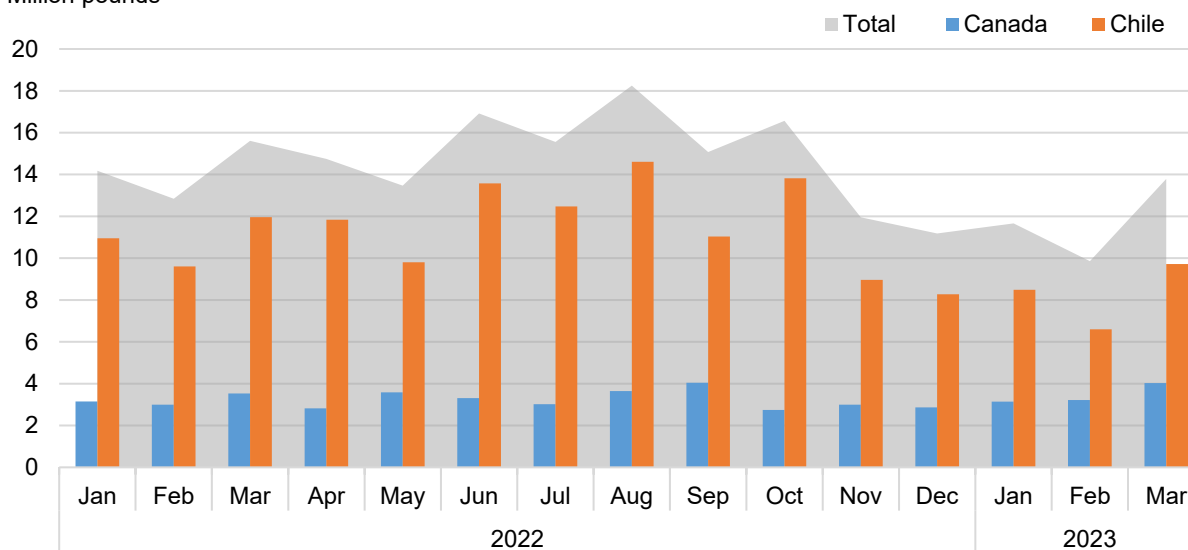
	March 2022 Volume	March 2023 Volume	Absolute change	March 2022 Share	March 2023 Share
	Million pounds			Percent	
Mexico	128.7	135.8	7.1	19.7	21.4
Cuba	64.3	40.2	-24.2	9.8	6.3
Taiwan	41.1	62.5	21.4	6.3	9.9
China	31.9	34.9	3.0	4.9	5.5
Guatemala	28.2	25.8	-2.4	4.3	4.1
Canada	37.6	26.5	-11.1	5.8	4.2
Angola	20.6	17.1	-3.6	3.2	2.7
Philippines	34.7	28.5	-6.2	5.3	4.5
Haiti	14.8	15.7	0.9	2.3	2.5
Vietnam	21.2	21.8	0.6	3.2	3.4
World	653.7	633.1	-20.7	100	100
South Africa	26.9	12.0	-14.9	4.1	1.9

Note: Top 10 based on year-to-date (January-March) export totals.

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

Monthly United States broiler imports, January 2022–March 2023

Million pounds

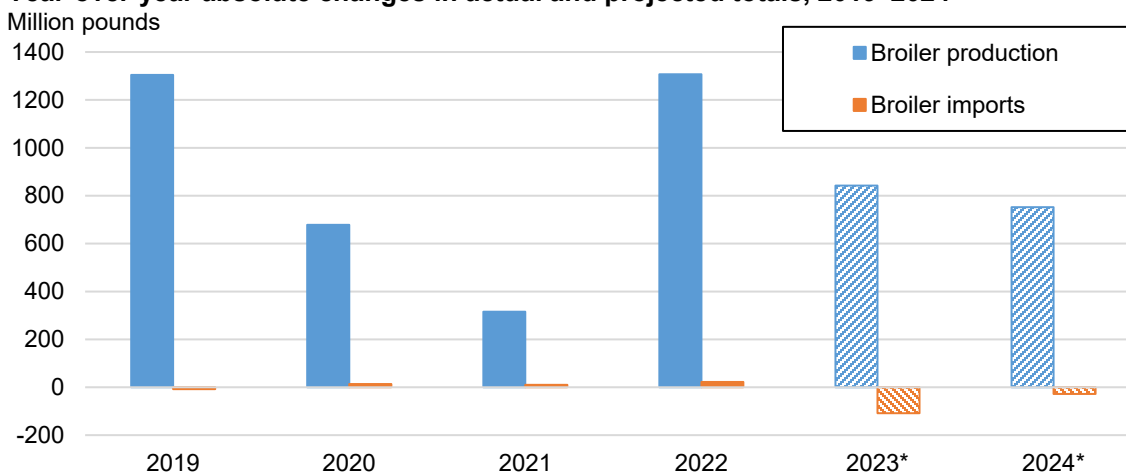


Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

March broiler imports increased relative to January and February as both major import partners, Chile and Canada, increased shipments. In response to the discovery of Highly Pathogenic Avian Influenza (HPAI) in Chilean commercial poultry in mid-March, the United States has restricted poultry shipments from the effected regions. Because these correspond with the major producing areas, it is expected that shipments from Chile dropped sharply after March. Historical levels of shipments from Canada would not make up for lost shipments from Chile, but they are expected to increase marginally. March imports from Canada totaled 4.029 million pounds, an increase of 0.5 million pounds from last March. Projected imports for the last three

quarters of the year are unchanged, but the 2023 import forecast is raised by 8 million pounds to 68 million due to stronger-than-expected March imports. In 2024, broiler imports are projected to total 40 million pounds. While these are sharp decreases from the typical import totals before 2023, they are dwarfed by the projected increases in domestic production.

Year-over-year absolute changes in actual and projected totals, 2019–2024



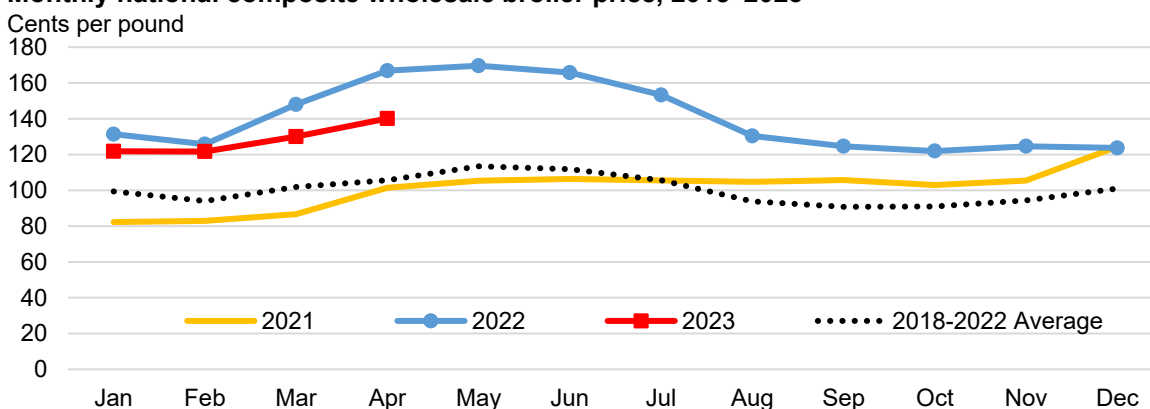
Note: Asterisks indicate projected values.

Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census and USDA *World Agricultural Supply and Demand Estimates*.

