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Economic Research Service | Situation and Outlook Report

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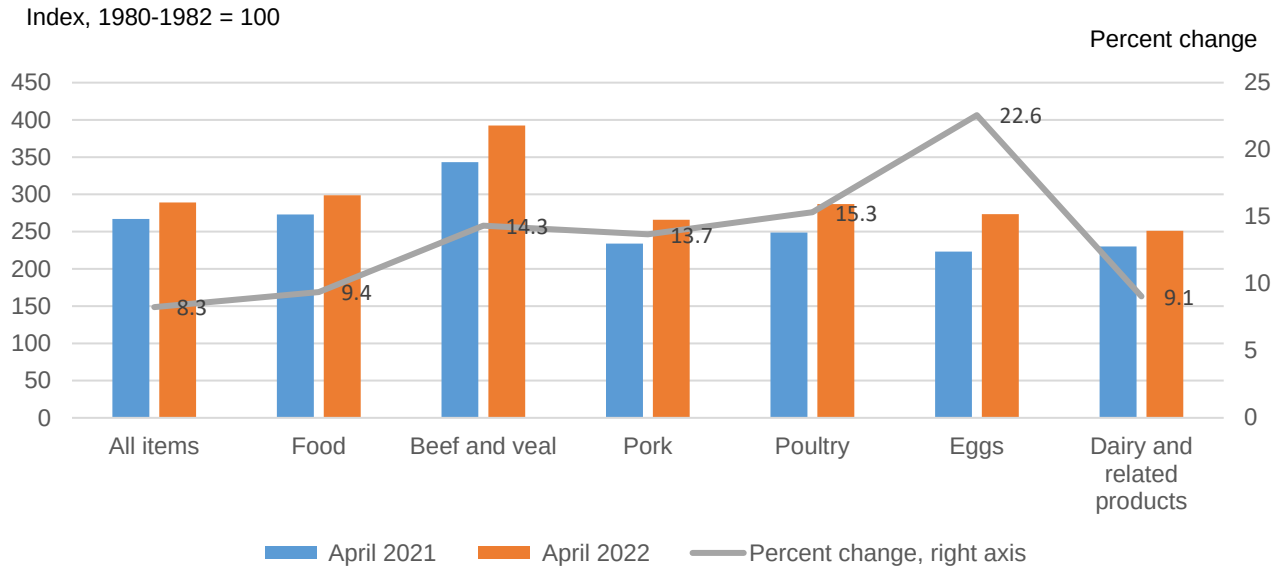
Livestock, Dairy, and Poultry Outlook: May 2022

Large Year-Over-Year Increases in Retail Animal Product Prices in April

The U.S. Department of Labor's Bureau of Labor Statistics released consumer price indexes, CPI, for April of this year on May 11. The chart below compares April 2021 and April 2022 CPI for all products, including food, beef, pork, poultry, eggs, and dairy products. The all-items CPI, a measure of inflation in general, increased by 8.3 percent. The inflation rates for food and the selected animal products were larger than the general inflation rate. Poultry at 15.3 percent and eggs at 22.6 percent had the largest percentage increases.

Consumer price indices, CPI, for selected items



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

Summary

Beef/Cattle: Drought and forage conditions led to an increase in expected cow and bull slaughter during 2022, offsetting lower expected fed cattle slaughter and raising 2022 production to 27.8 billion. Based on anticipated tight supplies of cattle next year, 2023 beef production is expected to decline 6.8 percent to 26.0 billion pounds. As a result, aggregate domestic beef disappearance in 2023 is expected to decline almost 7 percent to the retail equivalent of 55.1 pounds per capita, its lowest level since 2015. Cattle prices in 2023 are expected to increase close to record highs. The 2023 annual trade forecast is projected lower.

Sheep/Lambs: Actual data are available for first-quarter 2022 production and trade. No revisions were made to the rest of the quarters of 2022's production forecasts. Sheep and lamb production is expected to decline between 2023 and 2022. Lamb prices are expected to be higher in 2023 than 2020.

Dairy: The all-milk price forecast for 2022 has been adjusted to $25.75 per hundredweight (cwt), $0.05 lower than last month's forecast. The all-milk price forecast for 2023 is $23.55 per cwt, $2.20 lower than 2022 projection. For 2022, wholesale price forecasts for all Cheddar cheese and butter were adjusted up, while prices for dry whey and nonfat dry milk (NDM) were adjusted down. Wholesale price projections for all major dairy products in 2023 are lower than 2022. Milk production for 2022 is projected to total 226.7 billion pounds, 0.4 billion higher than last month's forecast. In 2023, milk production is estimated at 229.4 billion pounds, 1.2 percent above the 2022 projection.

Pork/Hogs: Commercial pork production for 2023 is forecast at about 27.4 billion pounds, slightly more than 1 percent above expected 2022 production. Pork exports in 2023 are forecast at about 6.5 billion pounds, 1 percent lower than exports projected for this year. Live equivalent prices of 51-52 percent lean hogs in 2023 are expected to average $71 per cwt, about 1 percent lower than prices forecast for 2022.

Poultry/Eggs: The broiler production forecast was revised up for 2022 based on recent slaughter and hatchery data, while exports were adjusted down. Both production and exports are expected to grow in 2023. Broiler prices were adjusted up to an average of 155 cents per pound in 2022 on recent price strength, but 2023 prices are expected to come back down to an average of 150 cents per pound. Considering April discoveries of Highly Pathogenic Avian Influenza (HPAI) in the egg-layer flock, the 2022 table egg production forecast was lowered to 7,688 million dozen eggs. The forecast for USDA benchmark wholesale egg prices (New York, Grade A, Large) was adjusted up to an average of 194 cents per dozen. Eggs and egg products trade forecasts for 2022 are unchanged, but the annual totals were adjusted to reflect first-quarter 2022 data. Relative to 2022, the 2023 forecasts include a 5.5-percent increase in total egg production, a 23.3-percent decrease in average wholesale egg prices, a 13.8-percent increase in export levels, and a 36.8-percent decrease in import levels. Turkey production for 2022 was lowered for each quarter as HPAI continues to affect flocks, but production is expected to gradually increase each quarter in 2023. End-of year stocks for 2022 were also lowered. End-of-year stocks for 2023 are expected to increase with production. Price estimates were raised for each quarter of 2022 after a historically high average March price, and prices in 2023 are expected to average 2 percent below 2022 prices. Exports for 2022 were lowered each quarter due to import restrictions on HPAI-affected regions, and imports were raised. Exports in 2023 are expected to return to pre-HPAI patterns, and imports are expected to continue at 2022 levels.

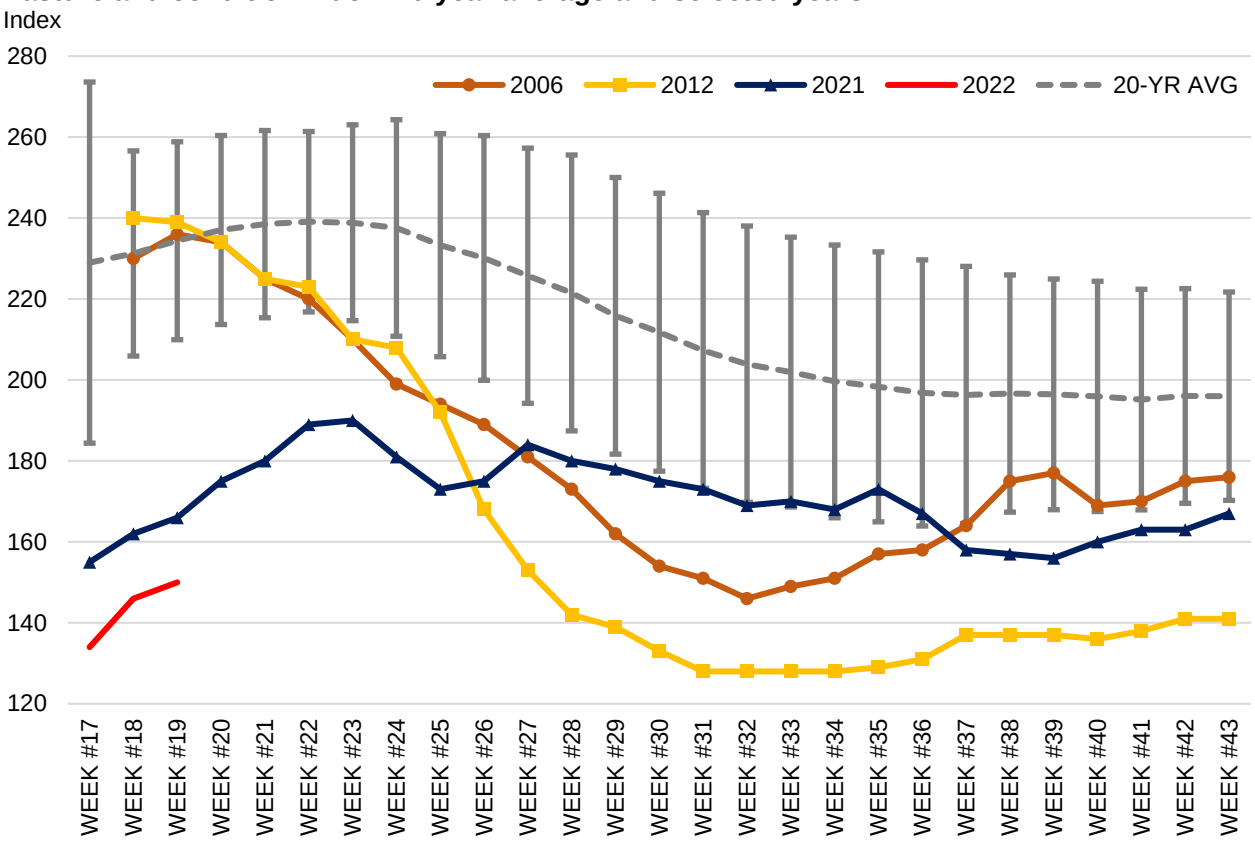
Beef/Cattle

Russell Knight and Hannah Taylor

Drought Conditions Pull Cattle Forward in 2022; Limited Cattle Supplies Draw Down 2023 Production

Drought is playing a significant role in the cattle cycle. Two years of drought have deteriorated pasture and forage conditions, and the pastureland condition index for 2022 is off to its worst start for the grazing season since the series began in 1995 (see in chart below). This is pushing calves into the feedlots at a faster pace, which will likely quicken the pace of fed cattle slaughter in 2022, leaving fewer supplies of cattle available for slaughter in late 2022 and 2023.

Pastureland condition index: 20-year average and selected years



Note: Conditions Index is calculated as (4*Excellent rating value) + (3*Good rating value) + (2*Fair rating value) + (1*Poor rating value) + (0*Very Poor).
Note: Errors bars equal one standard deviation.
Source: U.S. Department of Agriculture, National Agricultural Statistics Service *Crop Progress* report.

Furthermore, drought conditions and higher operating costs have encouraged the rapid culling of beef cows in first-quarter 2022 to levels not seen in decades. Also, based on USDA, Agricultural Marketing Service reports for actual weekly slaughter under Federal inspection, April 2022 showed the highest number of beef cows slaughtered for the month since 1996;

there were over 5 million more beef cows on January 1 of 1996 than January 1 of this year. Subsequently, the outlook weakens for the potential calf crops in 2022 and 2023, further reducing potential cattle placements year over year in late 2022 and early 2023.

The April *Cattle on Feed* report—released by USDA, National Agricultural Statistics Service—estimated March 2022 placements nearly unchanged and about 2 percent fewer marketings than March of last year, resulting in an April 1 cattle-on-feed number of 12.1 million head. That is a record for the month of April since the series began in 1996. March placements of cattle were greater than expected. As more calves are placed in feedlots sooner than normally expected due to drought conditions, marketings in 2022 are pulled forward into the second and third quarters, partially offsetting an expected decline in marketings in late 2022. However, the forecast for cow and bull slaughter is higher than last month, more than offsetting the net decline in fed cattle marketings in 2022. As a result, the forecast for 2022 beef production was raised 132 million pounds to 27.8 billion pounds.

Based on anticipated tight supplies of cattle, 2023 beef production is projected to decline 6.8 percent from 2022 to 26.0 billion pounds. It will mark a second year of lower production following the record set in 2021, although the decline from 2021 to 2022 is fractional at this point in the forecast cycle. As depicted in the chart below, it will be the lowest production level since 2016.

With lower expected beef production contributing to higher expected prices in 2023, aggregate domestic beef disappearance next year is expected to decline almost 7 percent to the retail equivalent of 55.1 pounds per capita, compared with 59.0 pounds per capita in 2022. This will be its lowest level since 2015.

2023 production forecast down from 2022 on lower expected cattle slaughter
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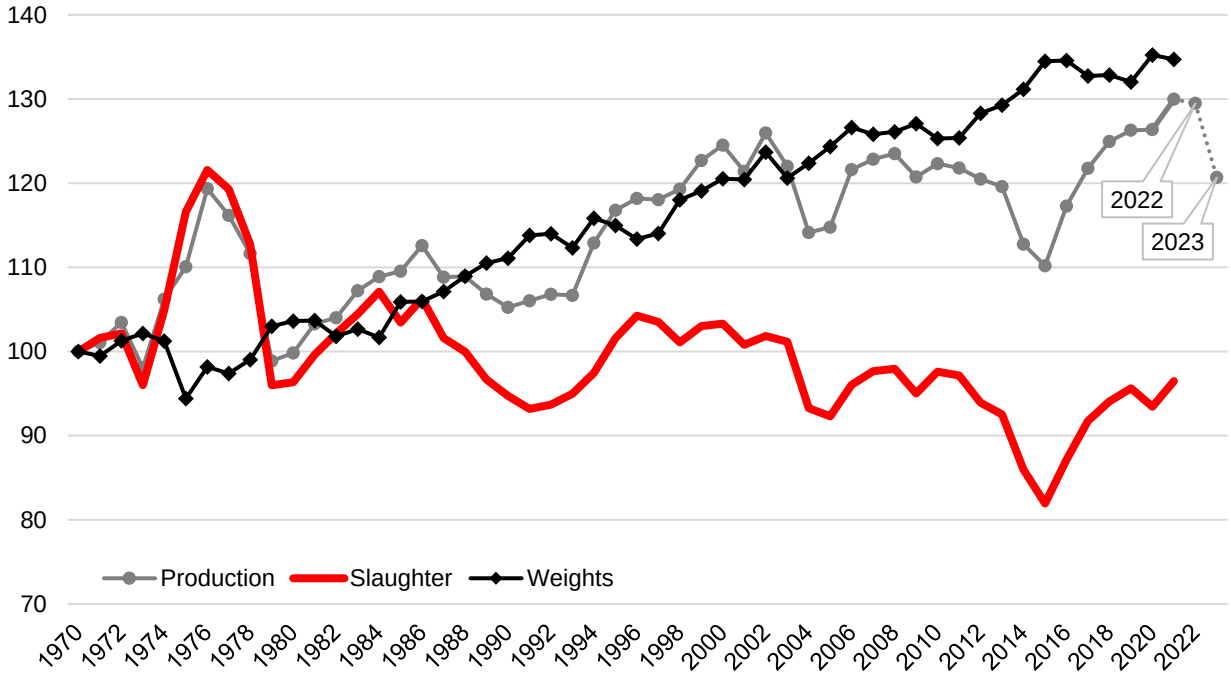


Source: USDA, Economic Research Service calculations using data from USDA, National Agricultural Statistics Service.

