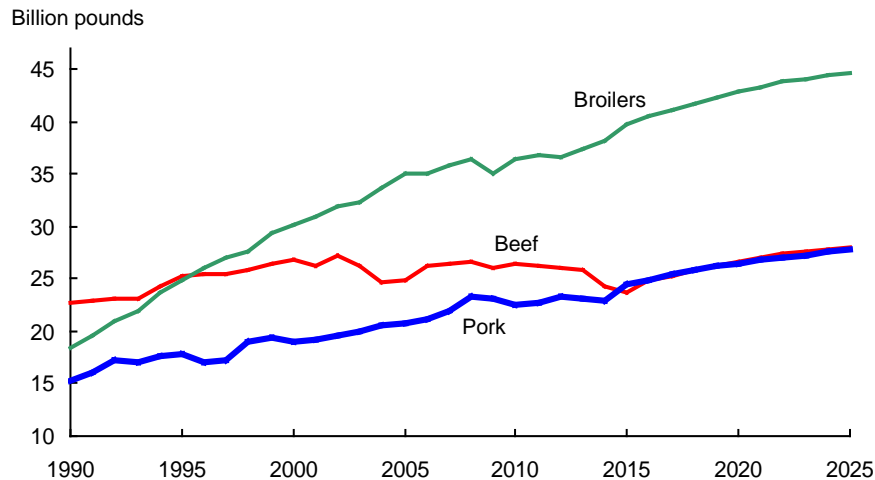


## U.S. Livestock

The U.S. livestock sector is projected to increase production over the next decade, an expansion that reflects several factors. Feed costs have fallen from recent highs and are projected to rise only moderately over the next 10 years. Also, demand for meats and dairy products in both the domestic market and for export is projected to be strong. As a result, total U.S. red meat and poultry production rises over the projection period. Milk production also increases over the next decade.

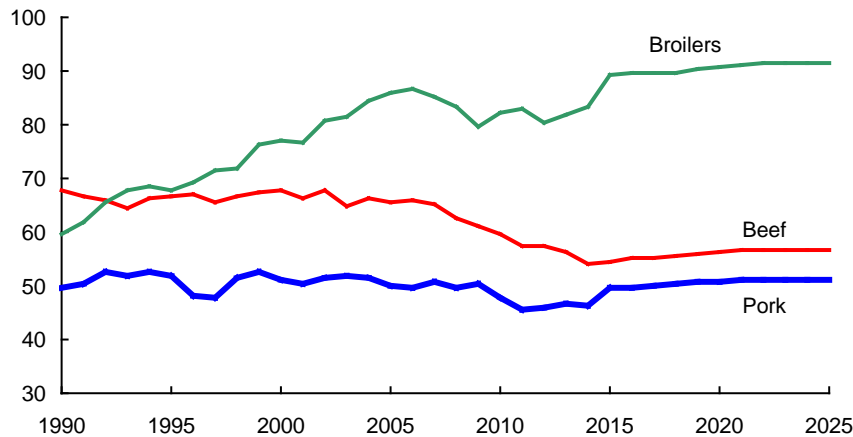
**U.S. red meat and poultry production**



- Lower feed prices than in the past several years raise producer returns and, coupled with improved pasture, provide incentives for herd expansion in the cattle sector and increases in beef production over the projection period. Beef cow numbers rise from 29.7 million head at the start of 2015 to more than 33 million toward the end of the projection period. The total cattle inventory rises from 89.8 million head to more than 97 million. Rising slaughter weights also contribute to the longer term increases in beef production.
- Lower feed costs and a rebound from the Porcine Epidemic Diarrhea virus (PEDv) led to a large rise in pork production in 2015. With demand projected to be strong over the next decade and only moderate projected increases in feed costs, producers are expected to increase farrowings. The number of pigs saved per litter also rises. Consequently, pork production rises over the projection period, with increases also supported by rising slaughter weights.
- Poultry production rises through the projection period, with both broiler and turkey meats projected to expand. Production growth is expected to come from both higher numbers of birds and higher average weights at slaughter.