Broiler Prices Adjusted Up in Second Quarter of 2023; 2024 Prices Projected To Fall Slightly

The national composite wholesale broiler price averaged 140.15 cents per pound in April. This is down 27 cents from last April but up 10 cents from March. While less steep than last year’s increase, this increase follows seasonal expectations. Prices averaged 141.52 cents per pound in the first week of May. The projected second-quarter average price was adjusted up to 142 cents per pound on recent data and expectations of a seasonal demand increase. With the third- and fourth-quarter price forecasts unchanged at 130 cents per pound, the annual average projection for 2023 is 131.6 cents per pound. In 2024, the first-quarter projected price is 127 cents per pound, with an annual average forecast of 129 cents. This is down slightly from 2023, reflecting expectations of increased production.

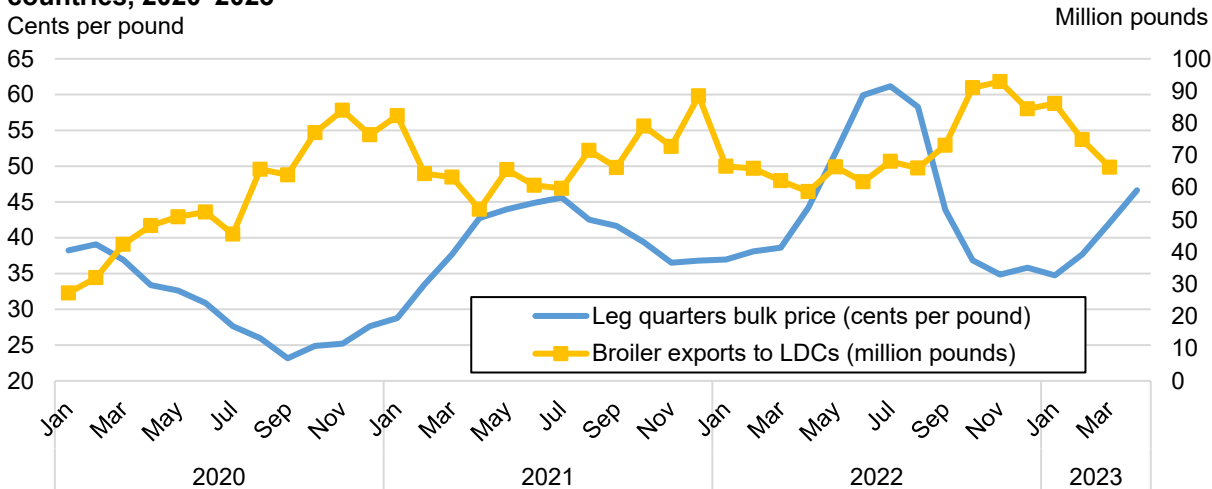
Monthly national composite wholesale broiler price, 2018–2023



Source: USDA Agricultural Marketing Service.

Chicken leg quarters tend to be among the lowest priced chicken parts at wholesale, along with bone-in thighs, legs, and drumsticks. Each leg quarter consists of an uncut thigh and drumstick with a portion of the back attached. U.S. broiler exports to lower income countries are strongest when leg-quarter prices are competitive. In 2022, shipments to the least-developed countries (LDCs, as defined by World Bank) made up about 12 percent of all U.S. broiler meat exports. This group includes Angola and Haiti, which are typically within the top 10 destinations for US broiler exports. In the first quarter of 2023, average wholesale leg-quarter prices increased from 34.74 cents per pound in January to 42.07 cents per pound in March. Broiler exports to LDCs totaled 66.3 million pounds in March, accounting for about 10 percent of all exports. These monthly shipments peaked at 92.9 million pounds last November when leg quarter prices were 34.86 cents per pound. In April, leg quarter prices climbed again, averaging 46.64 cents per pound.

Monthly average wholesale prices for leg quarters and broiler exports to least-developed countries, 2020–2023



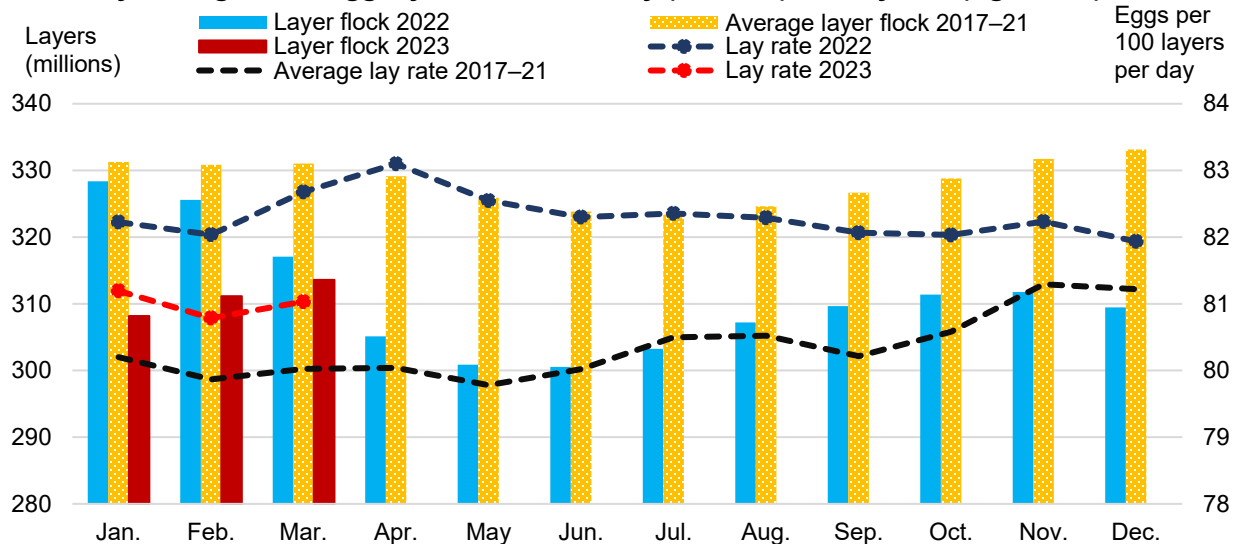
LDCs = Least-developed countries.

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

2023 Table-Egg Production Forecast Raised; Higher Expectations for 2024

March table-egg production was estimated at 656.5 million dozen eggs, 3.1 percent year-over-year lower. The principal determinants of the production levels also were both year-over-year lower: the size of the average table-egg layer flock by 1.1-percent and the rate of lay by almost 2.0 percent. With no HPAI discoveries in commercial egg operations since late-December, the table-egg layer-flock inventory has been growing since the beginning of the year, albeit at a slower-than-expected pace. At the same time, the average rate of lay, while following the seasonal patterns, is trending below year-ago levels.

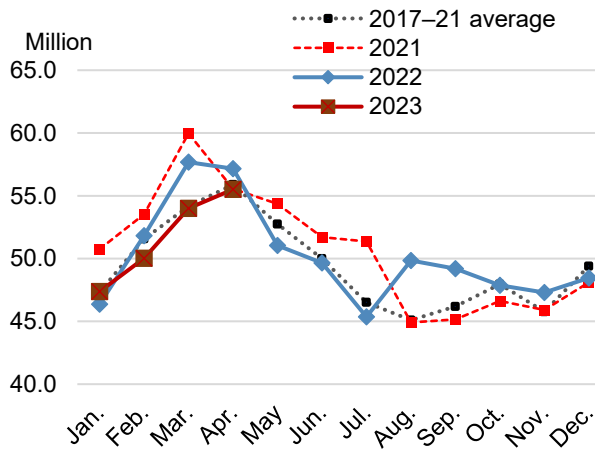
Monthly average table-egg layer flock inventory (left axis) and lay rate (right axis)



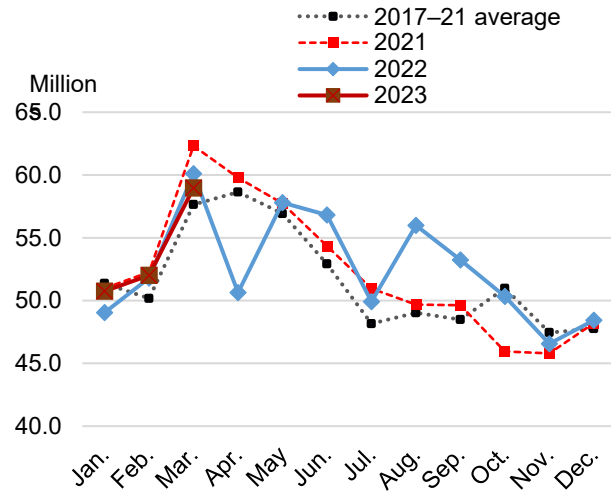
Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service.