Cattle Prices To Climb for Second Year

In early 2022, a faster pace of placements and slower-than-expected pace of marketings of fed cattle has resulted in the largest on-feed numbers recorded for the month of April. This has likely kept feeder calf prices restrained given late-2022 fed cattle prices implied by the futures market in late 2022. The third-quarter 2022 price forecast is raised $1, but the fourth-quarter 2022 price is lowered $2, for an annual forecast of $162.80 per hundredweight (cwt), $0.20 lower than last month's forecast.

Cattle prices in 2023 are expected to increase for a second consecutive year. Prices are expected to approach record levels set in 2014, a year when the U.S. cattle inventory was the lowest since 1952. With a smaller 2022 calf crop and higher anticipated beef cow slaughter in 2022, calf supplies are expected to contract in 2023. The average annual feeder steer price is expected to climb to $198.00 per cwt in 2023, $35 (or 22 percent) higher than the projection for 2022.

Fed steer prices for the 5-area marketing region for the week ending May 15 averaged $23 above a year ago at $142.44 per cwt. Based on the April 2022 average monthly price of $141.66 per cwt and current price data, the second-quarter 2022 fed steer price forecast is raised $1 to $140 per cwt. The fourth-quarter 2022 price is raised $2 to $145 per cwt because of fewer expected market-ready supply of fed steers at that time. The 2022 fed steer price is forecast at $140.10 per cwt.

Despite less expected beef production in 2023, a changing economic situation could temper beef demand in 2023. The 2023 fed steer price is expected to increase 9 percent, or $13, to $153.00 per cwt, the highest price since 2014.

Record-High First-Quarter 2022 U.S. Beef Trade; Exports and Imports To Slow in 2023

First-quarter 2022 was a record for U.S. beef trade, with both exports and imports reaching new highs for the quarter. U.S. beef exports in the first quarter totaled 846 million pounds, 6 percent higher than a year ago and 16 percent above the 5-year average. Beef imports totaled 985 million pounds, 41 percent higher year over year and 36 percent higher than the 5-year average.

Beef exports in March were higher than March of any previous year, eclipsing the previous record set last year, and were the third largest for any month. Among the top five destinations, higher exports to China, South Korea, and Canada offset lower exports to Japan and Mexico. Overall, for the first quarter, South Korea emerged as the top foreign market for U.S. beef with exports increasing 8 percent year over year. Despite a decrease in exports to Japan of 7 percent year over year, the country was the second-largest market for the quarter. Exports to China showed the largest year-over-year increase, up nearly 62 percent, maintaining China's status as the third-largest market with over 17 percent of total exports for the quarter. Among the top five markets, the largest decrease in exports came from Mexico, with shipments down over 24 percent year over year.

First-quarter exports to Taiwan increased nearly 46 percent year over year, and the share of exports increased almost 2 percentage points. Additionally, combined exports to other markets increased 24 percent. Economic recovery and the return of tourism has fueled some of the demand recovery for U.S. beef in these smaller markets.

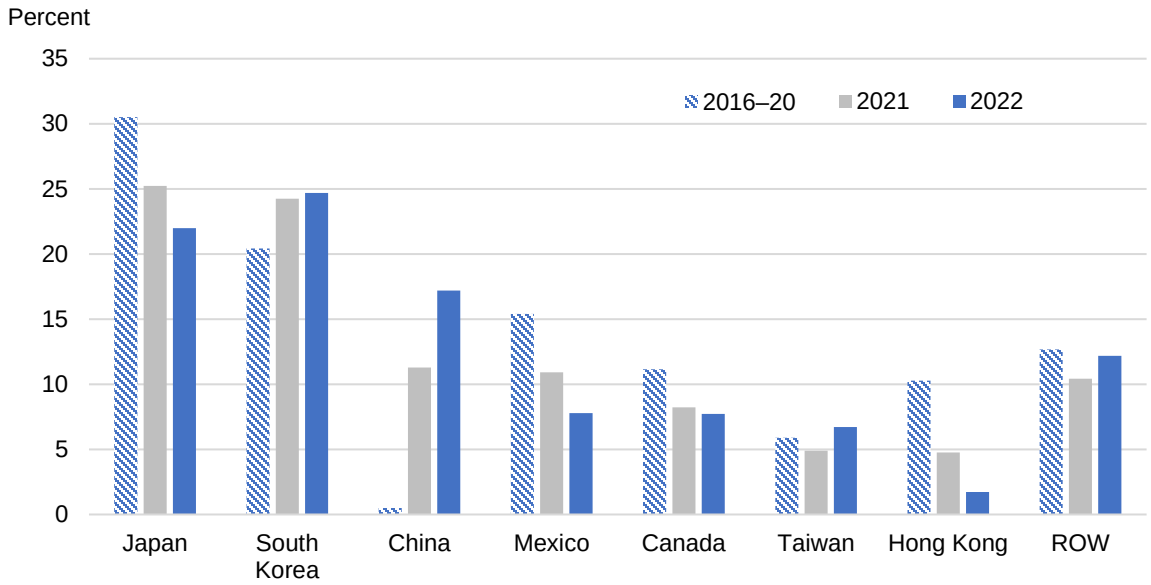
U.S. beef exports by volume, January–March 2021 and 2022

Country	First-quarter exports				Export share	
	2021	2022	Year-over-year change		2021	2022
	Million pounds	*Million pounds*	*Million pounds*	*Percent*	*Percent*	*Percent*
Top 5 largest foreign markets						
South Korea	193.1	208.9	15.7	8.2	24.2	24.7
Japan	200.9	186.0	-14.9	-7.4	25.2	22.0
China	89.9	145.4	55.5	61.8	11.3	17.2
Mexico	86.9	65.9	-21.1	-24.3	10.9	7.8
Canada	65.5	65.3	-0.3	-0.4	8.2	7.7
World	796.5	845.8	49.4	6.2	100.0	100.0
Additional foreign markets of note						
Taiwan	39.0	56.8	17.8	45.5	4.9	6.7
Hong Kong	37.9	14.6	-23.4	-61.6	4.8	1.7
Other markets	83.1	103.0	20.0	24.0	10.4	12.2

Note: Largest markets are based on 2022 export volumes. Other markets collectively refer to countries other than Japan, South Korea, China, Mexico, Canada, Taiwan, and Hong Kong.
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

The chart below shows the share of first-quarter exports by country. Export shares to South Korea, China, and Taiwan were higher than the first quarter of 2021 and the 5-year average, while Japan, Mexico, Canada, and Hong Kong accounted for smaller shares of exports. Exports to smaller markets have nearly returned to pre-pandemic levels.

Share of first-quarter exports by country



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

Based on firm demand anticipated from Asia, the second- and third-quarter 2022 export forecasts are increased by 20 million pounds each, though still below record levels in 2021. The annual forecast for 2022 is raised to 3.356 billion pounds. Due to the expected decrease in 2023 U.S. beef production, exportable supplies are expected to be lower next year. The annual export forecast for 2023 is 2.930 billion pounds, a year-over-year decrease of about 13 percent.

Imports in March were also a record for the month and the fourth-largest overall. Nearly all major suppliers showed year-over-year increases for the month, with the largest increases from Brazil, Mexico, and Canada.

Imports from Brazil were elevated in the first quarter, making that country the largest supplier so far this year. The WTO tariff rate quota (TRQ)[1] for fresh, chilled, and frozen beef imports from countries without a country-specific quota (including Brazil) was filled as of April 4, 2022. Therefore, for the remainder of this year, imports of fresh beef from Brazil and other U.S. suppliers not under a specific TRQ will be subject to a higher tariff of 26.4 percent of the value of the imports. However, imports from Brazil are likely to remain elevated if U.S. beef trimmings prices also remain relatively high.

First-quarter imports from Mexico were also higher than the previous year, increasing 39 percent. while imports from Canada were up nearly 14 percent. Imports from Australia were 14 percent higher than a year ago, as the country emerges from 2 years of limited exportable supplies caused by rebuilding a drought-reduced cattle herd. The only major supplier with a year-over-year decrease was New Zealand, down less than 1 percent. Imports from Argentina were up 64 percent year over year and imports from Nicaragua increased almost 14 percent.

[1] A tariff rate quota (TRQ) is a two-tiered tariff (tax) where a lower (in-quota) tariff is charged on imports within a quota volume, while a higher (over-quota) tariff is charged on imports in excess of the quota volume. Quota fill rates are available from the USDA, Economic Research Service *Livestock and Meat International Trade Data.*

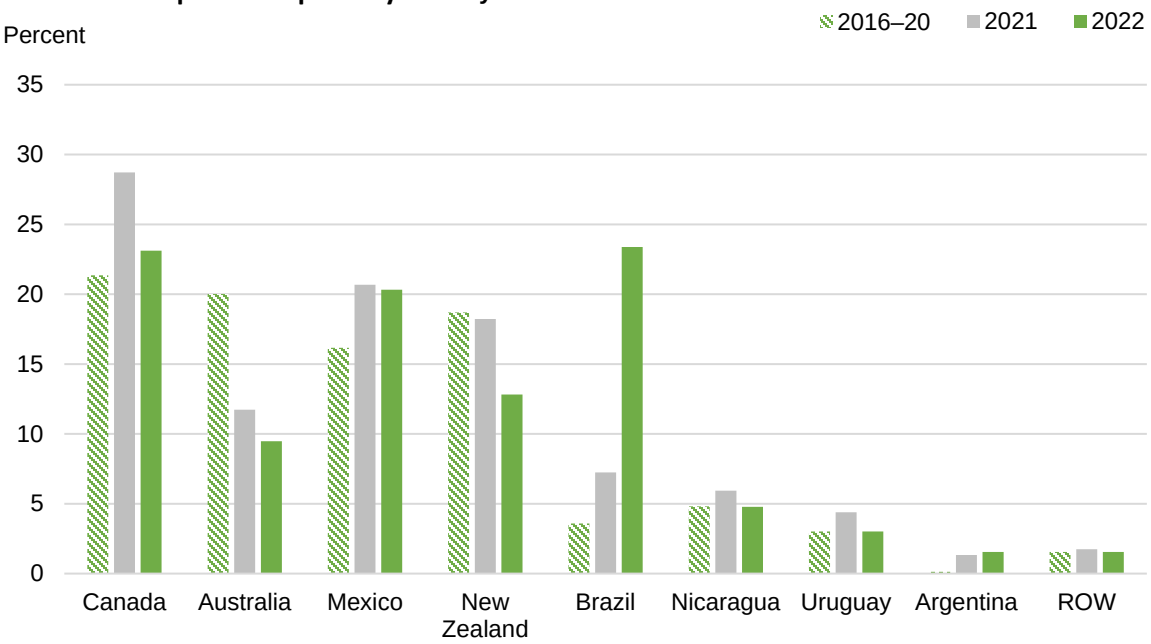
U.S. beef imports by volume, January–March 2021 and 2022

Country	First-quarter imports				Import share	
	2021	2022	Year-over-year change		2021	2022
	Million pounds	*Million pounds*	*Million pounds*	*Percent*	*Percent*	*Percent*
Top 5 largest suppliers						
Brazil	50.5	230.2	179.8	356.3	7.2	23.4
Canada	199.9	227.6	27.7	13.8	28.7	23.1
Mexico	143.9	200.1	56.2	39.0	20.7	20.3
New Zealand	126.9	126.3	-0.6	-0.5	18.2	12.8
Australia	81.6	93.3	11.6	14.2	11.7	9.5
World	696.1	984.6	288.5	41.4	100.0	100.0
Additional suppliers of note						
Nicaragua	41.4	47.0	5.7	13.7	5.9	4.8
Uruguay	30.5	29.7	-0.9	-2.8	4.4	3.0
Argentina	9.2	15.2	6.0	64.4	1.3	1.5

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

As shown in the chart below, there have been a few major shifts in the share of imports for the first quarter over the last few years. The share of imports from Australia has been much lower than the 5-year average due to limited exportable supplies. The import share from Brazil is elevated this year; the lifting of the U.S. ban on fresh beef imports, carryover from disrupted trade with China in late 2021, and high U.S. beef prices have likely caused this spike in imports from Brazil. Increased production in Mexico has led to a higher share of total imports from Mexico in the last 2 years.

Share of first-quarter imports by country



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

The second-quarter 2022 import forecast is increased 30 million pounds to 890 million, reflecting continued strong domestic demand. Forecasts for the second half of 2022 are unchanged from the previous month. The annual import forecast for 2022 is increased to 3.545 billion pounds. The annual forecast for beef imports in 2023 is 3.200 billion pounds, a decrease of about 10 percent compared to the relatively strong 2022 forecast.

Lamb/Sheep

William F. Hahn

First-Quarter Lamb Production Lower Than a Year Ago

Actual lamb and mutton production and import data for the first quarter of 2022 became available prior to the release of this report. Total production for the first quarter of 2022 came in higher than the April forecast of 30 million pound. Actual production was 33 million pounds. No revisions were made to the production forecasts for the last three quarters of 2022.

Lamb and mutton imports for the first quarter of this year were 88 million pounds, below last month's forecast of 97 million pounds. The 2022 second quarter forecast of lamb and mutton imports was lowered from the April estimate of 91 million pounds to 85 million pounds. No revisions were made to import forecasts for the last two quarters of 2022.

Lamb prices in April have averaged around 220 dollars per hundredweight. The second quarter 2022 forecast for lamb prices was lowered from last month's value of 225 dollars per hundredweight to this month's forecast of 220. The price forecasts for the last two quarters of this year were not changed.

Forecasts for 2023

This report provides the first forecasts for 2023. U.S. Mutton and lamb production generally has been declining for decades. For example, this year's starting inventory of all sheep was 2 percent lower than the starting inventory in 2021. This was the largest percentage decline since 2014.

2021 had some of the highest lamb prices in recent history. The highest reported weekly lamb price in the years 2016 to 2020 was 167.15 dollars per cwt, reported for the week ending July 22, 2016. Weekly lamb prices since the week ending March 19, 2021 have all been higher than the 2016-2020 high. These high prices should have encouraged producers to keep more sheep; on the other hand, many important U.S. sheep producing areas suffered from drought in 2021 and poor pasture conditions would tend to lead to lower sheep inventories.