### U.S. per capita meat consumption

Pounds per capita, retail weight



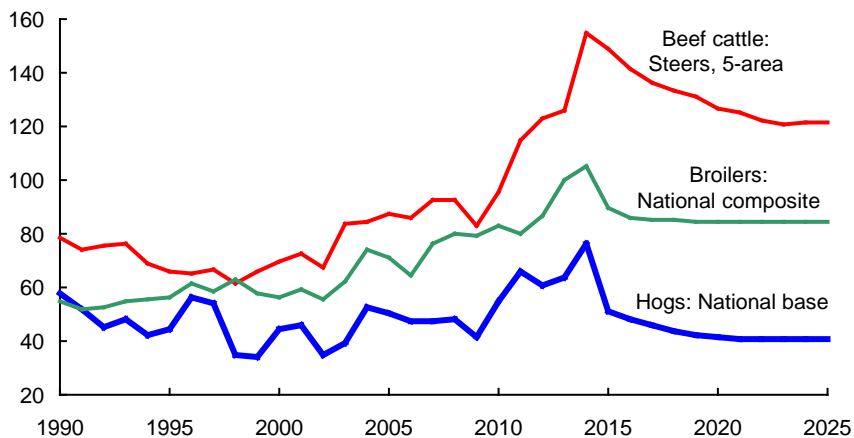
As production increases, consumption of red meats and poultry is projected to rise from about 211 pounds per person in 2015 to about 219 pounds toward the end of the projection period.

Although this level consumption is below those in 2004-07 of more than 221 pounds per person, it represents a rebound from a low of 202 pounds per person in 2014.

- Per capita beef consumption rises moderately over the projection period, as production gains are large enough to support increasing net exports as well as rising domestic use.
- Per capita pork consumption rebounded sharply in 2015 as production gains reflected producer response to improved returns and higher pigs per litter following losses due to PEDv. As with beef, for the remainder of the projections, gains in pork production are large enough to accommodate both increased domestic use as well as rising U.S. pork exports. Gains in per capita pork consumption slow toward the end of the projection period as production growth moderates.
- Poultry production rose sharply in 2015, although broilers and turkeys followed divergent paths—overall gains were led by increases for broilers while turkey production fell largely due to effects of highly pathogenic avian influenza (HPAI). U.S. exports were down sharply in 2015 for both broilers and turkeys as many countries placed restrictions on the imports of U.S. poultry products following the HPAI outbreak. As a result, 2015 U.S. per capita consumption rose for both broilers and turkeys, even with the decline in turkey output. Poultry production is projected to increase throughout the next decade, with per capita consumption also rising.

### Nominal U.S. livestock prices

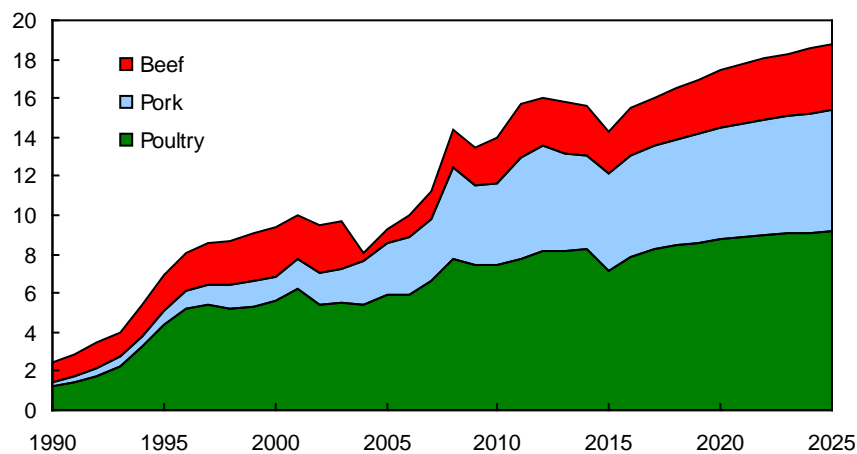
Dollars per hundredweight



- Nominal prices for beef cattle, hogs, and broilers are projected to decline through most of the next decade as production levels for overall meats rise.
- Livestock prices begin to level off and increase slightly toward the end of the projection period as production gains for beef, pork, and poultry slow and exports continue to grow.