Year-to-date monthly data on egg-type eggs in incubators at the beginning of the month and chicks hatched egg-type followed the expected seasonal patterns with values close to pre-HPAI 5-year averages. This most likely indicates a measured growth of the table-layer flock for the remainder of the year.

Egg-type eggs in incubators at the beginning of the month



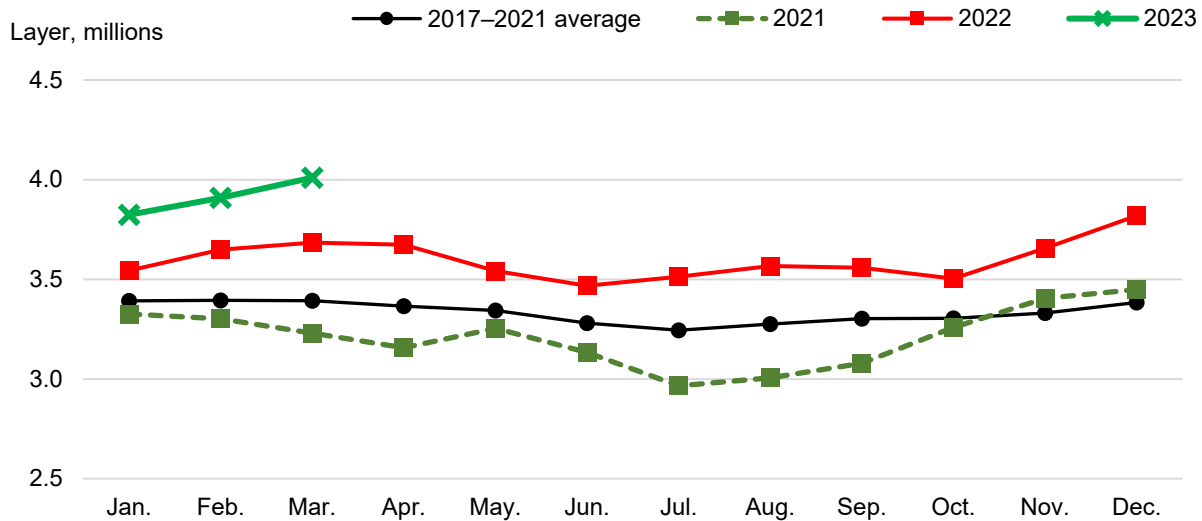
Egg-type chicks hatched



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

After several months of consecutive increases, the average hatching-egg type layer flock—layers that produce fertile eggs that are set in incubators and eventually become future table-egg layers—was estimated at 4.01 million layers. This was a record high for the data series and almost 9 percent higher than a year ago. This suggests that a more rapid expansion of the table-egg layer flock might take place later this year or in 2024.

Monthly hatching egg layer flock inventory

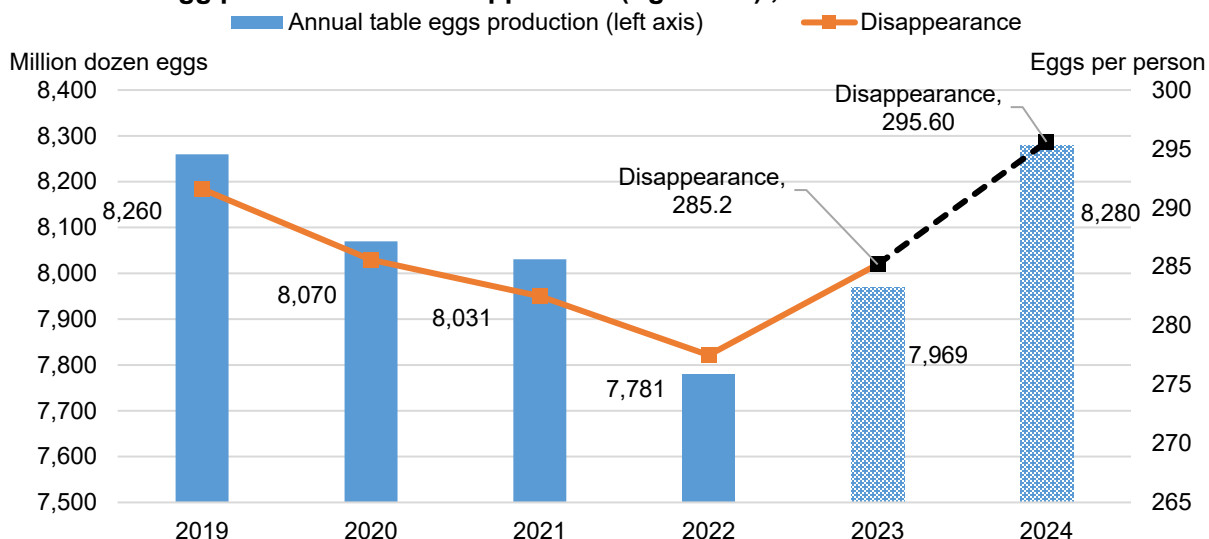


Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service.

First-quarter table-egg production was estimated at 1,889.4 million dozen eggs, 5.4-percent lower year-over-year. In the near term, the April 1 indicators of table-egg layer flock and rate of lay signal a continuation of trends in the first quarter: a slower-than expected but steady growth of the table-egg layer inventory and a year-over-year lower rate of lay. Hence, the second-quarter table-egg production is raised to 1,995 million dozen eggs. This change brings the 2023 table-egg production forecast to 7,969 million eggs, 2.4 percent higher than 2022 production.

In 2024, as more layers are expected to be added to the table-egg flock, the rate of lay improves and there is an additional day of production due to leap year, table-egg production is expected to increase beyond the pre-HPAI levels. The first-quarter 2024 table-egg production is forecast at 2,025 million, more than a 7.0 percent year-over-year increase, while the 2024 total table-egg production is projected at 8,280 million dozen eggs, almost a 4-percent increase from 2023 expected levels. Hatching-egg production for 2024 is forecast at 1,335 million dozen eggs, more than a 2.0 percent year-over-year-increase. This brings the 2024 forecast for total egg production (table eggs and hatching eggs) to 9,615, a 3.6-percent year-over-year increase. In 2024, per capita disappearance is forecast at 293.2 eggs per person, a 2.8-percent increase from the 2023 forecast disappearance of 285.1 eggs per person.