Current weather forecasts predict that the drought will continue in the Western United States. The poor grazing conditions forecast for this year are expected to lead to lower sheep inventories and production in 2023. The 2023 sheep and lamb production forecast is 130 million pounds, 6 million pounds below the 2022 production forecast. The lower level of domestic production is likely to provide some support to lamb prices. The 2023 annual-average lamb price forecast is 224 dollars per CWT, about 4 dollars higher than the 2022 annual average lamb price forecast.

Dairy

Angel Terán

Recent Wholesale Dairy Product Prices

From the week ending April 9 to the week ending May 7, trends in wholesale dairy product prices reported in the USDA *National Dairy Products Sales Report* (NDPSR) were mixed. Prices for Cheddar cheese 40-pound blocks and 500-pound barrels (adjusted to 38-percent moisture) rose to $2.3808 (+15.3 cents) and $2.4127 per pound (+21.8 cents), respectively. The price for nonfat dry milk (NDM) rose slightly to $1.8340 (+0.3 cent) per pound. Prices for butter and dry whey price decreased to $2.7244 (-1.7 cents) and $0.6837 (-8.3 cents), correspondingly.

Dairy wholesale product prices, April 9 and May 7, 2022
Dollars per pound

	For the week ending		
	April 9	May 7	Change
Butter	2.7410	2.7244	-0.0166
Cheddar cheese			
40-pound blocks	2.2283	2.3808	0.1525
500-pound barrels *	2.1944	2.4127	0.2183
Nonfat dry milk	1.8311	1.8340	0.0029
Dry whey	0.7665	0.6837	-0.0828

* Adjusted to 38-percent moisture.

Source: USDA, Agricultural Marketing Service, *National Dairy Products Sales Report,* May 11, 2022.

For the trading week[2] ending May 6 at the Chicago Mercantile Exchange (CME), the average spot prices for Cheddar cheese 40-pound blocks and 500-pound barrels averaged $2.3485 and $2.3380 per pound, respectively. CME prices for butter, NDM, and dry whey averaged $2.6475, $1.7350, and $0.5895 per pound, respectively.

Except for Oceania butter, skim milk powder (SMP), and whole milk powder, most international export prices reported by USDA *Dairy Market News* increased from February to March. Most of these international prices have been above United States export prices, which likely gives domestic sellers some competitive advantage when trading in international markets.

[2] 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, Europe, and South America, March-April, 2022

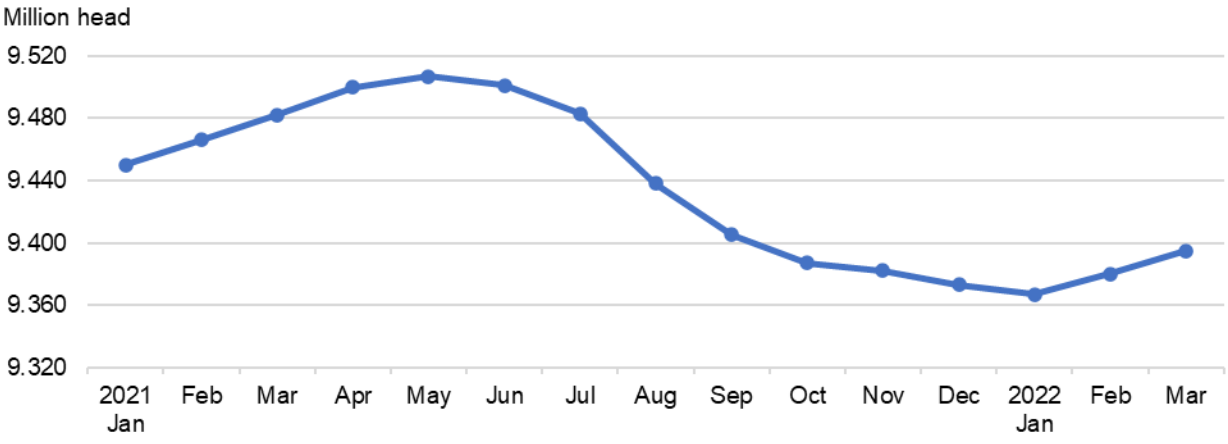
Product	Region	Units	March 2022	April 2022	Change
Butter	Oceania	Dollars per pound	3.152	3.107	-0.045
	Western Europe		3.260	3.520	0.261
Cheddar cheese	Oceania		2.799	2.847	0.048
Skim milk powder	Oceania		2.072	2.057	-0.015
	South America		1.835	1.859	0.024
	Western Europe		2.000	2.080	0.080
Dry whey	Western Europe		0.736	0.759	0.024
Whole milk powder	Oceania		2.101	1.955	-0.147
	South America		2.043	2.092	0.050
	Western Europe		2.518	2.622	0.104

Source: 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 19.690 billion pounds, 0.5 percent lower than March 2020. Milk cows numbered 9.395 million head in March, 15,000 more than the previous month but 87,000 head lower than March 2021. Milk per cow averaged 2,096 pounds per head in March, 8 pounds higher than March 2021. For the first quarter of the year (2022-Q1), U.S. milk production totaled 56.3 billion pounds, down 1.0 percent from 2021-Q1. The average number of milk cows during 2022-Q1 was 9.381 million head, 85,000 head lower than the 2021-Q1. In February and March 2022, there was an increase in the number of dairy cows after a steady decline from June 2021 to January 2022, as shown in the graph below.

Milk cows in the United States, January 2021–March 2022

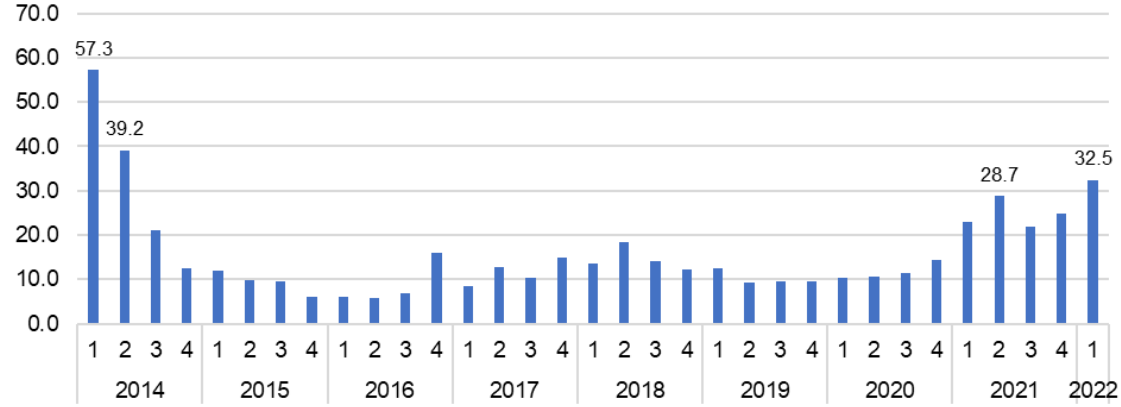


Source: USDA, National Agricultural Statisics Service.

March dairy exports on a milk-fat milk-equivalent basis totaled 1.200 billion pounds,192 million pounds above February and 186 million pounds higher than March 2021. On a skim-solids milk-equivalent basis, March dairy exports totaled 4.635 billion pounds, 838 million above the previous month and 176 million pounds lower than March 2021. Notably, butter exports totaled 13.5 million pounds, 2.3 million more than the previous month and 4.3 million more than March 2021. Butter exports in 2022-Q1 reached 32.5 million pounds, the highest quarterly export

volume since 2014-Q2, when butter exports totaled 39.2 million pounds. Exports of cheese totaled 91.9 million pounds in March, 19.3 million higher than February and 10.5 million higher than March 2021. Exports of dry skim products totaled 176.7 million in March, 37.0 million higher than February but 14.1 million lower than March 2021. Exports of dry whey totaled 43.3 million pounds, 10.8 million higher than February but 9.4 million lower than March 2021.

United States exports of butter by quarters, 2014–22



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

In March, imports on a milk-fat basis were 535 million pounds, 168 million higher than the previous month and 54 million lower than March 2021. On a skim-solids basis, March imports were 538 million pounds, 67 million above February but 22 million lower than March 2021. In March, butter imports totaled 8.1 million pounds, 2.6 million pounds above February but 2.1 million pounds below March 2021. Imports for other-than-American cheese totaled 24.6 million pounds, 8.1 million pounds higher than the previous month and 1.4 million pounds above March 2021.

During 2022-Q1, on a milk-fat basis, domestic use totaled 52,321 million pounds, 1.0 percent lower than 2021-Q1, mainly due to a decrease in butter domestic use. On a skim-solids basis, 2022-Q1 domestic use was 44,960 million pounds, virtually unchanged from 2021-Q1. In 2022-Q1, domestic uses of cheese, whey protein concentrate (WPC), and lactose were higher than 2021-Q1, but domestic use of skim milk products declined.

Domestic use of milk and dairy products, 2021-Q1 and 2022-Q1

Product	Units	2021 first quarter	2022 first quarter	Change	Percent change
Milk in all products					
Milk-fat basis	Million pounds	52,859	52,321	-538.5	-1.0
Skim-solids basis		44,979	44,960	-19.5	0.0
Dairy products					
American type cheese		1,318	1,355	36.8	2.8
Other-than-American type cheese		1,844	1,940	95.5	5.2
Butter		522	484	-38.8	-7.4
Dry skim milk products		223	156	-67.6	-30.3
Dry whey		106	119	12.9	12.2
Whey protein concentrate		46	59	13.1	28.5
Lactose		79	82	3.3	4.1

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

Outlook for Feed Prices

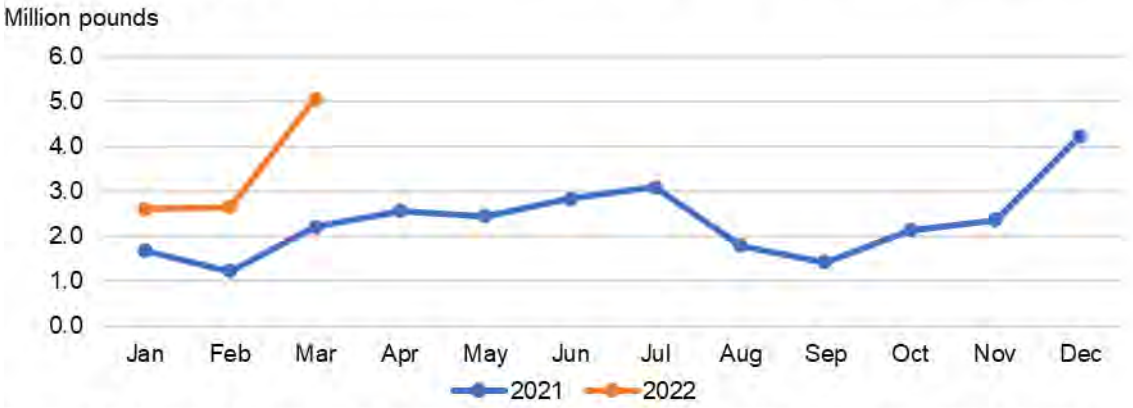
The 2021/22 and 2022/23 corn price projections are $5.90 per bushel and $6.75 per bushel, respectively. The 2021/22 and 2022/23 price projections for soybean meal are $420 per short ton and $400 per short ton, respectively. For more information, see *Feed Outlook*, published by USDA, Economic Research Service. The alfalfa hay price in March was $221 per short ton, $7 higher than February and $44 higher than March 2021. The 5-State weighted-average price for premium alfalfa hay in March was $269 per short ton, $3 higher than February and $59 higher than March 2021.

Infant formula shortage

On February 17, 2022, a major infant formula manufacturer recalled certain powder infant formulas produced domestically. According to the USDA press release No. 0106.22, USDA is urging States to take advantage of flexibilities the Department is offering in the Special Supplemental Nutrition Program for Women, Infants, and Children, commonly known as WIC, to help families get the safe formula they need.

According to the most recent *Dairy Market News* (DMN) report, the demand for lactose and WPC products that meet stringent requirements for infant formula is strong, but supplies are tight. The current infant formula supply shortage may have boosted imports of preparations suitable for infant and young children in March, as shown in the chart below. In March, imports of these products totaled 5.1 million pounds, an increase on of 91 percent from February and 130 percent from March 2021. Although infant formula imports have increased substantially, supplies remain tight relative to domestic demand.

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



*Inlcludes most products imported under Harmonized Tariff Schedule number 1901.10. Does not include products that are specifically designated as non-dairy products.

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

2022 Dairy Forecasts

In 2022, the U.S. milking herd is projected to average 9.400 million head, 30,000 head higher than last month's forecast. Based on recent information, the number of milk cows is expected to trend upward into 2022-Q3 and then stabilize in 2022-Q4. The milk per cow forecast for 2022 is 24,120 pounds, 40 pounds lower last month's forecast due to relative higher feed prices. With the higher anticipated number of milk cows, the milk production forecast for 2022 has been raised to 226.7 billion pounds, 0.4 billion higher than last month's projection.

On a milk-fat basis, the annual dairy export forecast for 2022 is 12.0 billion pounds, 0.5 billion higher than last month's forecast as 2022-Q1 exports on a milk-fat basis were higher than expected. On a skim-solids basis, the dairy export projection has been lowered to 49.9 billion pounds, 0.4 billion below the last month's forecast as the actual exports in 2022-Q1 on a skim-basis solid were lower than anticipated, particularly for whey products. With strong international demand and relatively competitive domestic prices, exports of cheese, butter, and several other dairy products are anticipated to increase from 2021 totals.

The 2022 forecast for dairy imports on a milk-fat basis has been increased to 6.6 billion pounds, 0.2 billion pounds higher than last month's forecast. On a skim-solids basis, the dairy import forecast has been raised to 5.9 billion pounds, 0.1 billion higher than last month's projections. In 2022, imports of cheese, milk protein concentrate, and milk powders are expected to increase from 2021 totals.

On a milk-fat basis, domestic use in 2022 has remained steady from last month's forecast of 221.6 million pounds. On a skim-solid basis, 2022 domestic use was raised by 0.9 million due to higher-than- expected domestic use in 2022-Q1. The forecasts for ending stocks remined unchanged from last month's forecast, at 12.9 billion pounds on a milk-fat basis and 11.0 billion pounds on a skim-solids basis.

The 2022 price forecasts for Cheddar cheese and butter are raised to $2.175 (+2.5 cents), and $2.650 (+1.0 cent) per pound, respectively. Due to higher anticipated production, the NDM and dry whey price forecasts have been lowered to $1.715 (-3.0 cents) and $0.655 (-3.5 cents), per pound respectively.

The Class III milk price forecast for 2022 remains unchanged from last month's forecast, at $22.75 per hundredweight (cwt), as the higher expected cheese price is offset by the lower expected whey price. The Class IV milk price forecast has been lowered by $0.25 to $23.80 per cwt, as the lower expected NDM price more than offsets the higher expected butter price. The all-milk price forecast for 2022 is $25.75 per cwt, $0.05 lower than last month's forecast.