## U.S. meat exports

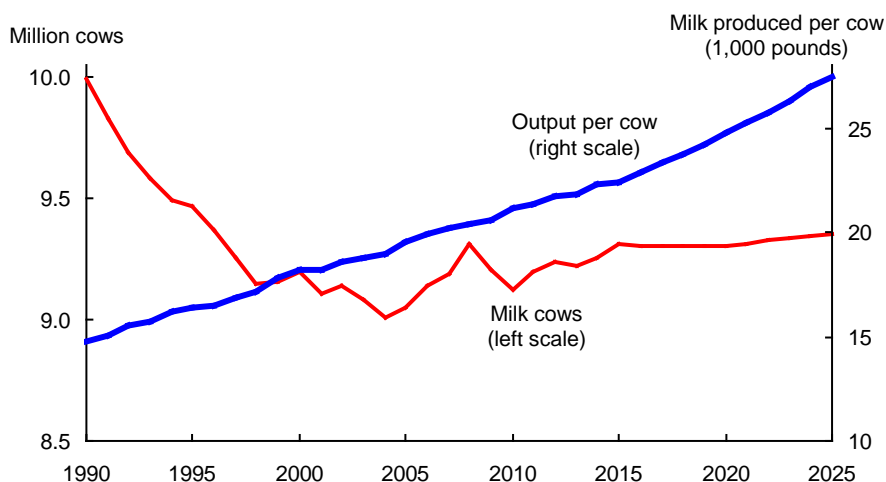
Billion pounds



The stronger U.S. dollar coupled with poultry trade restrictions related to HPAI led to a reduction in U.S. meat exports in 2015. However, U.S. red meat and poultry exports are projected to rise over the next decade as steady global economic growth supports foreign demand for selected meat cuts and parts from the large U.S. market.

- Most U.S. beef exports are high-quality, grain-fed beef that typically go to Mexico, Canada, and Pacific Rim nations. The United States is projected to remain the world's largest importer of beef, primarily of grass-fed, lean beef from Australia, New Zealand, and NAFTA countries for use in ground beef and processed products.
- U.S. pork exports are projected to rise over the next decade. Production efficiency in the U.S. pork sector enhances the sector's international competitiveness. Pacific Rim nations and Mexico are key markets for long-term growth of U.S. pork exports. Although Russia's recent ban on imports from several countries is assumed to end, Russia's pork imports are projected to continue to drop over the next decade, reflecting continued use of policies to facilitate expansion of its domestic pork industry and limit reliance on imports—these policies affect pork exports from the United States and Brazil the most.
- U.S. broiler exports rise through the projection period, with strong near-term gains reflecting a rebound from import restrictions due to HPAI. Major U.S. export markets include China and Mexico, but U.S. broiler exports also have been increasing to a number of other countries. Longer term gains in these markets reflect economic growth and increasing consumer demand. International demand for broilers also remains strong because of its lower cost relative to beef and pork. U.S. poultry producers continue to face competition from other major exporters, particularly Brazil. Over the projection period, most poultry exports from Thailand and China will continue to be fully cooked products, although Thai export gains also reflect the reopening of trade in uncooked chicken products from that country to the EU and Japan. As noted for pork, Russia is assumed to continue policies to support its domestic poultry industry—as a consequence, Russia's poultry imports are projected to continue to fall.

### U.S. dairy herd and milk production per cow



Milk production is projected to continue rising over the projection period. The long-term upward trend in output per cow continues. Strong domestic and export demand for dairy products combined with only moderate gains in projected feed costs provide favorable returns to dairy producers that also encourage a general expansion of milk cow numbers.

- Milk cow numbers are projected to decrease in 2016, remain about even through 2020, and then rise through the remainder of the projection period. Rising milk prices after 2018 and lower feed costs than in recent years give favorable returns to producers and provide economic incentives for this continued expansion.
- U.S. milk output per cow is projected to increase through the projection period, reflecting continued technological and genetic developments as well as efficiency gains resulting from consolidation in the sector.
- Domestic demand grows at a strong pace, with commercial use of dairy products rising faster than the growth in U.S. population over the next decade. Demand for cheese is expected to rise due to greater consumption of prepared foods and increased away-from-home eating. Butter demand is also expected to grow, in part due to the phase out of trans fats. A decline in per capita consumption of fluid milk products is expected to continue.
- Commercial exports of U.S. dairy products declined in 2015, mostly due to lower demand from China and greater competition from the EU as a result of the Russian trade ban. However, U.S. exports are projected to recover and expand over the next decade, led by greater exports of products that are high in nonfat milk solids, such as nonfat dry milk. Exports are projected to reach record levels on both a milk-fat and a skim-solids basis. Production increases in other major dairy exporting countries are expected to lag growth in global import demand.
- Nominal farm-level milk prices are projected to decline through 2018 as lower feed costs encourage increased production. Prices then rise faster than the general inflation rate over the remainder of the projection period, largely on the strength of export market gains.