Annual table-egg production and disappearance (right axis) , 2019–24¹



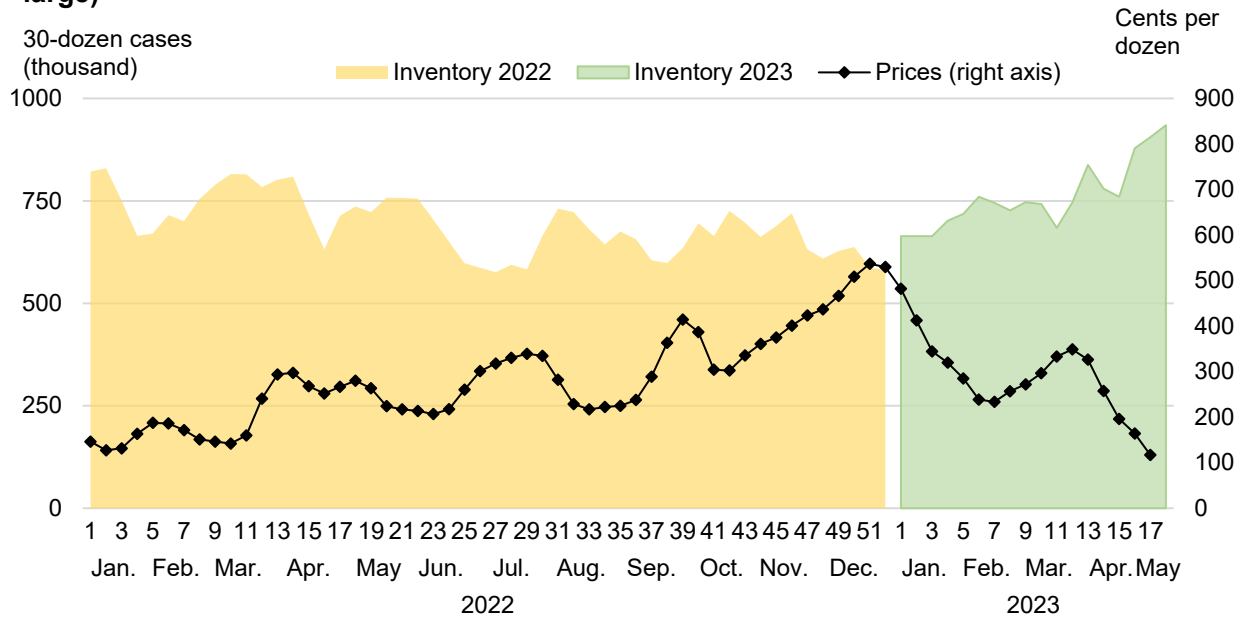
¹ 2023, 2024 table-egg production and disappearance are forecast values.

Source: USDA, Economic Research Service calculations using USDA-National Agricultural Statistics Service data, *World Agricultural Supply and Demand Estimates*.

Wholesale Egg Prices Declined at a Rapid Pace in April; Lower Prices Projected for 2023 and 2024

Following month-long daily declines, wholesale table-egg prices (New York, Grade A, large) averaged 183.7 cents per dozen in April, a sharp decline from both last year (- 32.5 percent) and March (-42.5). Early May daily prices plateaued at 89 cents per dozen. As a reference, prices averaged 91 cents per dozen in May of 2021. The sharp downturn in prices was likely due to the post-Easter demand decline and shell-egg inventories that kept improving for the last several weeks.

Weekly U.S. at-hand shell-egg inventory (large) and wholesale prices (New York, Grade A, large)



Source: USDA, Economic Research Service calculations using USDA-Agricultural Marketing Service.

Given the sharper-than-expected decline in late-April prices and a slight upward revision for the second-quarter table-egg production, the second-quarter wholesale egg price forecast is revised downward to 135 cents per dozen. The average price forecasts for the last two quarters of the year are also adjusted downward to 140 and 160 cents per dozen, respectively. These changes bring the 2023 average price forecast to 187.7 cents per dozen, about 33.0 percent lower than 2022 average price.

In 2024—reflecting higher production and lower feed cost expectations—the average wholesale egg price for the first quarter is forecast at 155 cents per dozen, more than 50.0-percent below the 2023 first quarter. For the year, the 2024 wholesale egg prices are projected to average 144 cents per dozen, a 23-percent reduction from the 2023 projected average.

2023–2024 Eggs and Egg Products Trade: Higher Exports and Lower Imports

Export of egg and egg products in March totaled 24.67 million dozen shell-egg equivalent, an 8.9-percent decrease from last year but 64.2 percent higher than February shipments. First-quarter 2023 exports of eggs and egg products totaled 55.3 million dozen shell-egg equivalent, a 22.3-percent year-over-year decrease. The quarterly year-over-year decrease was due to lower shipments of both egg products (-42.9 percent) and shell eggs (-5.6 percent).

To date, year-over-year higher shipments to Canada and Caribbean countries (Jamaica, Trinidad and Tobago, and Bahamas) were more than offset by lower shipments to Mexico, Asian markets (Hong Kong, Japan, South Korea, China) and elsewhere (United Arab Emirates). The 2023 egg and egg product export forecast is adjusted for the first-quarter reported values but no changes are made to the outlying 2023 quarters. Hence, the 2023 egg exports are forecast at 205.3 million dozen shell-egg equivalent, a more than 9-percent decrease from the last year.

U.S. egg and egg products exports: Volume and export share, January–March 2023/22

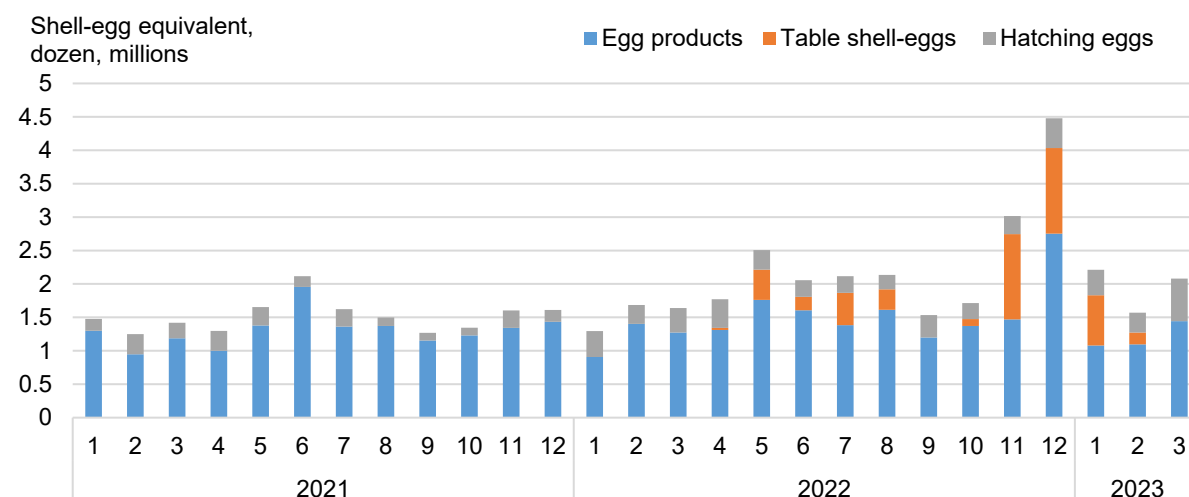
Country	Volume			Export share	
	2022	2023	Change in volume	2022	2023
	Million dozen			Percent	
Canada	21.9	26.0	4.1	31	47
Mexico	15.0	11.6	-3.4	21	21
Japan	6.0	5.4	-0.6	8	10
Jamaica	1.9	2.1	0.2	3	4
Bahamas	1.4	2.0	0.6	2	4
Trinidad and Tobago	1.5	1.5	0.1	2	3
South Korea	6.4	0.6	-5.8	9	1
Hong Kong	9.0	0.4	-8.7	13	1
United Arab Emirates	0.6	0.2	-0.4	1	0
ROW	69.7	53.3	-16.4	10	10
World	71.1	55.3	-15.9	100	100

Note: Largest markets are based on year-to-date 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.