2023 Dairy Forecasts

Typically, we discuss forecasts compared to projections from the previous month. Since these are the first USDA projections for 2023, these forecasts are discussed in terms of year-over-year comparisons with 2022 forecasts.

The U.S. milking herd is projected to average 9.400 million head in 2023, unchanged from the 2022 projection. Milk per cow is projected to average 24,420 per head, a year-over-year increase of 1.2 percent. The milk production forecast for 2023 is 229.5 billion pounds, 1.2 percent higher than the 2022 projection.

Dairy exports on a milk-fat basis are projected to total 11.5 billion pounds in 2023, 0.5 billion lower than the forecast for 2022. On a skim-solids basis, exports are projected to total 51.0 billion pounds, 1.1 billion higher than the 2022 projection. Among the major dairy products exported, with strong foreign demand and weaker domestic prices, exports of cheese, dry skim milk products, and whey products and milk-based drinks are anticipated to increase year over year. However, butter exports are likely to be lower.

Dairy imports on a milk-fat basis are projected to total 6.6 billion pounds in 2023, unchanged from the 2022 forecast. On a skim-solids basis, 2023 imports are projected to total 6.0 billion pounds, 0.1 billion higher than 2022. In 2023, imports of cheese, casein products, and lactose are expected to increase on a year to year basis.

Domestic use for dairy products is expected to increase in 2023. The domestic use forecast on a milk-fat basis is 222.8 billion pounds, 1.2 billion higher than 2022. On a skim-solids basis, the 2023 projection is 182.7 billion pounds, 1.0 billion higher than 2022. On a milk-fat basis, the ending stock forecast for 2023 is 13.6 billion pounds, 0.7 million higher than 2022. On a skim-solids basis, the ending stock forecast for 2023 is 11.7 billion pounds, 0.7 million higher than 2022.

Higher milk supplies projected in 2023 and relative stable demand are expected to contribute to lower prices for the main dairy products compared to 2022 projections. The Cheddar cheese price is projected to fall to $2.040 per pound, 13.5 cents lower than 2022, as more milk is expected to move into cheese manufacturing in 2023. The price of dry whey is projected at $0.520 per pound (-13.5 cents) due to relatively large cheese production and competitive price pressure from foreign exporters. In 2023, the NDM price is projected at $1.580 (-13.5 cents). The butter price is expected to decline to $2.350 per pound (-30.0 cents), as more cream volumes are expected to move into churns in 2023.

The Class III milk price forecast for 2023 is $20.50 per cwt, $2.25 lower than the projection for 2022. The Class IV milk price projection for 2023 is $21.40 per cwt, a year-over-year decline of $2.40. The all-milk price forecast for 2023 is $23.55 per cwt, $2.20 lower than the projection for 2022.

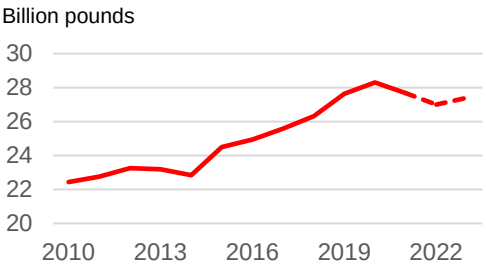
Pork/Hogs

Mildred Haley

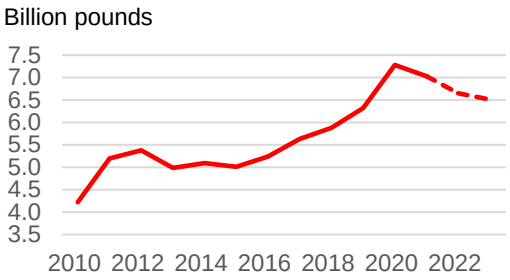
Slow Growth in Pork Production Forecast For 2023

U.S. commercial pork production in 2023 is expected to be almost 27.4 billion pounds, about 1 percent higher than projected production this year. This higher production forecast derives mostly from larger first-half 2023 pig crops, continued modest growth in sow productivity, and slightly heavier 2023 average dressed weights, compared with those expected in 2022. Pork exports next year are expected to be about 6.5 billion pounds, about 1 percent below this year's forecast. Expectations for lower 2023 exports are based largely on continued weak demand in important markets in the Western Hemisphere and Asia.

Commercial pork production, 2010–2023*



U.S. pork exports, 2010–2023*



*Hatched segment = 2022–2023 forecasts.
Source: USDA, Economic Research Service.

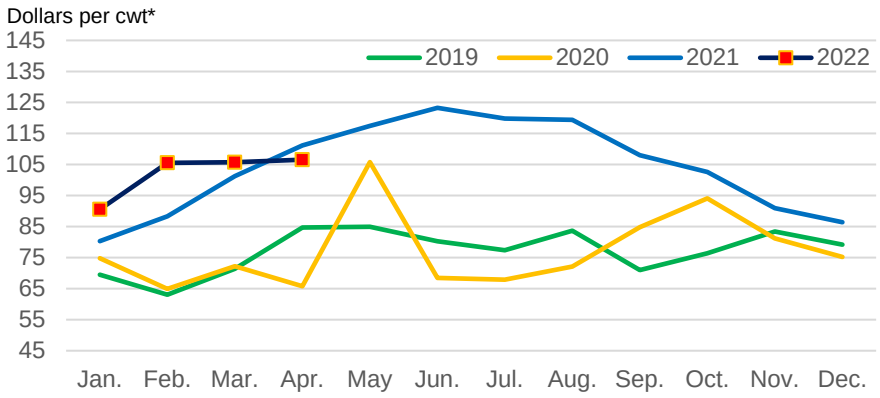
The forecast increase in 2023 production along with the export reduction, combine with expectations for higher 2023 pork imports and ending stocks, resulting in an almost 2 percent increase in per capita pork disappearance next year. Pork imports are forecast to increase about 2 percent to 1.4 billion pounds, and 2023 ending pork stocks are expected to average slightly less than 10 percent of total disappearance, about the same as this year. Consequently, 2023 pork per capita disappearance increases just under 1 pound, to 51.7 pounds compared with 50.8 pounds expected this year.

Larger 2023 supplies of pork should pressure hog prices lower next year. Prices of live equivalent 51–52 percent lean hogs are expected to average $71 per hundredweight (cwt), about 1 percent below the expected average this year.

High Retail Pork Prices May Be Contributing to Weakening of Wholesale Pork Carcass Value

The wholesale value of the pork carcass in April 2022 fell below its year-earlier value for the first time since December 2020. The cutout averaged $106.56 per cwt last month, compared with $111.17 per cwt a year earlier, a 4.1 percent decline from its year-earlier value.

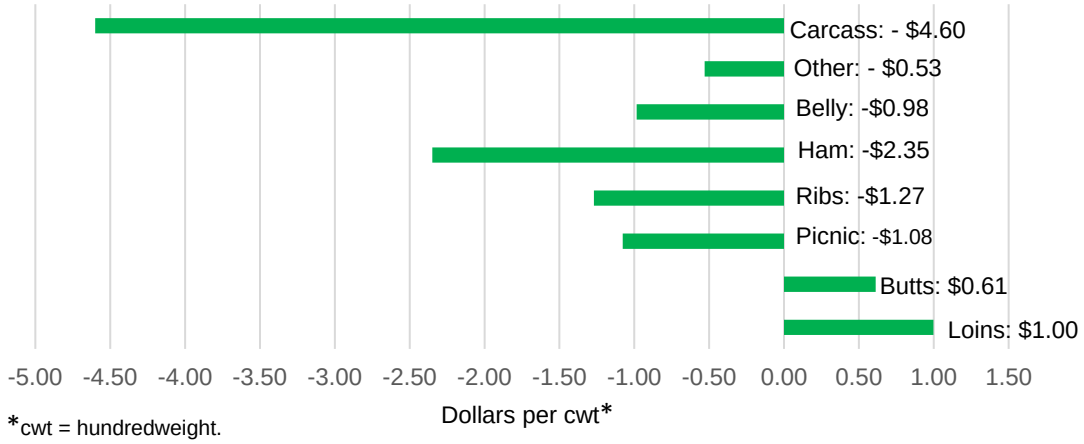
Estimated wholesale pork carcass cutout



*cwt = hundredweight.
Source: USDA, Agricultural Marketing Service.

The year-over-year difference between the two values—$4.60 per cwt—is disaggregated between component primals using the USDA Agricultural Marketing Service's (AMS) cutout weighting yields for the composite cutout in the figure below[3]. Positive contributions from butts ($0.61 per cwt) and loins ($1.00 per cwt) are more than offset by value subtractions by picnics (-$1.08 per cwt), ribs (-$1.27 per cwt), hams (-$2.35 per cwt), bellies (-$0.98 per cwt), and other (-$0.53).

Primal contributions to the year-over-year difference in the pork carcass cutout value: April 2022 and April 2021



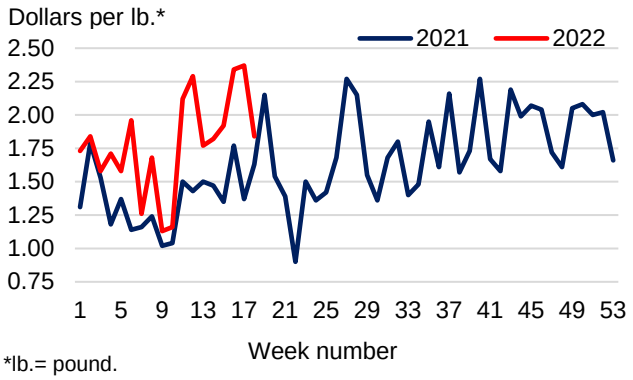
*cwt = hundredweight.
Source: USDA, Economic Research Service calculations with USDA, Agricultural Marketing Service data.

It is possible that the year-over-year lower cutout value in April is reflecting a slowdown in wholesale demand for pork as retail consumers begin to back away from high-priced retail pork cuts. Through 2021 and into 2022, retailers appeared to be able to pass through higher costs of labor, energy and transportation to consumers. It could be that as consumers' household budgets continue to be squeezed by higher living costs—gasoline and food in particular—a smaller share of consumers' food budget is allocated to animal proteins. Within that smaller budget allocation, consumers may reduce pork volumes purchased, substitute lower-priced meats as prices continue to increase, or some combination of the two. Such consumer decisions would tend to weaken wholesale pork demand and contribute to lower cutout values.

[3] USDA, Agricultural Marketing Service. "A User's Guide to USDA's Pork Carcass Cutout". January 2022.

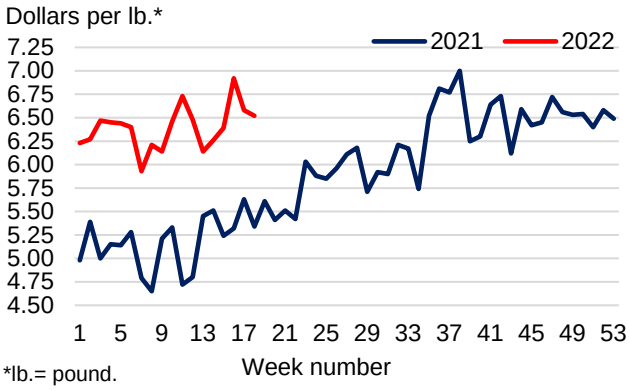
USDA, AMS collects weekly retail price and volume data for some pork cuts. Below are figures of 2021 and 2022 price series for pork cuts whose primals reduced the value of the wholesale pork carcass cutout in April 2022. Persistent year-over-year higher retail prices for bacon, hams, ribs, and picnics may reduce consumer retail demand for those cuts, leading to weaker wholesale pork demand.

Fresh bone-in picnics



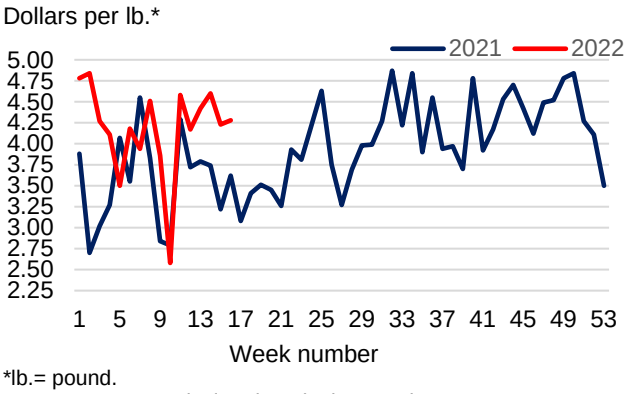
*lb.= pound.
Source: USDA, Agricultural Marketing Service.

Sliced bacon, 1-pound package



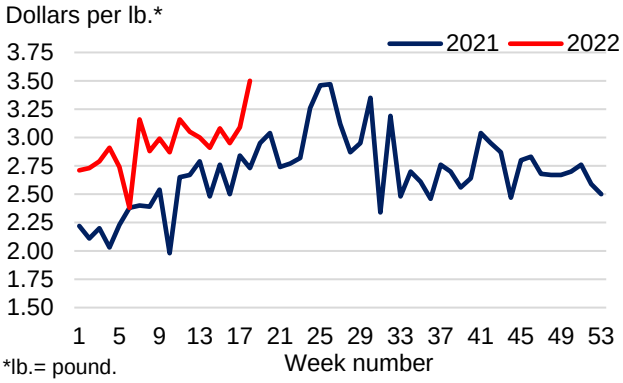
*lb.= pound.
Source: USDA, Agricultural Marketing Service.

Boneless ham



*lb.= pound.
Source: USDA, Agricultural Marketing Service.

Spareribs



*lb.= pound.
Source: USDA, Agricultural Marketing Service.

March Pork Exports Trend Lower

Pork exports totaled 544 million pounds in March, down more than 25 percent from a year earlier. The table below of the 10 largest foreign destinations for U.S. exported pork in March, shows that large shipments to Mexico—204 million pounds, almost 37 percent higher than a year ago—were not sufficient to offset significantly lower shipments to China\Hong Kong and other important foreign markets in Asia and the Western Hemisphere.

U.S. pork exports: Volumes and export shares of the 10 largest foreign destinations in March 2021 and 2022					
Country	Exports	Exports	Percent change	Export share	Export share
	March 2021	March 2022	2022/2021	March 2021	March 2022
	Million pounds	Million pounds		Percent	Percent
World	729	544	-25.3		
Mexico	149	204	36.8	20	37
Japan	129	98	-24.0	18	18
Canada	55	50	-9.0	8	9
South Korea	52	45	-14.4	7	8
China\Hong Kong	174	43	-75.1	24	8
Colombia	28	23	-17.9	4	4
Dominican Republic	19	21	9.8	3	4
Honduras	15	16	1.8	2	3
Australia	23	9	-62.6	3	2
Guatemala	9	6	-25.3	1	1

Source: USDA, Economic Research Service.