Table 17. Per capita meat consumption, retail weight

Item	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
	<i>Pounds</i>											
Beef	54.1	54.4	55.3	55.2	55.6	56.1	56.3	56.6	56.7	56.7	56.8	56.8
Veal	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Pork	46.4	49.5	49.7	50.1	50.5	50.8	50.9	51.0	51.0	51.1	51.1	51.1
Lamb and mutton	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8
Total red meat	101.7	105.2	106.1	106.5	107.2	108.0	108.3	108.6	108.8	108.9	108.9	108.9
Broilers	83.3	89.1	89.6	89.5	89.8	90.2	90.7	91.1	91.3	91.4	91.5	91.5
Other chicken	1.3	1.2	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.5
Turkeys	15.7	15.8	16.2	16.7	17.0	17.1	17.2	17.3	17.3	17.3	17.3	17.3
Total poultry	100.3	106.1	107.1	107.5	108.1	108.7	109.3	109.7	110.0	110.2	110.2	110.3
Red meat & poultry	202.1	211.2	213.2	214.0	215.3	216.7	217.6	218.4	218.8	219.0	219.1	219.2

Table 18. Beef long-term projections

Item	Units	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning stocks	Mil. lbs.	584	591	600	560	560	560	560	560	560	560	560	560
Commercial production	Mil. lbs.	24,252	23,715	24,850	25,230	25,696	26,231	26,619	26,992	27,303	27,559	27,786	27,992
Change from previous year	Percent	-5.7	-2.2	4.8	1.5	1.8	2.1	1.5	1.4	1.2	0.9	0.8	0.7
Farm production	Mil. lbs.	68	65	64	65	65	65	65	65	65	65	65	65
Total production	Mil. lbs.	24,320	23,780	24,914	25,295	25,761	26,296	26,684	27,057	27,368	27,624	27,851	28,057
Imports	Mil. lbs.	2,947	3,432	3,045	2,950	2,975	3,000	3,050	3,100	3,150	3,200	3,250	3,300
Total supply	Mil. lbs.	27,851	27,803	28,559	28,805	29,296	29,856	30,294	30,717	31,078	31,384	31,661	31,917
Exports	Mil. lbs.	2,573	2,223	2,425	2,500	2,650	2,800	2,925	3,050	3,150	3,250	3,325	3,400
Ending stocks	Mil. lbs.	591	600	560	560	560	560	560	560	560	560	560	560
Total consumption	Mil. lbs.	24,687	24,980	25,574	25,745	26,086	26,496	26,809	27,107	27,368	27,574	27,776	27,957
Per capita, retail weight	Pounds	54.1	54.4	55.3	55.2	55.6	56.1	56.3	56.6	56.7	56.7	56.8	56.8
Change from previous year	Percent	-3.8	0.5	1.6	-0.1	0.6	0.9	0.5	0.4	0.3	0.1	0.1	0.0
Prices:													
Beef cattle, farm	\$/cwt	152.83	149.01	141.58	136.49	132.89	130.59	126.55	124.82	121.73	120.88	121.21	121.49
Calves, farm	\$/cwt	254.58	271.83	268.86	222.39	207.48	198.81	189.92	187.62	183.93	181.86	182.89	183.95
Steers, 5-area	\$/cwt	154.56	149.19	141.75	136.65	133.05	130.75	126.70	124.96	121.87	121.02	121.35	121.63
Feeder steers, Oklahoma City	\$/cwt	202.82	207.12	205.00	169.57	158.20	151.59	144.81	143.05	140.25	138.67	139.45	140.26
Feed price ratio:													
Beef cattle-corn	Ratio	34.3	40.3	38.8	37.9	36.4	35.3	34.2	33.7	32.9	32.7	32.8	32.4
Cattle inventory	1,000 head	88,526	89,800	92,900	95,200	95,700	96,200	96,600	96,900	97,100	97,200	97,300	97,400
Beef cow inventory	1,000 head	29,086	29,675	30,382	30,800	31,300	31,800	32,200	32,500	32,800	33,000	33,100	33,200
Total cow inventory	1,000 head	38,293	39,000	39,800	40,102	40,602	41,102	41,502	41,812	42,122	42,332	42,442	42,547

Note: Cwt = hundredweight.