Imports of egg and egg products in March totaled 2.1 million dozen egg equivalent, 27-percent year-over-year higher. Historically, most import shipments are of egg products, with the remainder consisting of shell eggs. Furthermore, shell eggs can be either for consumption or for hatching purposes, with hatching eggs representing the majority of imports between January 2017 and April 2022. Following the HPAI outbreaks, the United States has imported a small amount of shell eggs. March marked the first month since September with no imports for shell-egg consumption.

Monthly eggs and egg products imports, 2021–23



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

First-quarter 2023 imports of eggs and egg products totaled 5.9 million dozen shell-egg equivalent, a 27-percent year-over-year increase. Adjusted for the first-quarter reported

values, the 2023 egg imports are projected at 22.9 million dozen shell-egg equivalent, a 12-percent decrease from 2022.

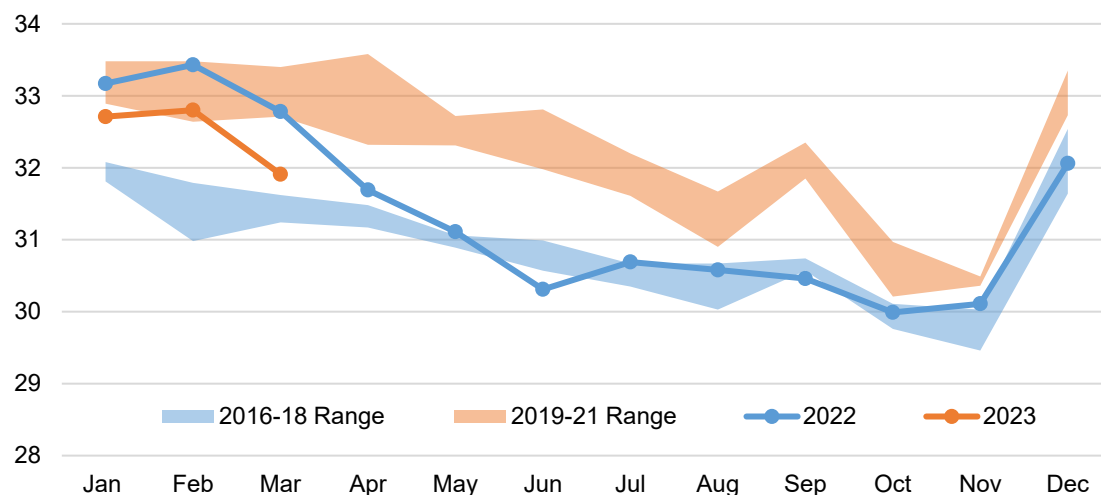
As the domestic production levels increase and the wholesale prices return to the pre-HPAI levels, the 2024 egg exports are forecast at 245 million dozen, about 19-percent year-over-year higher. The 2024 egg imports are expected to decline and are forecast at 18.0 million dozen eggs, a 21-percent decline from the 2023 forecast value.

Turkey Production Projection Decreased in 2023; 2024 Production Projected To Grow 4 Percent

Turkey production in March totaled 479.9 million pounds, a decrease of 5.5 percent from last March. This makes the first-quarter production total 1.344 billion pounds, down 2.1 percent from the first quarter of 2022. The decline in March was due in part to 2.8 percent lower slaughter and to 2.7 percent lower average weights compared to last March. After the initial outbreak of HPAI in 2022, average turkey live weights fell below the range typical in 2019–2021 and toward the range of weights that was more typical in 2016–2018. HPAI-related losses of meat-producing turkeys led to surviving birds being pulled forward and slaughtered at lighter weights.

Monthly average live weights, 2016–2023

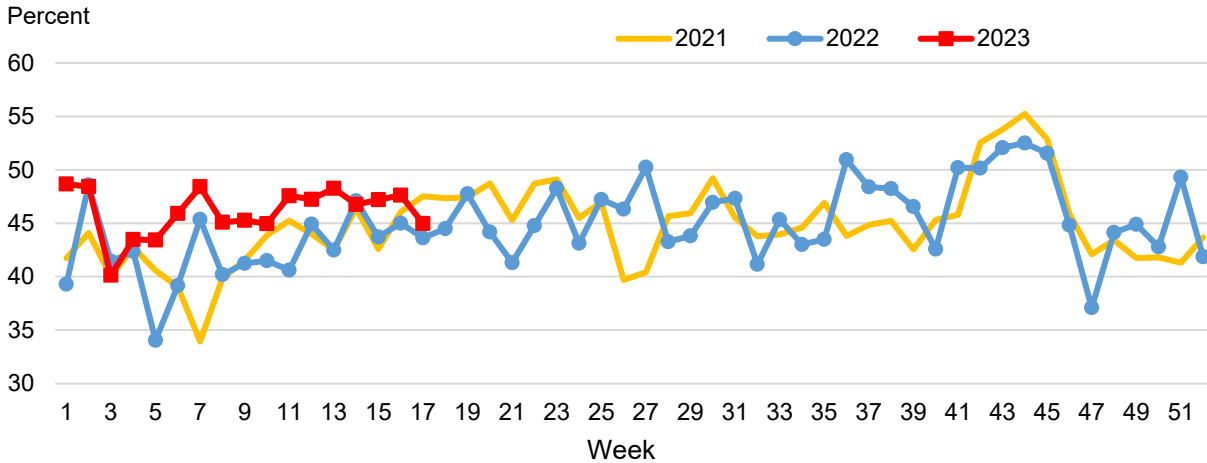
Pounds



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

In the middle of 2022, weekly AMS slaughter data showed that the average live weights of tom turkeys, the heavier category, were lower than usual. Since the beginning of this year, the average weights are instead being pushed down by a higher proportion of the lighter hen turkeys being slaughtered. This share usually peaks close to Thanksgiving when demand shifts toward birds that fit in a household-sized oven. In the first 17 weeks of 2023, hens made up 46 percent of all turkeys slaughtered, compared to 42 percent in the same period of 2022. Based on recent trends in both average weights and slaughter numbers, the second-quarter production projection is adjusted down by 55 million pounds to 1.325 billion pounds. This is still an increase of nearly 4 percent from second-quarter production in 2022.

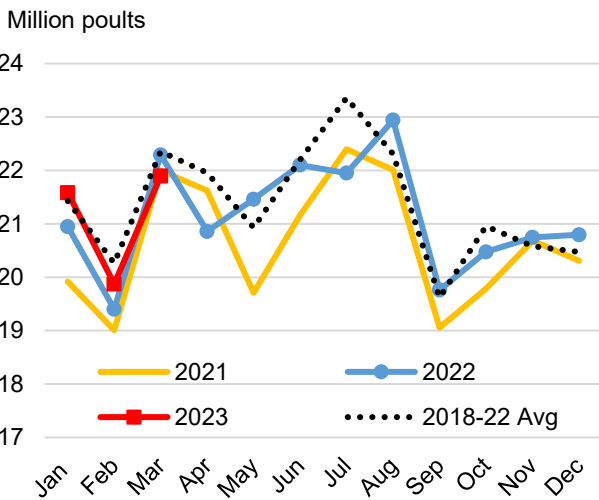
Weekly hens as a share of all turkeys slaughtered, 2021–2023



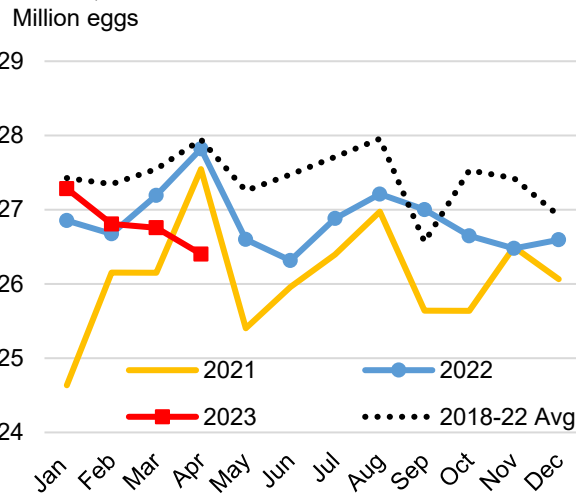
Source: USDA, Economic Research Service using data from USDA, Agricultural Marketing Service.