In particular, U.S. exports to Japan were 24 percent lower in March, implying a decline of more than 16 percent for the first quarter of this year. The table below of Japanese Government import data shows that Japan's pork imports in the first quarter 2022 were almost 10 percent higher than a year ago, with almost 29 percent of those imports coming from the European Union (EU). The U.S. share of the Japanese import market declined from about 36 percent in the first quarter of 2021 to about 31 percent this year. Japanese import data shows that imports of U.S. pork declined 4.3 percent in the first quarter of this year, while those of the EU increased more than 38 percent. Relatively high U.S. pork prices likely combined with a strengthening U.S. dollar exchange rate in the first months of 2022 to reduce competitiveness of U.S. pork products in important foreign markets.

Japan pork imports: Volumes and market shares of important pork exporting countries, January–March 2021 and 2022					
Country	Imports	Imports	Percent change	Import share	Import share
	Jan.–Mar. 2021	Jan.–Mar. 2022	2022/2021	Jan.–Mar. 2021	Jan.–Mar. 2022
	Metric tons	Metric tons		Percent	Percent
World	235,229	257,721	9.6		
United States	84,118	80,496	-4.3	35.8	31.2
Canada	59,919	57,690	-3.7	25.5	22.4
Mexico	24,108	29,186	21.1	10.2	11.3
European Union	53,995	74,605	38.2	23.0	28.9

Source: Japan Ministry of Finance and Customs.

First quarter U.S. pork exports totaled 1.541 billion pounds, more than 20 percent below shipments in the same period last year. Lower exports to China account for about 30 percent of the volume difference between first quarter 2022 and 2021. This is due to the ongoing recovery of China's pork sector from African Swine Fever, and the decline in demand for imported pork as a result. Strong pork demand in the United States, coupled with lower 2023 U.S. pork

production, have also contributed to higher U.S. pork prices, which make U.S. pork less competitive in foreign markets, everything else being equal.

Pork export forecasts for quarters 2 through 4 of 2022 are unchanged from last month. They are as follows: second-quarter, 1.58 billion pounds, about 17 percent below a year earlier; third quarter, 1.60 billion pounds, about 4 percent higher than a year earlier. For the fourth quarter, exports are expected to be 1.86 billion pounds, almost 13 percent higher than a year ago. Total pork exports in 2022 are expected to be about 6.6 billion pounds, 6.4 percent lower than the total in 2021.

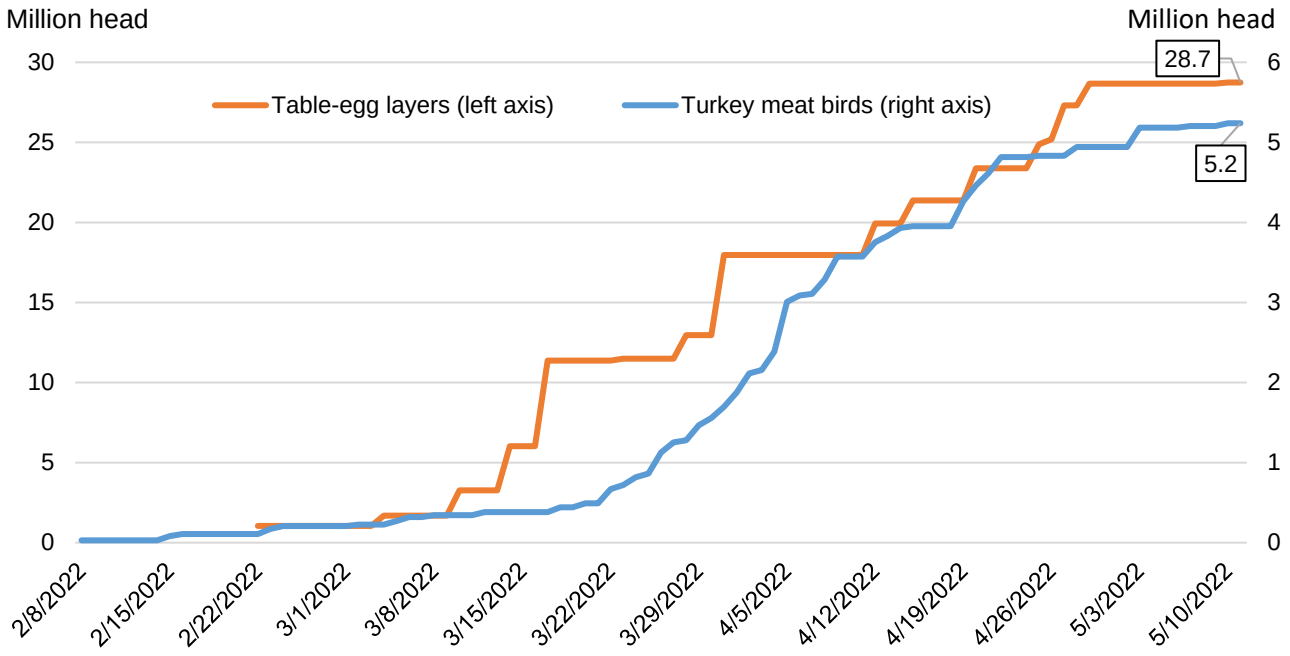
Poultry

Grace Grossen, Adriana Valcu-Lisman, and Margaret Cornelius

Recent Impact of Highly Pathogenic Avian Influenza

As of May 11, 2022, USDA's Animal and Plant Health Inspection Service (APHIS) confirmed highly pathogenic avian influenza (HPAI) in 172 commercial poultry flocks in 20 States, resulting in the culling of more than 37 million commercial birds. Of these, 28.7 million were egg-laying hens. The outbreak resulted in the loss of 8.9 percent of the table-egg laying flock on February 1, before the outbreak began. Of the laying hens destroyed, 44 percent were in Iowa, the largest egg-producing State. In the turkey industry, 5.2 million meat birds and 254,800 breeding hens were culled. The meat turkey total represents 29 percent of average monthly slaughter in 2021. HPAI confirmations in turkey flocks have been concentrated in Minnesota, the largest turkey-producing State, and South Dakota. The outbreak had minimal impact on the broiler industry. So far, 2.3 million broiler meat birds have been affected in 8 States, but 3 of the largest broiler-meat producing and exporting States—Georgia, Alabama, and Arkansas—have not reported HPAI outbreaks. The last major HPAI outbreak in the United States lasted from December 2014 to June 2015 and resulted in the loss of 7.4 million turkeys and 43 million egg-layers and pullet chickens (future egg-layers). The prior outbreak also had a large impact on trade, as poultry products nationwide were banned from entering partner countries. The international trade landscape for 2022 is different from 2014. Whereas import bans were generally for the whole country in 2014, they are more likely to be State- or county-specific in 2022.

Cumulative losses to 2022 HPAI outbreak as of May 11

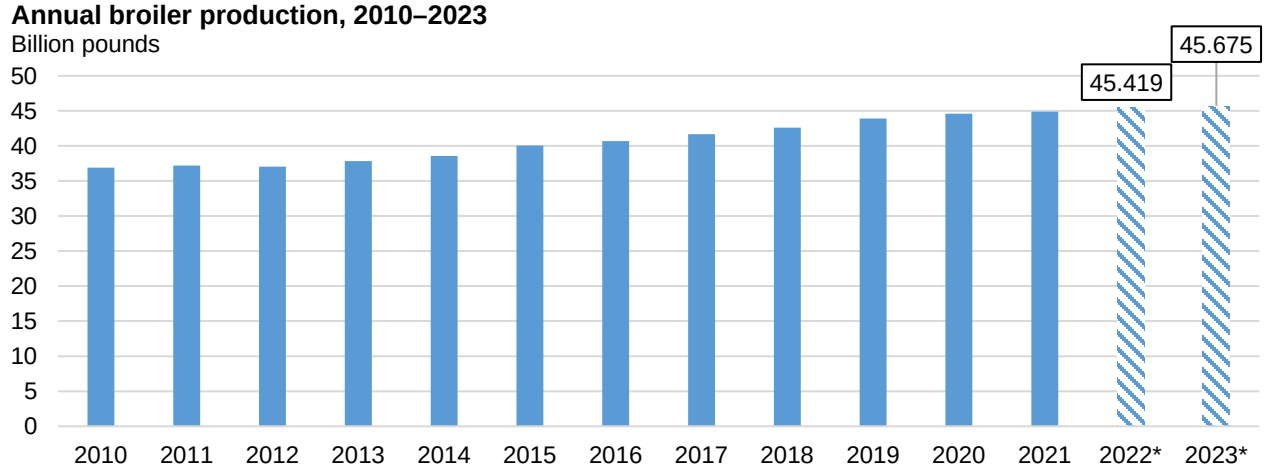


Note: HPAI is Highly Pathogenic Avian Influenza
Source: USDA, Animal and Plant Health Inspection Service.

Broiler Production Forecast Raised in 2022; Increase Projected for 2023

Broiler production in March totaled 3.994 billion pounds, just below March of last year. While average weights in March were slightly above last year, slaughter was down 1 percent. February production was revised up slightly to 3.484 billion pounds, making the first-quarter total 11.169 billion pounds. This is an increase of 2.5 percent over the first quarter of 2021. The HPAI outbreak continues to be a major challenge for the egg and turkey industries, but only 2.3 million broiler birds have been culled so far in 2022. This is more than were impacted in 2015, but it is a small share of broiler production and has not affected the largest broiler-producing States. Projected production in 2022 is increased by 25 million pounds in each remaining quarter as chicken prices remain strong and hatchery indicators are expected to improve. This brings the 2022 production projection to 45.419 billion pounds, a year-over-year increase of 1 percent. Total production in 2023 is forecast at 45.675 billion pounds, about 1percent above the 2022 forecast.

Annual broiler production, 2010–2023

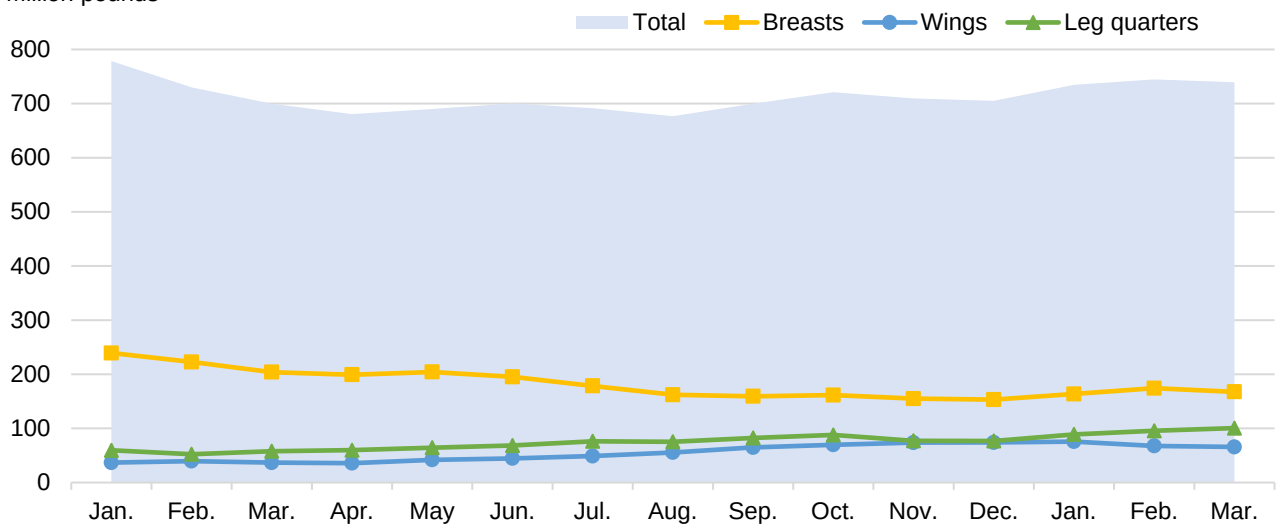


Note: Asterisk indicates a forecast figure.
Source: USDA, National Agricultural Statistics Service, and USDA, *World Agricultural Supply and Demand Estimates*.

During much of 2021, broiler meat in cold storage averaged at its lowest levels since 2014. In 2022, stocks rebounded, with March ending stocks at 739 million pounds, 5.7 percent above March 2021. Breast meat made up a smaller share of broiler meat stocks than last year, with 168 million pounds in cold storage at the end of March. This represents 23 percent of the total, down from 29 percent at the end of March 2021. Wings and leg quarters are making up a growing share of broiler meat in cold storage, 9 and 14 percent of the stocks at the end of March, respectively. This is up from 5 and 8 percent at the end of March 2021. The ending stock forecast for 2022 is adjusted up 20 million pounds to 750 million pounds, 6 percent higher than the end of 2021. Ending stocks for 2023 are also forecast at 750 million pounds.

Total broiler meat in cold storage at the end of the month, January 2021–March 2022

Million pounds



Source: USDA, National Agricultural Statistics Service.

Broiler Exports Strong in First Quarter; Projected To Grow in 2023

March broiler exports totaled 653.7 million pounds. This is a decrease of 1.1 percent, or 7.6 million pounds, from March 2021. First-quarter total exports are 1,866 million pounds, 12.4 million pounds more than the first quarter in 2021. During the first quarter, large decreases in shipments to the Philippines, Angola, and Vietnam were more than offset by increased shipments to Taiwan, Canada, Guatemala, South Africa, and Haiti, as well as increased shipments to the rest of the world. Shipments to Mexico, Cuba, and China and their shares of exports were similar to the first quarter of last year. The 2022 total export forecast was adjusted down to 7.376 billion pounds. This would be a fractional increase from 2021, representing 16 percent of forecast 2022 production. In 2023, broiler exports are forecast to climb to 7.465 billion pounds, still representing 16 percent of the forecast level of production in 2023.