Table 19. Pork long-term projections

Item	Units	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning stocks	Mil. lbs.	618	560	675	650	650	650	650	650	650	650	650	650
Commercial production	Mil. lbs.	22,843	24,508	24,925	25,359	25,807	26,201	26,510	26,786	27,041	27,306	27,551	27,794
Change from previous year	Percent	-1.5	7.3	1.7	1.7	1.8	1.5	1.2	1.0	1.0	1.0	0.9	0.9
Farm production	Mil. lbs.	18	18	18	18	18	18	18	18	18	18	18	18
Total production	Mil. lbs.	22,861	24,526	24,943	25,377	25,825	26,219	26,528	26,804	27,059	27,324	27,569	27,812
Imports	Mil. lbs.	1,008	1,106	1,000	1,015	1,025	1,035	1,045	1,055	1,065	1,075	1,085	1,095
Total supply	Mil. lbs.	24,487	26,192	26,618	27,042	27,500	27,904	28,223	28,509	28,774	29,049	29,304	29,557
Exports	Mil. lbs.	4,857	4,996	5,225	5,325	5,450	5,575	5,700	5,800	5,900	6,013	6,125	6,250
Ending stocks	Mil. lbs.	560	675	650	650	650	650	650	650	650	650	650	650
Total consumption	Mil. lbs.	19,070	20,521	20,743	21,067	21,400	21,679	21,873	22,059	22,224	22,386	22,529	22,657
Per capita, retail weight	Pounds	46.4	49.5	49.7	50.1	50.5	50.8	50.9	51.0	51.0	51.1	51.1	51.1
Change from previous year	Percent	-0.9	6.8	0.3	0.8	0.9	0.6	0.2	0.2	0.1	0.1	0.0	0.0
Prices:													
Hogs, farm	\$/cwt	77.10	53.71	51.31	48.47	45.70	44.16	43.42	42.90	42.64	42.52	42.52	42.63
National base, live equivalent	\$/cwt	76.03	50.82	48.50	46.08	43.52	42.06	41.35	40.86	40.61	40.50	40.50	40.60
Feed price ratio:													
Hog-corn	Ratio	17.3	14.5	14.1	13.5	12.5	11.9	11.7	11.6	11.5	11.5	11.5	11.4
Hog inventory,													
December 1, previous year	1,000 head	64,775	67,776	68,025	68,662	69,320	69,899	70,352	70,757	71,132	71,520	71,881	72,237

Note: Cwt = hundredweight.

Table 20. Young chicken long-term projections

Item	Units	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning stocks	Mil. lbs.	669	680	800	695	695	695	695	695	695	695	695	695
Federally inspected slaughter	Mil. lbs.	38,550	40,207	40,975	41,648	42,173	42,734	43,323	43,831	44,255	44,602	44,928	45,216
Change from previous year	Percent	1.9	4.3	1.9	1.6	1.3	1.3	1.4	1.2	1.0	0.8	0.7	0.6
Production	Mil. lbs.	38,138	39,777	40,537	41,202	41,721	42,277	42,860	43,362	43,781	44,125	44,447	44,733
Total supply	Mil. lbs.	38,924	40,582	41,453	42,014	42,534	43,091	43,675	44,178	44,598	44,943	45,266	45,553
Change from previous year	Percent	1.9	4.3	2.1	1.4	1.2	1.3	1.4	1.2	1.0	0.8	0.7	0.6
Exports	Mil. lbs.	7,301	6,426	6,975	7,334	7,510	7,652	7,801	7,914	7,990	8,053	8,112	8,141
Ending stocks	Mil. lbs.	680	800	695	695	695	695	695	695	695	695	695	695
Consumption	Mil. lbs.	30,943	33,356	33,783	33,985	34,329	34,744	35,179	35,569	35,913	36,195	36,459	36,717
Per capita, retail weight	Pounds	83.3	89.1	89.6	89.5	89.8	90.2	90.7	91.1	91.3	91.4	91.5	91.5
Change from previous year	Percent	1.8	7.0	0.5	-0.1	0.3	0.5	0.5	0.4	0.3	0.1	0.1	0.0
Prices:													
Broilers, farm	Cents/lb.	63.8	53.1	50.8	50.6	50.8	50.8	50.7	50.6	50.6	50.7	50.7	50.7
Broilers, National composite	Cents/lb.	104.9	89.5	85.8	85.0	85.0	84.7	84.5	84.3	84.3	84.5	84.5	84.5
Feed price ratio:													
Broiler-feed <sup>1</sup>	Ratio	4.7	4.9	5.1	5.2	5.1	5.0	5.0	5.0	4.9	4.9	4.9	4.9

<sup>1</sup>Broiler feed price based on 58 percent corn price and 42 percent soybean price, as used by USDA, National Agricultural Statistics Service.