Turkey eggs in incubators and hatched poult placements are early indicators of turkey production intentions. March placements were 1.8 percent lower than 2022 but have increased in the typical seasonal manner from February. Turkey eggs in incubators on the first of April moved counter-seasonally, falling 5 percent from the same time last year. It takes 28 days to incubate a turkey egg and about 16 weeks to grow out the bird, so April eggs indicate early fall production. For this reason, third- and fourth-quarter production projections were adjusted down to 1.325 and 1.410 billion pounds, respectively. Combined with the lowered second quarter, this brings the 2023 production projection to 5.404 billion pounds, still an increase of 3.5 percent from 2022.

Monthly turkey poult placements, 2018–2023



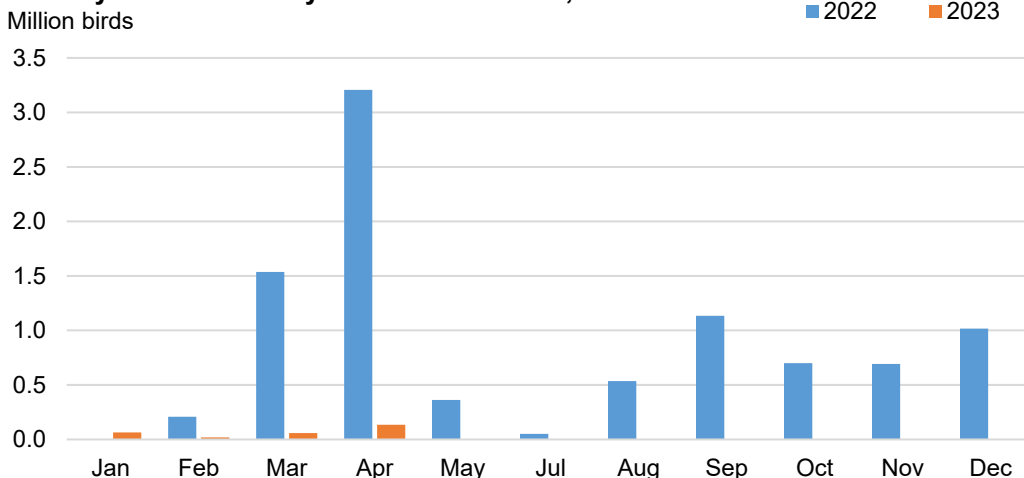
Turkey eggs in incubators on the first of the month, 2018–2023



Source: USDA, National Agricultural Statistics Service.

The most recent reported case of HPAI in commercial turkeys was on April 19th. All of the commercial meat turkey losses due to HPAI so far in 2023 represent only 7 percent of a typical week’s slaughter. In 2024, turkey production is expected to continue recovering from the HPAI outbreak and to benefit from easing feed prices. The 2024 turkey production forecast is 5.640 billion pounds. This would represent an increase of 4 percent from the 2023 projection.

Monthly losses of turkey meat birds to HPAI, 2022–2023

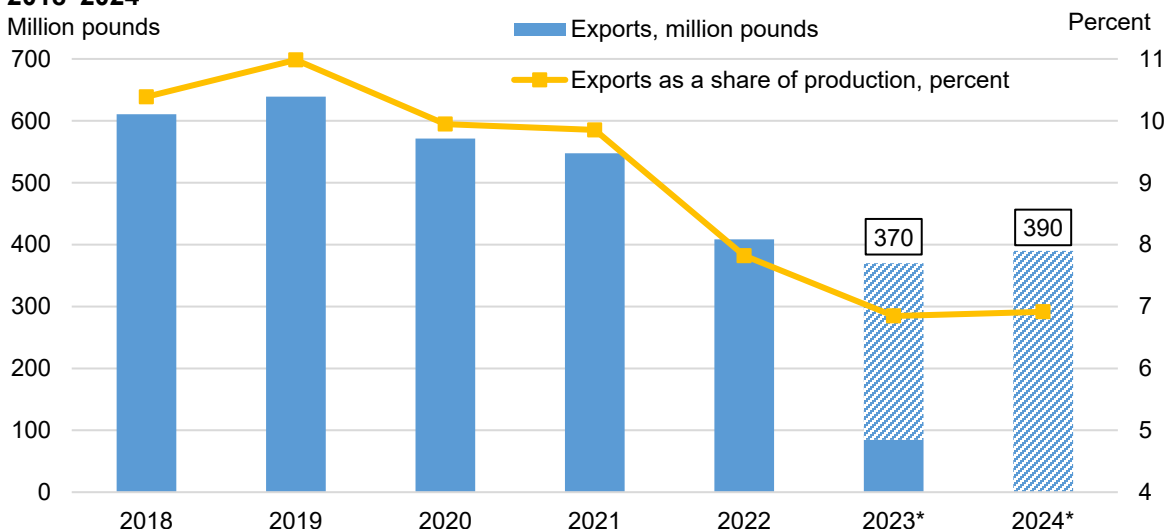


Source: USDA, Economic Research Service using data from USDA, Animal and Plant Health Inspection Service.

Turkey Export Projection Unchanged in 2023

Turkey exports in March totaled 33 million pounds, a decrease of 5 million pounds from last March. First-quarter exports totaled 84.6 million pounds, representing 6.3 percent of first quarter production. Mexico accounted for 71.5 percent of first-quarter exports, with the next largest destinations, Canada and Jamaica, accounting for 4.4 and 3.5 percent, respectively. With unchanged expectations for exports in the remaining quarters of 2023, the projected annual total is 370 million pounds. This would account for about 7 percent of projected 2023 production. Turkey exports in 2024 are expected to increase along with production to 390 million pounds. This would also represent about 7 percent of projected 2024 production.

Annual actual and projected U.S. turkey exports and exports as a share of production, 2018–2024



Note: Asterisks indicate projected values.

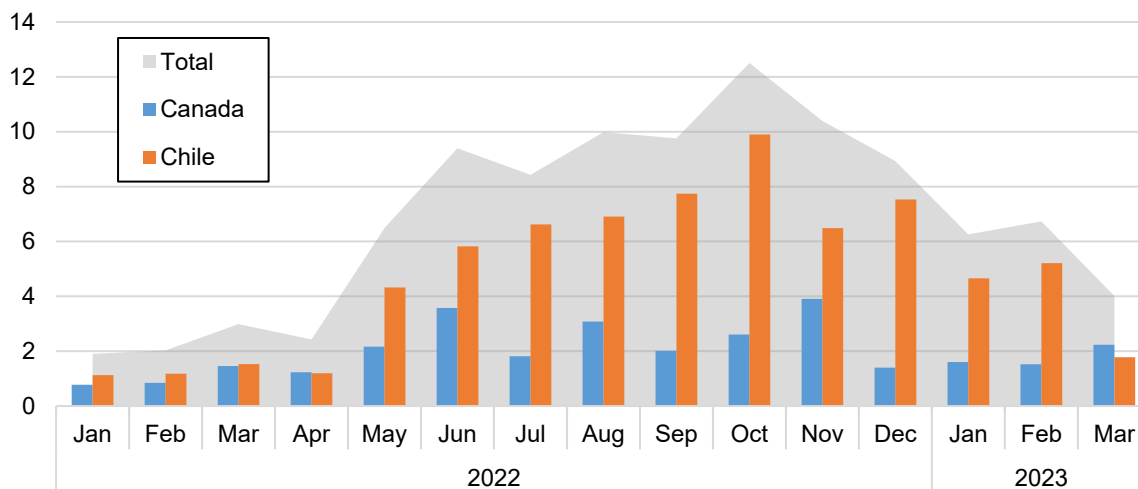
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census and USDA, *World Agricultural Supply and Demand Estimates*.