U.S. broiler exports: Volumes and export shares of largest markets, first-quarter 2021 and 2022

Country	Volume (million pounds)			Export share (percent)	
	First Quarter 2021	First Quarter 2022	Change in volume	First Quarter 2021	First Quarter 2022
Mexico	396.7	393.2	-3.5	21.4	21.1
Cuba	174.0	174.9	0.9	9.4	9.4
Taiwan	97.0	132.7	35.7	5.2	7.1
China	113.4	112.7	-0.6	6.1	6.0
Canada	76.6	90.1	13.5	4.1	4.8
Philippines	110.5	81.9	-28.6	6.0	4.4
Guatemala	74.6	81.8	7.1	4.0	4.4
Angola	92.3	74.2	-18.0	5.0	4.0
South Africa	46.6	53.4	6.8	2.5	2.9
Haiti	42.2	45.5	3.3	2.3	2.4
Vietnam	67.4	43.4	-24.0	3.6	2.3
ROW	562.9	582.7	19.8	30.4	31.2
World	1,854.0	1,866.0	12.4	100.0	100.0

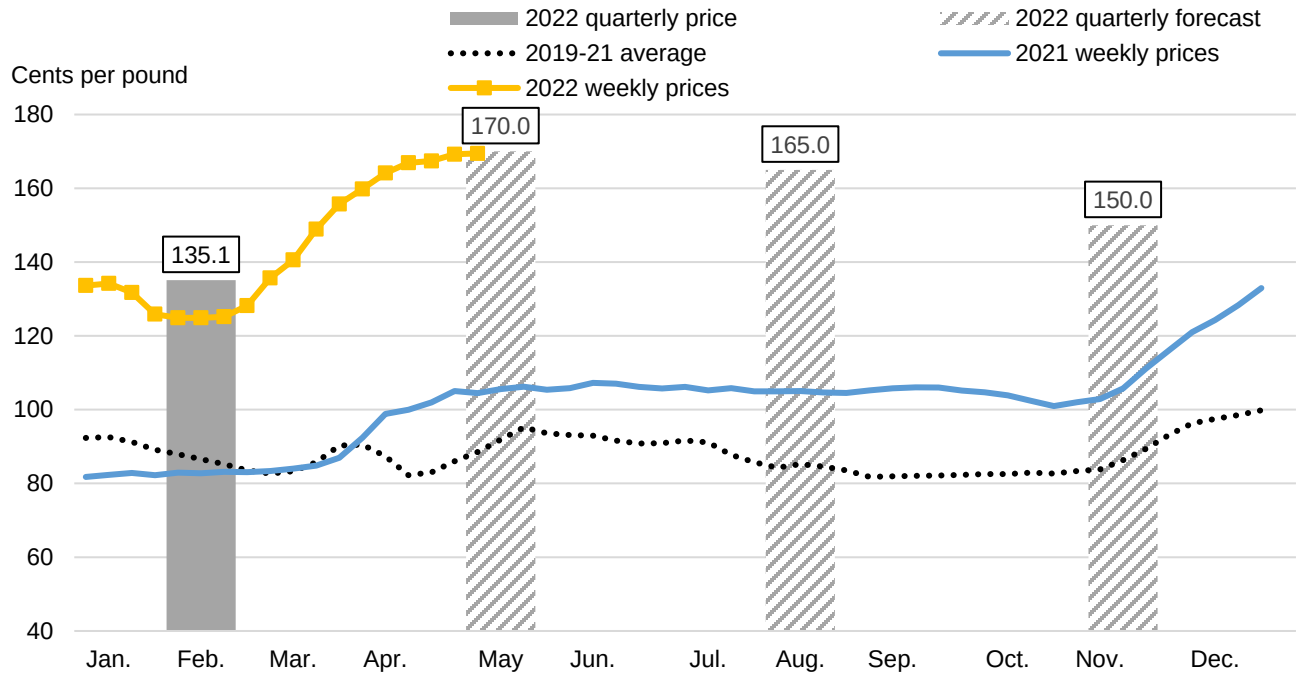
Note: Largest markets are based on year-to-date 2022 export volumes. ROW = Rest of World.
Source: USDA, Economic Research Service using data from the U.S. Department of Commerce, Bureau of the Census.

Broiler imports were stronger than expected in the first quarter, totaling 42.6 million pounds. This is a 31-percent increase from the first quarter of 2021 and likely reflects relatively strong demand for broiler meat. The United States imports broiler meat from Canada, Chile, and Mexico, but the largest share came from Chile, which accounted for 76 percent of shipments. This is up from a 65-percent share in 2021 thanks to strong prices for chicken parts pulling in more product. The 2022 total import forecast was adjusted up to 178 million pounds, 23 million pounds over the 2021 total. Imports in 2023 are forecast closer to historical levels at 152 million pounds.

Broiler Prices Adjusted up in 2022; Projected To Decline in 2023

The national composite broiler price averaged 166.89 cents per pound in April, an increase of 65 cents from last April. Weekly prices continued climbing through April and reached 169.45 cents per pound in the first week of May. Quarterly price forecasts were adjusted up on recent prices and expectations for strong demand. The second-, third-, and fourth-quarter forecasts for 2022 are 170 cents, 165 cents, and 150 cents, respectively. The annual average forecast for 2022 is 155 cents per pound. Prices are expected to remain elevated in the first quarter of 2023, with the forecast set at 155 cents per pound. This is 20 cents above the first quarter of 2022. However, prices are forecast to settle back later in the year; the 2023 annual average price forecast is 149 cents per pound.

National composite wholesale broiler price

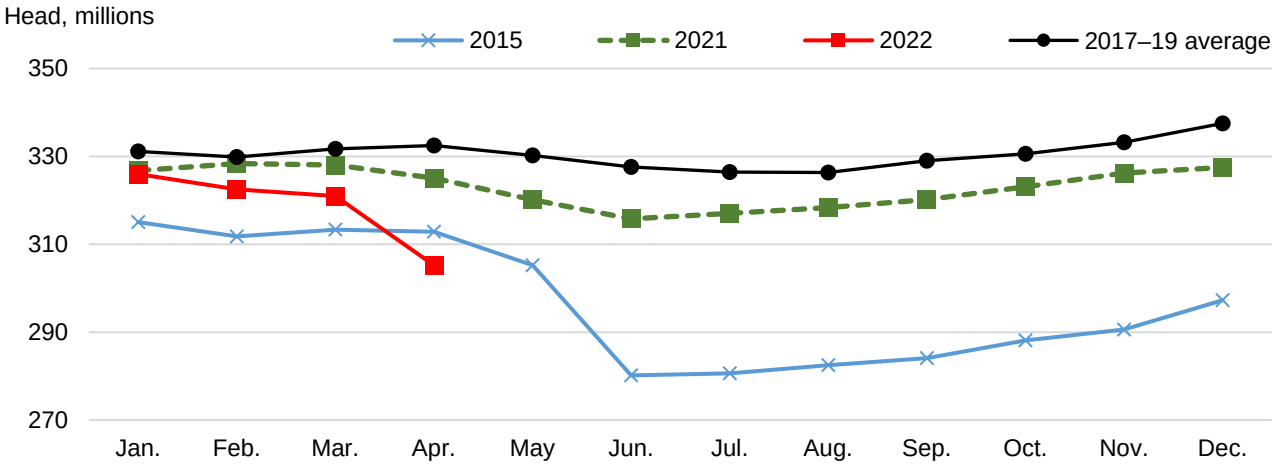


Source: USDA, Agricultural Marketing Service and USDA, *World Agricultural Supply and Demand Estimates*.

HPAI Discoveries Continue To Impact the Table-Egg Layer Flocks

The first case of HPAI outbreak in a commercial table-egg layer facility was detected on February 22 in Delaware. Since then, as of May 11, HPAI outbreaks in commercial table-egg facilities have been reported in 10 States and resulted in losses of 28.7 million table-egg layers. Most losses were reported in March (16.9 million layers) and April (10.7 million layers).

Monthly table-egg layer flock size at the beginning of the month



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

2022 Egg Production Forecast Revised Further Down Due to HPAI

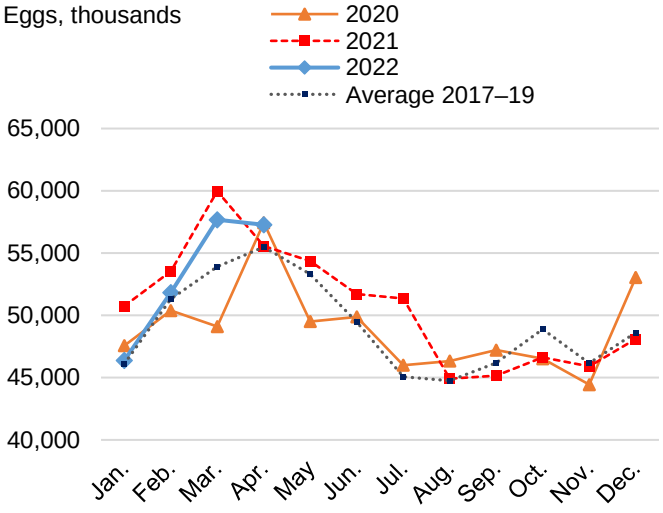
Table-egg production in March was estimated at 668.8 million dozen, a 1.8-percent year-over-year decrease. This decline was likely largely the result of the HPAI-related losses of 16.9 million table-egg layers, primarily in Iowa and Wisconsin. The table-egg layer flock averaged 313.1 million layers in March, a 4.1-percent year-over-year decrease. March lay rate averaged 82.7 eggs per 100 layers per day, a 2.4-percent increase from last year and a record high for March.

Going forward, some upstream production indicators show the producers' efforts to lessen the negative HPAI impact on the layer flock. The April 1, 2022, data for eggs-in-incubators (egg-type) suggest producers' intentions to add more birds to the layer flock. In addition, March slaughter of light-spent hens (slaughter of spent table-egg layers)—one of the methods used to manage the size of the flock—was significantly lower than indicated by past trends (see charts).

During the 2015 outbreak, the last HPAI discovery was in mid-June and the egg production declined for about 9 months, with a 9-percent reduction in May-December 2015 relative to a year earlier. However, although the forecast assumes HPAI discoveries to date, the growth potential of the layer flock and the table egg production will also reflect the impacts of higher forecast production costs.

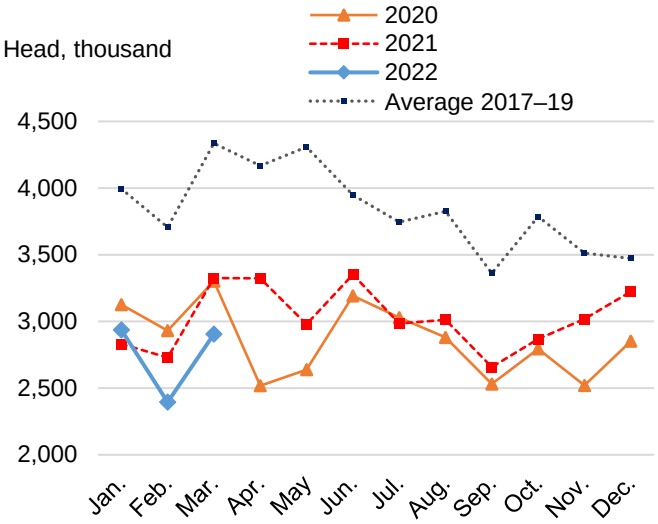
In light of the April HPAI-related losses, the forecasts for the second, third and fourth quarters of 2022 were revised further down to 1,840 million dozen,1,900 million dozen, and 1,975 million dozen, respectively. Consequently, 2022 total table-egg production is forecast at 7,688 million dozen, a 3.6-percent year-over-year decrease.

Egg-type, eggs in incubators, first of the month



Source: USDA, National Agricultural Statistics Service.

Monthly slaughter of light-spent hens



Source: USDA, National Agricultural Statistics Service.

Hatching egg production in the first quarter was estimated at 323.4 million dozen eggs, 4.9 percent higher than 2021 first quarter. Given the expectations of post-HPAI recovery of the table-egg layer flock and growth of broiler production, the 2022 hatching egg production is forecast at 1,308 million dozen eggs, a 3.3-percent year-over-year increase.

The forecast of 2023 table-egg production is 8,170 million dozen, a 6.3-percent increase from the 2022 forecast. Hatching egg production for 2023 is forecast at 1,320 million dozen eggs, a slight year-over-year increase. This brings the 2023 forecast for total egg production (table eggs and hatching eggs) to 9,490 million dozen, a 5.5-percent year-over-year increase. In 2023, per capita disappearance is forecast at 289.0 eggs per person, a 5.2 percent increase from the 2022 disappearance forecast of 247.8 eggs per person.

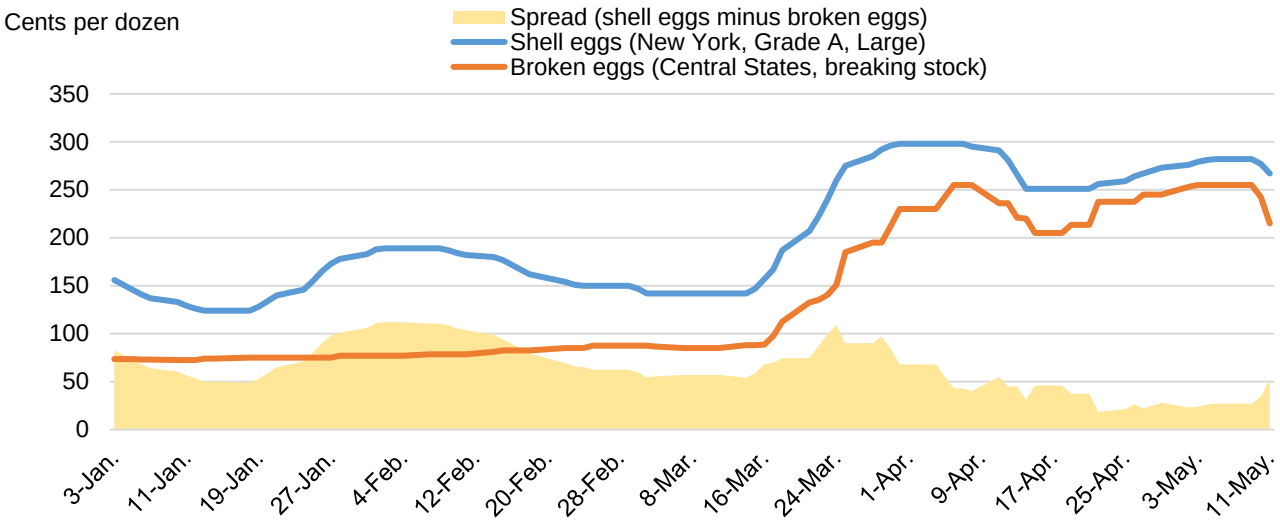
HPAI Impacts Wholesale Table-Egg Prices

Seasonally, after the Easter surge, wholesale table-egg prices usually trend lower. However, due to HPAI impact on the table-egg production, daily wholesale egg prices (New York, Grade A, Large) maintained historically high levels in April and the beginning of May. However, as of May 10, daily prices were trending lower. April wholesale egg prices averaged 272.3 cents per dozen. At a 166-percent year-over-year increase and 40-percent month-over-month increase, the April average prices set a historic high, surpassing the 2015 record-average prices.

The fact that the price increase is much larger than the decreases in production reflects the inelastic nature of the demand for eggs; in the short term, egg consumers are less likely to reduce purchases when prices rise. Additional upward pressure on wholesale egg prices is driven by the commercial egg users of broken eggs—eggs used in bakeries, restaurants, and other commercial facilities. Commercial egg users can substitute broken eggs with shell eggs—eggs normally sold in grocery stores— more easily than changing their product formulas and packaging.

During April, the daily price spread between the USDA benchmark wholesale egg prices and the Central States breaking stock prices trended lower than it was the period preceding the HPAI discoveries. A narrower price spread implies that the prices for broken eggs increased at a faster pace than the prices for shell eggs over the analyzed period. This might have created incentives for the broken egg buyers to bid for shell eggs (see chart). As of May 10, both shell eggs and broken egg prices were trending lower, with broken eggs prices declining at a faster pace. This is reflected by a wider spread in the observed prices. (see chart).