Table 21. Turkey long-term projections

Item	Units	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning stocks	Mil. lbs.	237	193	190	250	275	275	275	275	275	275	275	275
Production	Mil. lbs.	5,756	5,570	6,010	6,212	6,350	6,454	6,541	6,613	6,674	6,731	6,784	6,831
Total supply	Mil. lbs.	6,022	5,804	6,236	6,498	6,661	6,765	6,852	6,924	6,985	7,042	7,095	7,142
Change from previous year	Percent	-0.4	-3.6	7.4	4.2	2.5	1.6	1.3	1.0	0.9	0.8	0.7	0.7
Exports	Mil. lbs.	805	537	740	786	813	833	850	860	868	875	882	888
Ending stocks	Mil. lbs.	193	190	250	275	275	275	275	275	275	275	275	275
Consumption	Mil. lbs.	5,024	5,077	5,246	5,437	5,573	5,657	5,727	5,789	5,843	5,892	5,938	5,979
Per capita	Pounds	15.7	15.8	16.2	16.7	17.0	17.1	17.2	17.3	17.3	17.3	17.3	17.3
Change from previous year	Percent	-1.3	0.3	2.6	2.9	1.8	0.8	0.5	0.4	0.2	0.2	0.1	0.0
Prices:													
Turkey, farm	Cents/lb.	73.2	81.3	79.0	77.2	75.5	74.2	73.6	73.1	73.0	73.1	73.3	73.6
Hen turkeys, National	Cents/lb.	107.6	117.1	114.0	111.4	108.9	107.1	106.2	105.5	105.3	105.5	105.7	106.2
Feed price ratio:													
Turkey-feed <sup>1</sup>	Ratio	5.8	8.0	8.6	8.7	8.4	8.1	8.0	7.9	7.8	7.8	7.8	7.8

<sup>1</sup>Turkey feed price based on 51 percent corn price, 28 percent soybean price, and 21 percent wheat price, as used by USDA, National Agricultural Statistics Service.

Table 22. Egg long-term projections

Item	Units	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Beginning stocks	Mil. doz.	23	23	23	22	21	20	20	20	20	20	20	20
Production	Mil. doz.	8,335	7,915	8,141	8,426	8,637	8,809	8,941	9,058	9,158	9,258	9,360	9,463
Change from previous year	Percent	2.3	-5.0	2.9	3.5	2.5	2.0	1.5	1.3	1.1	1.1	1.1	1.1
Imports	Mil. doz.	35	81	71	50	45	45	45	45	45	45	45	45
Total supply	Mil. doz.	8,393	8,019	8,235	8,498	8,703	8,874	9,006	9,123	9,223	9,323	9,425	9,528
Change from previous year	Percent	2.6	-4.5	2.7	3.2	2.4	2.0	1.5	1.3	1.1	1.1	1.1	1.1
Hatching use	Mil. doz.	981	993	1,005	1,017	1,028	1,037	1,047	1,057	1,065	1,071	1,077	1,082
Exports	Mil. doz.	394	323	350	375	400	403	406	409	412	415	418	421
Ending stocks	Mil. doz.	23	23	22	21	20	20	20	20	20	20	20	20
Consumption	Mil. doz.	6,995	6,680	6,858	7,084	7,255	7,414	7,533	7,637	7,726	7,817	7,910	8,005
Per capita	Number	263.0	249.3	254.1	260.6	265.0	268.9	271.3	273.1	274.4	275.8	277.2	278.7
Change from previous year	Percent	1.8	-5.2	1.9	2.6	1.7	1.5	0.9	0.7	0.5	0.5	0.5	0.5
Prices:													
Eggs, farm	Cents/doz.	125.8	171.0	153.2	130.5	112.5	103.5	99.0	94.5	91.8	90.9	90.0	90.0
New York, Grade A large	Cents/doz.	142.3	188.0	167.5	145.0	125.0	115.0	110.0	105.0	102.0	101.0	100.0	100.0
Feed price ratio:													
Egg-feed <sup>1</sup>	Ratio	11.0	18.7	17.8	15.5	13.2	11.9	11.4	10.8	10.4	10.3	10.1	10.1

<sup>1</sup>/ Egg feed price based on 75 percent corn price and 25 percent soybean price, as used by USDA, National Agricultural Statistics Service.