Turkey imports totaled 4 million pounds in March, bringing the first-quarter total to 17 million pounds. This is 10 million pounds more than first-quarter imports in 2022 but down almost 15

million pounds from the previous quarter, when imports from Chile were at their peak. In March, as Chile's shipments fell sharply from February due to HPAI in Chilean commercial poultry, Canada's shipments increased. While Canada will not entirely make up for Chile's decline, projected 2023 total imports are adjusted up to 42 million pounds on stronger expected shipments from Canada. In 2024, turkey imports are projected to total 32 million pounds, continuing the trend expected in the latter half of this year.

Monthly turkey meat imports, January 2022–March 2023

Million pounds



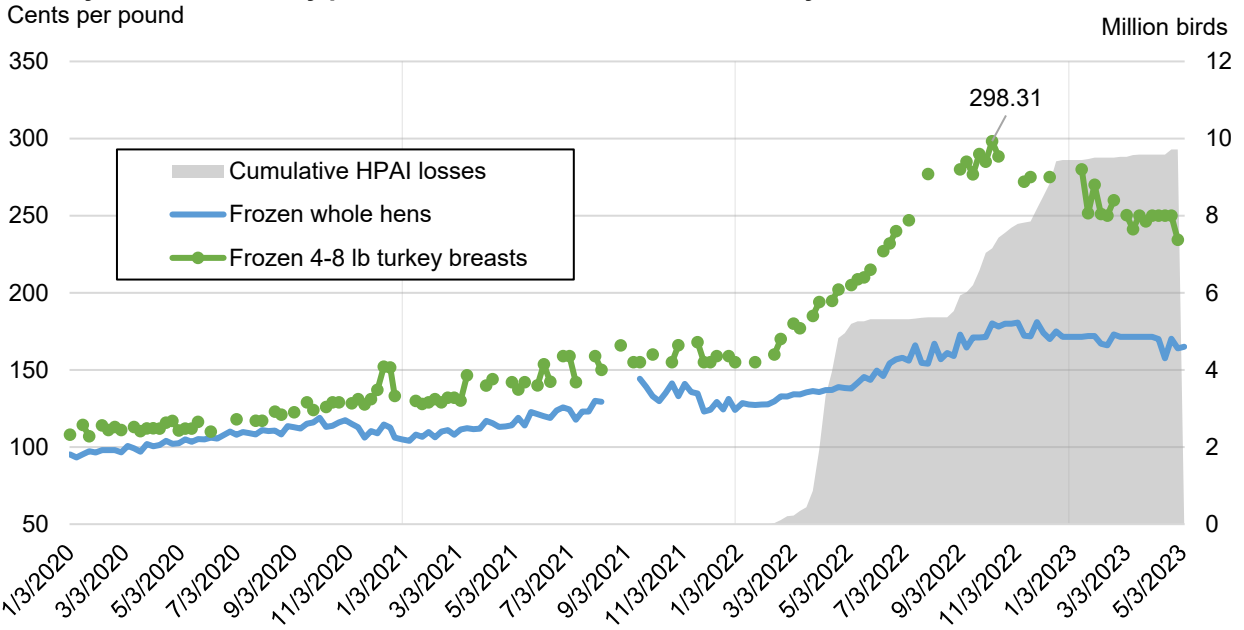
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

Turkey Prices Unchanged in 2023; Projected To Ease in 2024

In April, the wholesale price for frozen whole-hen turkeys averaged 169.93 cents per pound. This continues a trend of leveling-off so far in 2023, as opposed to the increase throughout the year that has been typical recently. In the first week of May, wholesale frozen whole-hen prices averaged 165 cents per pound. Projected prices for the second, third, and fourth quarters are unchanged from last month at 170, 170, and 175 cents per pound. In 2024, as recovery from the HPAI outbreak continues and feed prices ease, whole-hen prices are projected to decline, averaging 165 cents per pound in the first quarter and 167 cents per pound for the year.

While both the whole-bird price and the wholesale turkey breast price had been gradually increasing since before the outbreak of HPAI started in 2022, wholesale turkey breast prices saw a sharper climb in response to the outbreak, peaking at 298.31 cents per pound in the week ending October 7, 2022. With fewer outbreaks reported recently (only 2.8 percent of total losses in meat turkeys from HPAI have occurred since the start of 2023), breast prices declined, averaging 234.38 cents per pound in the week ending April 28th. This is 32 cents higher than a similar week in 2022 but down 64 cents from the peak price last year. Before 2022, frozen turkey breast prices were relatively steady or steadily climbing in the first half of the year, so a continued decline in the beginning of the new year is atypical. These 4-8 pound turkey breasts can be sold directly at the retail level, but they can also be used in deli meats and other further processing. For this reason, wholesale demand for the turkey breast is less seasonally anchored than that of the whole bird.

Weekly wholesale turkey prices and cumulative losses of turkey meat birds due to HPAI



Source: USDA, Agricultural Marketing Service and USDA, Animal and Plant Health Inspection Service.

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U.S. red meat and poultry forecasts