Daily prices for broken eggs, shell eggs, and their spread, January–May 11, 2022

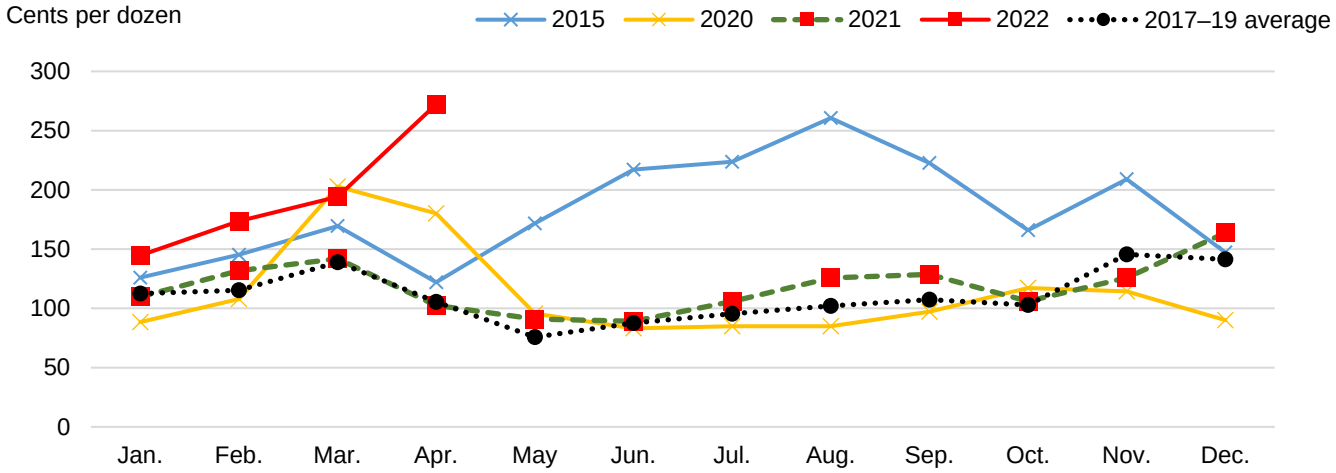


Source: USDA, Economic Research Service calculations using data from USDA, Agricultural Marketing Service.

During the 2015 HPAI outbreak, monthly average prices trended high and set all-time records in May through August, with a peak in August. Given the observed trend in prices and lowered

production forecasts, each subsequent quarter price forecast for 2022 was increased as follows: second quarter to 245 cents per dozen, third quarter to 190 cents per dozen, and fourth quarter to 170 cents per dozen. These changes bring the 2022 average wholesale egg price forecast to 194.0 cents per dozen, a 63.7-percent year-over-year increase.

Monthly average midpoint egg wholesale prices (New York, Grade A, Large)



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

Based on expectations of table-egg production being recovered from the 2022 HPAI impact, 2023 wholesale table-egg prices (New York, Grade A, Large) are expected to trend downward and average 149 cents per dozen, 23.3 percent below the 2022 average forecast price.

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

First-quarter 2022 exports of eggs and egg products totaled 71.14 million dozen shell-egg equivalent, a 25.8-percent year-over-year decrease. The year-over-year decrease was due to decreases both in shipments of shell eggs (-34.5 percent) and in the shipments of egg products (-11.0 percent). In terms of volumes, modest increases in shipments to secondary markets (Jamaica, Trinidad and Tobago, Bahamas, and China) were not sufficient to offset significant decreases in shipments to the top five markets (Mexico, Canada, Hong Kong, Japan, and South Korea).

Given the HPAI impact on domestic egg production, 2022 exports of eggs and egg products are forecast at 281.1 million dozen shell-egg equivalent, a 28.4-percent year-over-year decrease. Next year, total exports are forecast at 320 million dozen shell-egg equivalent, representing a 13.8-percent increase from the 2022 forecast level.

U.S. egg and egg products exports: Volume and export share, January–March 2021/22

	Volume (thousand-dozen)			Export share (percent)	
Country	2021	2022	Change in volume	2021	2022
Mexico	27,629	14,959	-12,670	29	21
Canada	23,583	21,887	-1,696	25	31
Hong Kong	11,331	9,028	-2,304	12	13
Japan	8,765	6,017	-2,748	9	8
South Korea	10,720	6,361	-4,359	11	9
Jamaica	1,628	1,901	272	2	3
United Arab Emirates	1,355	622	-733	1	1
Trinidad and Tobago	1,138	1,494	356	1	2
Bahamas	936	1,408	472	1	2
China	47	593	546	0	1
World	**95,762**	**71,136**	**-24,625**	**100**	**100**

Note: Largest markets are based on 2022 year-to-date export volumes.

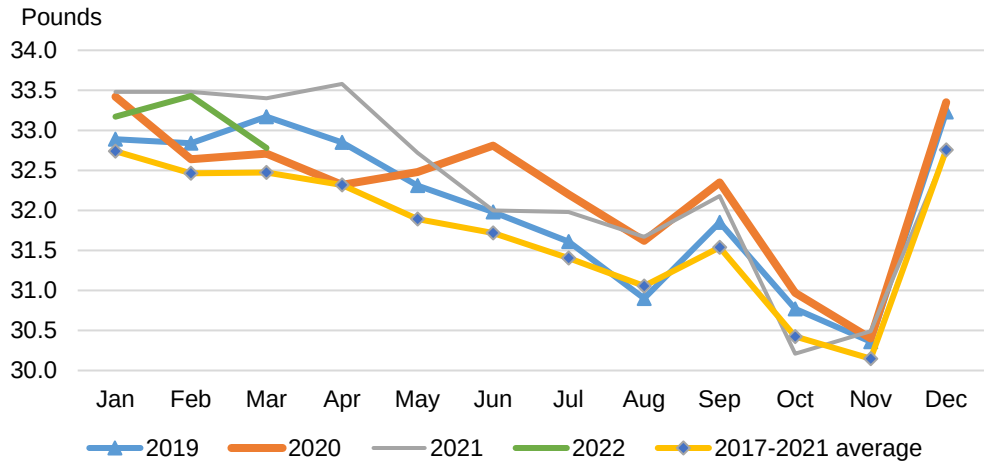
Source: USDA, Economic Research Service using data from U.S. Department of Commerce, Bureau of the Census.

First-quarter 2022 imports of eggs and egg products totaled 4.62 million dozen shell-egg equivalent, an 11-percent year-over-year increase. Given the expected impact of HPAI on domestic egg production, the 2022 imports are forecast at 45.1 million dozen shell-egg equivalent, a 147.9-percent increase from last year. As domestic production is expected to return to pre-HPAI levels, import volumes are expected to subdue in 2023. Hence, the 2023 imports of eggs and egg products are forecast at 28.5 million dozen shell-egg equivalent, a 36.8-percent decrease from 2022 forecast value.

HPAI Continues To Pressure Turkey Supplies

First-quarter turkey production totaled 1,374 million pounds, 1.2 percent below 2021 first-quarter production. This was 4 million pounds above the first-quarter production estimate made last month. March slaughter totaled 508 million pounds, which was higher than previously expected. Live slaughter weights for March averaged 32.78 pounds, a 1.9-percent decrease from February and a 1.9-percent decrease from March 2021. March poult placements were 14.3 percent higher from February but less than a 1-percent increase from March 2021.

Live slaughter weights

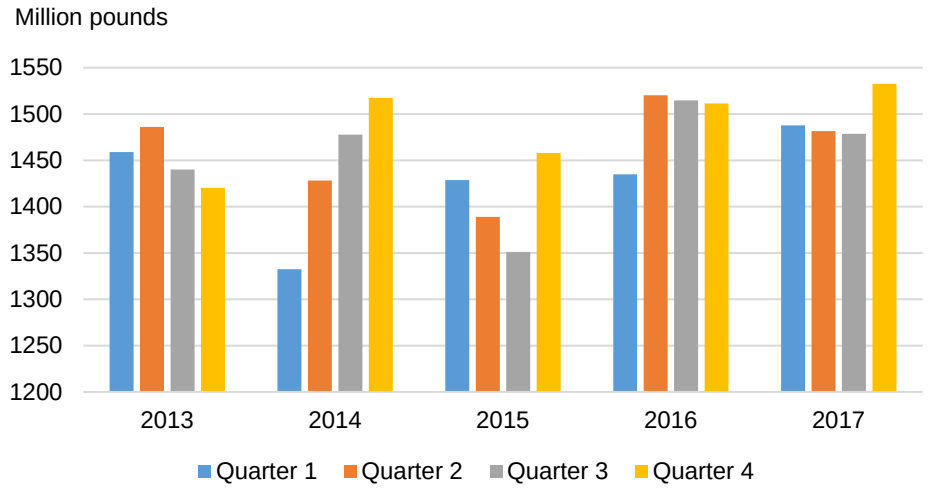


Source: USDA, National Agricultural Statistics Service.

Production forecasts were revised down for the rest of the year due to HPAI. With the current turkey depopulation rates, it is expected that production in quarters two and three will reflect these losses most, as was the case when HPAI hit the turkey industry in January–June 2015. Second quarter was revised down 40 million pounds to 1300 million pounds, and third quarter was revised down 45 million pounds to 1,325 million pounds. HPAI has also impacted turkey breeding farms. This is expected to delay the recovery of the industry because breeding farms provide birds for meat production farms. To date, 242,300 turkey breeders have been depopulated due to HPAI. For this reason, the fourth-quarter production forecast was revised down 30 million pounds to 1,360 million pounds. Turkey production in 2023 is forecast at 5,650 million pounds, which would be a 5.4-percent increase from 2022 and a 1.7-percent increase from 2021.

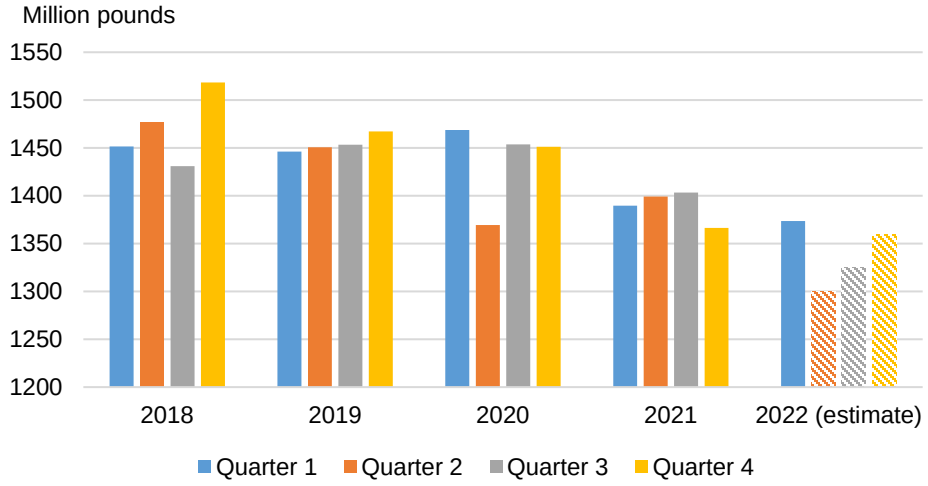
The ending stocks estimate for 2022 was revised down 15 million pounds to 150 million pounds. Given the impact of HPAI on production, it is expected that turkey supplies will be tighter than usual after the Thanksgiving and Christmas seasons. The ending stocks estimate for 2023 is 170 million pounds as increased production during the year supports higher stocks.

Quarterly turkey production (2013–2017): HPAI in 2015



Source: USDA, National Agricultural Statistics Service.

Quarterly turkey production (2018–2022): HPAI in 2022



Source: USDA, National Agricultural Statistics Service.

Turkey Trade Disrupted by Import Restrictions

The toll of HPAI on turkey supply is partially offset by the drop in export demand as countries set restrictions to protect their own poultry industries. First-quarter exports totaled 107 million pounds, a 17.6-percent drop from the first quarter in 2021. March exports totaled 37.6 million pounds, which was a 26.3-percent drop year-over-year. The annual trade forecast was revised down to 372 million pounds, with the expectation that heightened trade restrictions will continue as HPAI continues. Annual imports were increased 3 million pounds to 28 million pounds after first-quarter trade amounted to 6.9 million pounds, more than double the first-quarter imports in 2021. For 2023, the annual export forecast is 395 million pounds, which would be a 6.2-percent increase from 2022 but still a 28-percent decrease from 2021. The forecasts indicate that turkey

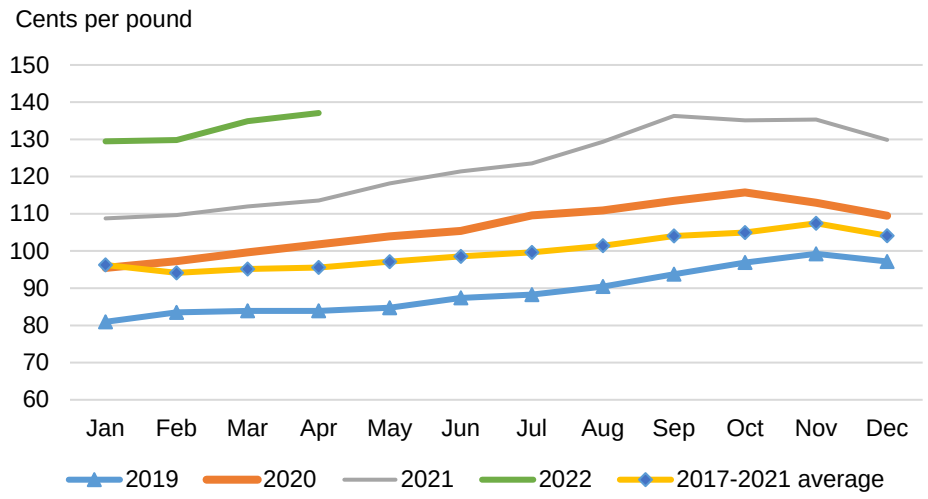
trade is not expected to fully recover next year because of tight supplies and high prices. Imports for 2023 are forecast at 28 million pounds.

Turkey Prices Revised Up Each Quarter

The April frozen whole-hen turkey price averaged 137.08 cents per pound, the highest recorded whole-hen frozen price. This is a 1.63-percent increase from March and a 20.72-percent increase year over year. The second-quarter price estimate was raised 5 cents to 140 cents per pound, the third-quarter price estimate was raised 7 cents to 145 cents per pound, and the fourth-quarter price estimate was raised 10 cents to 150 cents per pound. Prior to HPAI, turkey prices were high and egg sets and poult had begun increasing relative to 2021. However, with bird numbers affected by HPAI, it is not yet expected that production will expand and prices decline.

For 2023, prices are forecast to average 138 cents per pound, about 2 percent below 2022. With increasing production during the year, increased supplies and rebuilding stocks are expected to pressure prices during the year.