Table 23. Dairy long-term projections

Item	Units	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Milk production and marketings:													
Number of cows	Thousand	9,256	9,310	9,305	9,305	9,305	9,305	9,305	9,315	9,325	9,335	9,345	9,350
Milk per cow	Pounds	22,260	22,410	22,880	23,290	23,745	24,200	24,760	25,215	25,750	26,295	26,920	27,405
Milk production	Bil. lbs.	206.0	208.7	212.9	216.7	220.9	225.2	230.4	234.9	240.1	245.5	251.6	256.2
Farm use	Bil. lbs.	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9
Marketings	Bil. lbs.	205.1	207.7	211.9	215.7	219.9	224.2	229.4	233.9	239.1	244.6	250.7	255.3
Supply and use, milkfat basis:													
Beginning commercial stocks	Bil. lbs.	11.2	11.2	12.4	12.2	12.7	13.1	12.9	12.7	12.5	12.4	12.3	12.3
Marketings	Bil. lbs.	205.1	207.7	211.9	215.7	219.9	224.2	229.4	233.9	239.1	244.6	250.7	255.3
Imports	Bil. lbs.	4.3	5.9	5.8	5.2	4.9	4.7	4.6	4.5	4.5	4.5	4.5	4.5
Commercial supply	Bil. lbs.	220.6	224.8	230.1	233.1	237.5	242.0	246.9	251.1	256.1	261.5	267.5	272.1
Domestic commercial use	Bil. lbs.	196.9	203.6	208.6	208.9	212.2	217.0	222.0	226.5	231.1	236.4	242.1	246.2
Commercial exports	Bil. lbs.	12.4	8.8	9.4	11.5	12.2	12.1	12.2	12.1	12.6	12.8	13.1	13.6
Ending commercial stocks	Bil. lbs.	11.2	12.4	12.2	12.7	13.1	12.9	12.7	12.5	12.4	12.3	12.3	12.3
Supply and use, skim solids basis:													
Beginning commercial stocks	Bil. lbs.	11.7	13.1	13.4	13.6	13.2	13.3	13.4	13.4	13.5	13.5	13.6	13.7
Marketings	Bil. lbs.	205.1	207.7	211.9	215.7	219.9	224.2	229.4	233.9	239.1	244.6	250.7	255.3
Imports	Bil. lbs.	5.6	6.0	6.1	5.8	5.7	5.7	5.6	5.6	5.6	5.6	5.6	5.7
Commercial supply	Bil. lbs.	222.4	226.8	231.4	235.1	238.8	243.2	248.4	252.9	258.2	263.7	269.9	274.7
Domestic commercial use	Bil. lbs.	170.2	175.6	178.4	181.3	184.4	187.4	190.6	193.7	197.5	201.2	205.2	207.5
Commercial exports	Bil. lbs.	39.1	37.8	39.5	40.6	41.1	42.4	44.4	45.7	47.2	48.9	51.0	53.4
Ending commercial stocks	Bil. lbs.	13.1	13.4	13.6	13.2	13.3	13.4	13.4	13.5	13.5	13.6	13.7	13.8
Prices:													
All milk	\$/cwt	23.97	17.05	16.40	16.25	16.15	16.60	17.20	17.85	18.45	18.95	19.50	19.90
Cheese	\$/lb.	2.18	1.65	1.64	1.61	1.58	1.60	1.65	1.70	1.76	1.82	1.87	1.90
Butter	\$/lb.	2.14	2.03	1.90	1.58	1.48	1.52	1.58	1.64	1.64	1.65	1.67	1.67
Nonfat dry milk	\$/lb.	1.77	0.91	0.99	1.20	1.27	1.32	1.37	1.43	1.49	1.53	1.58	1.63
Dry whey	\$/lb.	0.65	0.38	0.30	0.35	0.36	0.37	0.40	0.42	0.45	0.47	0.49	0.53

Note: Cwt = hundredweight.

Totals may not add due to rounding.