	2021					2022					2023					2024	
	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	Annual
Production, million pounds																	
Beef	6,900	6,963	6,979	7,106	27,948	7,023	7,072	7,144	7,052	28,291	6,821	6,670	6,755	6,675	26,921	6,210	24,745
Pork	7,292	6,668	6,530	7,185	27,675	6,905	6,639	6,534	6,919	26,996	7,071	6,640	6,605	7,065	27,381	6,930	27,350
Lamb and mutton	35	36	32	35	138	32	35	33	32	131	33	33	32	33	131	32	129
Broilers	10,893	11,232	11,581	11,193	44,899	11,170	11,279	11,896	11,861	46,206	11,548	11,500	12,100	11,900	47,048	11,760	47,820
Turkeys	1,390	1,399	1,403	1,366	5,558	1,374	1,275	1,264	1,310	5,222	1,344	1,325	1,325	1,410	5,404	1,390	5,640
Total red meat and poultry	26,651	26,450	26,679	27,030	106,810	26,651	26,455	27,035	27,034	107,469	26,971	26,320	26,975	27,226	107,491	26,474	106,290
Table eggs, million dozen	1,995	1,970	1,996	2,069	8,031	1,998	1,894	1,934	1,956	7,781	1,889	1,955	2,025	2,100	7,969	2,025	8,280
Per capita disappearance, retail pounds 1/																	
Beef	14.5	14.9	14.6	14.8	58.9	15.0	14.8	14.7	14.6	59.1	14.9	14.2	14.1	13.8	57.0	13.5	52.8
Pork	13.1	11.8	12.3	14.0	51.1	13.1	12.4	12.4	13.1	51.1	13.0	12.1	12.4	13.2	50.7	12.8	51.0
Lamb and mutton	0.3	0.4	0.3	0.4	1.4	0.3	0.3	0.3	0.3	1.3	0.3	0.3	0.3	0.3	1.2	0.3	1.3
Broilers	23.5	24.3	25.0	23.8	96.5	23.8	24.2	25.7	25.2	98.9	24.8	24.5	26.1	25.1	100.5	24.9	101.2
Turkeys	3.4	3.6	3.8	4.5	15.3	3.4	3.2	3.6	4.3	14.6	3.4	3.5	3.7	4.5	15.1	3.5	15.7
Total red meat and poultry	55.2	55.4	56.4	57.8	224.8	56.1	55.4	57.3	57.9	226.8	56.8	55.1	57.0	57.4	226.4	55.5	223.8
Eggs, number	70.2	69.2	69.8	73.3	282.5	71.3	68.2	69.4	70.2	279.0	67.5	70.2	72.4	75.0	285.1	71.8	293.2
Market prices																	
Steers 5-area Direct, Total all grades, dollars/cwt	112.98	120.75	123.51	132.36	122.40	139.25	141.93	143.42	152.99	144.40	160.90	172.00	164.00	169.00	166.48	175.00	172.25
Feeder steers, Medium Frame No. 1, OK City, dollars/cwt	134.30	140.22	153.69	159.59	146.95	156.04	158.35	172.31	177.06	165.94	183.48	204.00	214.00	220.00	205.37	216.00	220.75
Cows, Live equivalent, Cutter 90% lean, 500 lbs and up, National, dollars/cwt	59.63	67.54	69.21	63.24	64.91	72.65	83.41	84.01	73.69	78.44	82.91	97.00	110.00	107.00	99.23	110.00	112.50
Choice/Prime slaughter lambs, National, dollars/cwt	165.42	211.79	256.86	233.61	216.92	225.00	210.33	138.69	124.26	174.57	134.23	143.00	140.00	145.00	140.56	145.00	145.00
Barrows and gilts, National base cost, 51-52% lean, live equivalent, dollars/cwt	55.71	80.92	76.15	56.36	67.29	65.55	75.58	80.20	63.49	71.21	54.83	56.00	60.00	55.00	56.46	60.00	61.50
Broilers, Wholesale, National composite, weighted average, cents/lb	84.0	104.4	105.4	110.9	101.2	135.1	167.5	136.1	123.5	140.5	124.5	142.0	130.0	130.0	131.6	127.0	128.8
Turkeys, National 8-16 lb hens, National, cents/lb	110.1	117.7	129.7	133.4	122.8	131.4	143.9	165.4	177.5	154.5	170.8	170.0	170.0	175.0	171.5	165.0	166.5
Eggs, Grade A large, New York, volume buyers, cents/dozen	127.8	94.2	120.1	131.8	118.5	170.8	251.6	295.6	411.7	282.4	315.9	135.0	140.0	160.0	187.7	155.0	143.8
U.S. trade, million pounds, carcass-weight equivalent																	
Beef and veal exports	798	875	912	856	3,441	846	940	906	844	3,536	779	825	830	790	3,224	730	2,950
Beef and veal imports	696	865	923	863	3,346	985	859	798	750	3,391	956	890	890	765	3,501	960	3,560
Lamb and mutton imports	69	93	100	103	364	88	88	93	89	358	79	80	90	90	339	95	370
Pork exports	1,922	1,903	1,550	1,652	7,026	1,541	1,609	1,509	1,679	6,338	1,668	1,630	1,510	1,695	6,503	1,620	6,320
Pork imports	247	260	308	364	1,180	358	369	317	300	1,344	284	260	255	270	1,069	300	1,155
Broiler exports	1,851	1,772	1,835	1,898	7,355	1,826	1,812	1,724	1,916	7,278	1,873	1,815	1,770	1,925	7,383	1,915	7,570
Turkey exports	130	140	138	140	548	107	109	96	95	408	85	90	95	100	370	90	390
Live swine imports (thousand head)	1,607	1,649	1,772	1,635	6,663	1,654	1,665	1,602	1,565	6,486	1,671	1,685	1,620	1,580	6,556	1,675	6,560

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 5/12/2023

Dairy forecasts

Years Quarters	2022				2023					2024	
	II	III	IV	Annual	I	II	III	IV	Annual	I	Annual
Milk cows (thousands)	9,411	9,408	9,404	9,402	9,424	9,425	9,415	9,400	9,415	9,390	9,395
Milk per cow (pounds)	6,144	5,999	5,944	24,087	6,032	6,190	6,050	6,010	24,280	6,150	24,570
Milk production (billion pounds)	57.8	56.4	55.9	226	57	58.3	57.0	56.5	228.6	57.7	230.8
Farm use	0.2	0.3	0.3	1.0	0.2	0.2	0.3	0.3	1.0	0.2	1.0
Milk marketings	57.6	56.2	55.6	225	57	58.1	56.7	56.2	227.6	57.5	229.8
Milk-fat (billion pounds milk equiv.)											
Milk marketings	57.6	56.2	55.6	225.5	56.6	58.1	56.7	56.2	227.6	57.5	229.8
Beginning stocks	16.4	18.4	16.6	14.3	14.4	16.3	18.9	17.9	14.4	14.6	14.6
Imports	1.9	1.9	1.9	7.1	1.8	2.0	2.0	2.0	7.7	1.7	7.7
Total supply	75.9	76.5	74.1	246.9	72.8	76.4	77.6	76.1	249.8	73.8	252.1
Exports	3.7	3.4	3.2	13.4	2.7	3.4	3.1	3.0	12.1	2.8	12.8
Ending stocks	18.4	16.6	14.4	14.4	16.3	18.9	17.9	14.6	14.6	16.5	14.6
Domestic use ¹	53.7	56.6	56.5	219.1	53.8	54.2	56.6	58.5	223.1	54.5	224.7
Skim solids (billion pounds milk equiv.)											
Milk marketings	57.6	56.2	55.6	225.5	56.6	58.1	56.7	56.2	227.6	57.5	229.8
Beginning stocks	11.9	12.4	11.9	11.1	11.7	12.5	12.6	12.3	11.7	12.1	12.1
Imports	1.6	1.6	2.0	6.7	1.8	1.6	1.6	1.8	6.8	1.7	7.0
Total supply	71.1	70.2	69.5	243.3	70.1	72.2	70.9	70.3	246.1	71.3	248.9
Exports	14.4	13.5	12.8	52.5	12.6	13.6	12.9	12.3	51.3	12.8	53.9
Ending stocks	12.4	11.9	11.7	11.7	12.5	12.6	12.3	12.1	12.1	12.3	12.1
Domestic use	44.3	44.8	45.0	179.1	45.0	46.1	45.8	46.0	182.8	46.2	182.9
Milk prices (dollars/hundredweight) ¹											
All milk	26.97	24.57	25.17	25.34	21.93	20.00	19.45	20.70	20.50	20.40	19.90
Class III	24.65	20.81	21.11	21.96	18.44	17.45	17.45	17.65	17.75	17.30	17.50
Class IV	25.38	25.08	23.46	24.47	19.08	18.05	18.10	18.00	18.30	17.40	17.35
Product prices (dollars/pound) ²											
Cheddar cheese	2.3523	2.0428	2.1004	2.1122	1.8797	1.785	1.800	1.830	1.825	1.800	1.820
Dry whey	0.6754	0.5143	0.4723	0.6057	0.4186	0.410	0.380	0.370	0.395	0.370	0.370
Butter	2.8095	3.0136	2.9743	2.8665	2.4338	2.425	2.450	2.400	2.430	2.300	2.335
Nonfat dry milk	1.8188	1.6831	1.5141	1.6851	1.2717	1.155	1.150	1.160	1.185	1.140	1.115

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. Product 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.

Published by USDA, Economic Research Service, in *Livestock, Dairy, and Poultry Outlook*.

Updated 5/18/2023.