Monthly wholesale frozen hen price



Source: USDA, Agricultural Marketing Service.

Suggested Citation

Livestock, Dairy, and Poultry Outlook: May 2022, LDP-M-335, U.S. Department of Agriculture, Economic Research Service, May 18, 2022

U.S. red meat and poultry forecasts

	2017					2018					2019					2020					2021					2022					2023	
	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	II	III	IV	Annual	I	Annual
Production, million pounds																															
Beef	6,303	6,407	6,736	6,742	26,187	6,466	6,726	6,819	6,862	26,872	6,414	6,817	6,923	7,001	27,155	6,931	6,059	7,115	7,069	27,174	6,900	6,963	6,979	7,106	27,948	7,022	**7,080**	**7,125**	**6,615**	**27,842**	**6,510**	**25,950**
Pork	6,410	6,137	6,240	6,796	25,584	6,645	6,325	6,315	7,031	26,315	6,838	6,615	6,706	7,478	27,638	7,426	6,313	7,048	7,515	28,303	7,292	6,668	6,530	7,185	27,675	6,904	**6,490**	**6,555**	**7,090**	**27,039**	**6,995**	**27,365**
Lamb and mutton	37	36	35	37	145	39	39	37	39	153	37	40	36	36	149	35	36	34	33	138	35	36	32	35	138	31	**33**	**32**	**35**	**131**	**28**	**125**
Broilers	10,233	10,407	10,551	10,472	41,662	10,385	10,687	10,940	10,588	42,601	10,384	10,945	11,402	11,175	43,905	11,238	10,940	11,358	11,047	44,583	10,893	11,232	11,581	11,193	44,899	11,169	**11,350**	**11,650**	**11,250**	**45,419**	**11,225**	**45,675**
Turkeys	1,488	1,482	1,479	1,533	5,981	1,452	1,477	1,431	1,518	5,878	1,446	1,451	1,453	1,467	5,818	1,469	1,369	1,454	1,451	5,743	1,390	1,399	1,403	1,366	5,558	1,374	**1,300**	**1,325**	**1,360**	**5,359**	**1,385**	**5,650**
Total red meat and poultry	24,617	24,621	25,197	25,734	100,169	25,130	25,410	25,704	26,191	102,435	25,264	26,019	26,675	27,308	105,266	27,251	24,870	27,172	27,263	106,556	26,651	26,450	26,679	27,030	106,810	26,648	**26,401**	**26,840**	**26,460**	**106,379**	**26,287**	**105,340**
Table eggs, million dozen	1,928	1,934	1,953	1,997	7,811	1,952	1,987	2,024	2,079	8,043	2,047	2,056	2,046	2,111	8,260	2,050	1,957	2,008	2,051	8,066	1,982	1,957	1,982	2,050	7,971	1,973	**1,840**	**1,900**	**1,975**	**7,688**	**1,990**	**8,170**
Per capita disappearance, retail pounds 1/																															
Beef	14.1	14.2	14.4	14.3	57.0	14.0	14.5	14.4	14.4	57.3	13.9	14.7	14.5	14.7	57.8	14.6	13.5	15.5	14.5	58.2	14.5	14.9	14.6	14.8	58.9	15.0	**15.2**	**14.9**	**13.8**	**59.0**	**13.9**	**55.1**
Pork	12.4	11.8	12.4	13.5	50.2	12.6	12.2	12.4	13.8	51.0	13.0	12.4	12.8	13.8	52.1	13.1	11.5	13.2	13.9	51.7	13.0	11.8	12.3	14.0	51.1	13.1	**12.2**	**12.3**	**13.2**	**50.8**	**13.4**	**51.7**
Lamb and mutton	0.3	0.3	0.2	0.3	1.1	0.3	0.3	0.3	0.3	1.1	0.3	0.3	0.2	0.3	1.1	0.4	0.3	0.3	0.3	1.2	0.3	0.4	0.3	0.4	1.4	0.3	**0.3**	**0.3**	**0.3**	**1.3**	**0.3**	**1.3**
Broilers	22.4	22.9	23.2	22.5	91.1	22.7	23.4	23.6	22.9	92.6	22.4	23.8	24.6	23.7	94.5	24.2	23.7	24.4	23.4	95.8	23.5	24.3	25.0	23.8	96.5	23.7	**24.5**	**25.1**	**23.8**	**97.2**	**23.9**	**97.3**
Turkeys	3.7	3.7	4.0	5.0	16.5	3.5	3.8	3.9	4.9	16.2	3.4	3.7	4.0	4.8	15.9	3.6	3.5	3.9	4.7	15.7	3.4	3.6	3.8	4.5	15.3	3.4	**3.6**	**3.7**	**4.4**	**15.1**	**3.4**	**15.7**
Total red meat and poultry	53.3	53.3	54.7	56.0	217.3	53.4	54.5	55.1	56.8	219.8	53.4	55.4	56.4	57.8	223.0	56.3	52.9	57.7	57.2	224.2	55.2	55.4	56.4	57.8	224.8	56	**56.3**	**56.7**	**56**	**225.1**	**55.3**	**222.7**
Eggs, number	69.4	69.6	70.3	71.0	280.3	69.6	70.9	72.7	74.3	287.5	72.7	72.6	72.3	74.0	291.6	72.1	69.3	71.1	72.8	285.5	69.7	68.8	69.3	72.7	280.5	70.5	**65.6**	**68.1**	**70.7**	**274.8**	**70.8**	**289.0**
Market prices																															
Steers 5-area Direct, Total all grades, dollars/cwt	122.96	132.76	112.46	117.88	121.52	125.60	116.72	110.83	115.32	117.12	125.27	118.79	108.16	114.88	116.78	118.32	105.79	101.74	108.18	108.51	112.98	120.75	123.51	132.36	122.40	139.25	**140.00**	**136.00**	**145.00**	**140.06**	**150.00**	**153.25**
Feeder steers, Medium Frame No. 1, OK City, dollars/cwt	129.56	147.75	148.12	154.88	145.08	146.29	143.05	150.46	147.90	146.93	140.76	140.51	140.19	147.44	142.23	136.42	126.37	141.42	137.57	135.45	134.30	140.22	153.69	159.59	146.95	156.04	**159.00**	**166.00**	**170.00**	**162.76**	**168.00**	**198.25**
Cows, Live equivalent, Cutter 90% lean, 500 lbs and up, National, dollars/cwt	62.63	69.55	69.78	58.68	65.16	61.60	61.32	57.74	49.07	57.43	53.34	58.30	60.42	53.66	56.43	59.38	63.14	64.97	54.93	60.61	59.63	67.54	69.21	63.24	64.91	72.65	**86.00**	**87.00**	**74.00**	**79.91**	**85.00**	**101.25**
Choice/Prime slaughter lambs, National, dollars/cwt	142.34	167.94	172.40	136.92	154.90	136.83	154.86	147.95	134.30	143.49	136.23	156.16	154.93	150.99	149.58	159.12	N/A	N/A	164.31	161.72	165.42	211.79	256.86	233.61	216.92	225.00	**220.00**	**215.00**	**220.00**	**220.00**	**225.00**	**223.75**
Barrows and gilts, National base cost, 51-52% lean, live equivalent, dollars/cwt	49.73	51.70	55.59	44.89	50.48	49.12	47.91	43.90	42.77	45.93	40.67	57.95	50.08	43.11	47.95	42.52	38.96	40.50	50.75	43.18	55.71	80.92	76.15	56.36	67.29	65.55	**77.00**	**76.00**	**66.00**	**71.14**	**66.00**	**70.50**
Broilers, Wholesale, National composite, weighted average, cents/lb	88.5	104.7	94.9	86.1	93.5	95.7	115.1	93.7	86.7	97.8	94.0	97.7	82.0	80.6	88.6	83.5	67.0	66.7	75.7	73.2	84.0	104.4	105.4	110.9	101.2	135.1	**170.0**	**165.0**	**150.0**	**155.0**	**155.0**	**148.8**
Turkeys, National 8-16 lb hens, National, cents/lb	100.4	99.1	96.9	88.0	96.1	79.4	79.6	80.4	81.4	80.2	82.8	85.5	90.8	97.8	89.2	97.4	103.7	111.3	113.6	106.5	110.1	117.7	129.7	133.4	122.8	131.4	**140.0**	**145.0**	**150.0**	**141.6**	**135.0**	**138.0**
Eggs, Grade A large, New York, volume buyers, cents/dozen	80.0	74.7	102.1	147.0	100.9	179.6	124.4	120.8	125.6	137.6	107.3	69.7	81.9	117.2	94.0	133.1	119.6	89.0	107.2	112.2	127.8	94.2	120.1	131.8	118.5	170.8	**245.0**	**190.0**	**170.0**	**194.0**	**160.0**	**148.8**
U.S. trade, million pounds, carcass-weight equivalent																															
Beef and veal exports	653	680	746	781	2,859	731	801	828	799	3,160	700	790	788	749	3,026	769	605	759	819	2,951	796	873	911	867	3,447	**846**	**840**	**860**	**810**	**3,356**	**650**	**2,930**
Beef and veal imports	700	812	814	668	2,993	721	805	807	664	2,998	739	836	771	712	3,058	774	848	1,028	693	3,342	696	866	923	863	3,348	**985**	**890**	**890**	**780**	**3,545**	**700**	**3,200**
Lamb and mutton imports	80	58	57	57	252	80	66	70	57	273	80	73	53	66	272	102	67	62	70	302	69	93	100	103	364	**88**	**85**	**89**	**93**	**355**	**100**	**370**
Pork exports	1,432	1,426	1,230	1,544	5,632	1,515	1,521	1,298	1,542	5,877	1,445	1,535	1,515	1,826	6,321	2,021	1,773	1,627	1,859	7,280	1,927	1,907	1,544	1,653	7,030	**1,541**	**1,580**	**1,600**	**1,860**	**6,581**	**1,540**	**6,510**
Pork imports	264	281	283	287	1,116	279	270	245	248	1,042	259	227	232	227	945	206	220	226	252	904	247	260	308	364	1,180	**358**	**330**	**335**	**385**	**1,408**	**360**	**1,440**
Broiler exports	1,720	1,622	1,659	1,785	6,786	1,709	1,704	1,785	1,871	7,069	1,721	1,721	1,773	1,888	7,103	1,860	1,729	1,821	1,958	7,367	1,854	1,778	1,844	1,891	7,367	**1,866**	**1,800**	**1,830**	**1,880**	**7,376**	**1,870**	**7,465**
Turkey exports	133	148	168	173	622	153	147	141	170	611	147	166	159	167	639	139	126	143	164	571	130	142	138	139	549	**107**	**85**	**85**	**95**	**372**	**105**	**395**
Live swine imports (thousand head)	1,449	1,458	1,296	1,394	5,597	1,357	1,349	1,258	1,286	5,250	1,338	1,253	1,200	1,305	5,096	1,332	1,202	1,272	1,487	5,293	1,607	1,651	1,773	1,635	6,666	**1,654**	**1,635**	**1,675**	**1,725**	**6,689**	**1,660**	**6,695**

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 5/18/2022

Dairy forecasts by quarters, 2021–23

	2021				2022					2023	
	II	III	IV	Annual	I	II	III	IV	Annual	I	Annual
Milk cows (thousands)	9,503	9,442	9,381	9,448	9,381	9,400	9,405	9,405	9,400	9,400	9,400
Milk per cow (pounds)	6,119	5,914	5,909	23,948	5,998	6,170	5,980	5,970	24,120	6,240	24,420
Milk production (billion pounds)	58.1	55.8	55.4	226.3	56.3	58.0	56.2	56.1	226.7	58.7	229.5
Farm use	0.3	0.3	0.3	1.0	0.3	0.3	0.3	0.3	1.1	0.3	1.1
Milk marketings	57.9	55.6	55.2	225.2	56.0	57.7	56.0	55.9	225.6	58.4	228.4
Milk-fat (billion pounds milk equiv.)											
Milk marketings	57.9	55.6	55.2	225.2	56.0	57.7	56.0	55.9	225.6	58.4	228.4
Beginning stocks	18.1	20.0	17.9	15.6	14.3	16.3	17.6	15.8	14.3	12.9	12.9
Imports	1.8	1.8	1.7	6.5	1.3	1.7	1.8	1.8	6.6	1.3	6.6
Total supply	77.8	77.4	74.8	247.4	71.7	75.7	75.3	73.5	246.5	72.6	247.9
Exports	3.1	3.2	2.7	11.6	3.0	3.3	3.1	2.6	12.0	2.7	11.5
Ending stocks	20.0	17.9	14.3	14.3	16.3	17.6	15.8	12.9	12.9	15.4	13.6
Domestic use [1]	54.6	56.3	57.7	221.4	52.3	54.8	56.5	58.0	221.6	54.5	222.8
Skim solids (billion pounds milk equiv.)											
Milk marketings	57.9	55.6	55.2	225.2	56.0	57.7	56.0	55.9	225.6	58.4	228.4
Beginning stocks	11.6	12.0	11.3	10.9	11.1	11.8	12.2	11.3	11.1	11.0	11.0
Imports	1.5	1.4	1.5	5.8	1.5	1.5	1.5	1.5	5.9	1.5	6.0
Total supply	71.0	69.0	67.9	241.9	68.6	71.0	69.7	68.6	242.6	70.9	245.4
Exports	14.1	12.9	11.8	51.1	11.8	13.5	12.8	11.7	49.9	12.0	51.0
Ending stocks	12.0	11.3	11.1	11.1	11.8	12.2	11.3	11.0	11.0	12.5	11.7
Domestic use [1]	44.9	44.8	45.1	179.7	45.0	45.3	45.5	45.9	181.7	46.4	182.7
Milk prices (dollars/hundredweight) [2]											
All milk	18.67	18.00	20.77	18.53	24.93	26.90	25.20	25.90	25.75	24.40	23.55
Class III	17.95	16.32	18.07	17.08	21.25	24.45	23.15	22.05	22.75	20.85	20.50
Class IV	15.98	16.09	18.57	16.09	23.97	24.65	23.45	23.15	23.80	21.95	21.40
Product prices (dollars/pound) [3]											
Cheddar cheese	1.7250	1.6016	1.7609	1.6755	1.953	2.335	2.250	2.150	2.175	2.050	2.040
Dry whey	0.6358	0.5668	0.5888	0.5744	0.761	0.675	0.600	0.580	0.655	0.550	0.520
Butter	1.7952	1.7375	1.9297	1.7325	2.669	2.705	2.600	2.630	2.650	2.400	2.350
Nonfat dry milk	1.2256	1.2676	1.4613	1.2693	1.724	1.785	1.700	1.650	1.715	1.620	1.580

Totals may not add due to rounding.

[1] Domestic use for 2020 includes additional milk marketed but not processed.

[2] Simple averages of monthly prices. May not match reported annual averages.

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

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

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