

Economic Research Service

Situation and Outlook

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Tables will be released on January 30, 2017

The next Outlook Report release is February 15, 2017

Approved by the World Agricultural Outlook Board.

Livestock, Dairy, and Poultry Outlook

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Exchange Rate Dynamics May Create Headwinds for Trade with Mexico in 2017

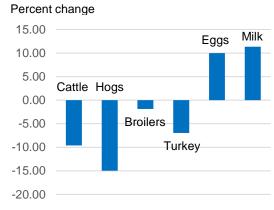
Recent depreciation of the Mexican peso could create a drag on U.S. animal product exports in 2017. In early January, the value of the peso fell almost 20 percent compared with its value in January 2016. Most recent U.S. export data shows that, on a volume basis, Mexico is the largest foreign destination for U.S. exports of pork, poultry (broilers, other chicken, and turkey), and dairy products (skim milk powder and cheese). Mexico is the third largest export market for U.S. beef, after Japan and South Korea. Lower U.S. prices from larger product supplies could, however, offset some of the negative exchange rate effects as the year unfolds. Prices of livestock and poultry are expected to be lower in 2017 compared with last year: cattle (-10 percent), hogs (-15 percent) and poultry (-2 percent for broilers, -7 percent for turkey). Lower livestock and poultry prices are likely to result in lower prices for both domestic and foreign consumers of beef, pork, and poultry. On the other hand, higher U.S. prices of eggs (+10 percent) and milk (+11 percent) over last year could weigh on exports to Mexico.

Pesos per U.S. dollar, monthly, 2013-2016



Source: Board of Governors of the Federal Reserve System.

2017 Livestock, dairy, and poultry price forecasts: percent change from 2016



Source: U.S Dept. of Agriculture, World Agricultural Outlook Board

Beef/cattle: Beef production is expected to be higher in 2016 due to a combination of higher slaughter rates and heavier carcass weights. Increased slaughter rates are expected to continue into 2017 as relatively large numbers of cattle on feed placed in the fourth quarter of 2016 are marketed in the first half of 2017. Prices across the cattle complex are forecast lower in 2017.

Dairy: With recent price increases for all major dairy products and expected strength in demand, the all-milk price forecast for 2017 is \$17.60-\$18.40 per cwt, an increase from \$16.85-\$17.65 forecast last month.

Pork/hogs: Pork production is expected to increase more than 5 percent in 2017 over production last year. Hog prices are forecast to fall 15 percent, on average, reflecting abundant availability throughout the year. The lower pork prices from increased production are expected to drive U.S. pork exports to 5.4 billion pounds, 4 percent higher than shipments in 2016.

Poultry: Broiler and turkey production was slightly lowered for the fourth quarter of 2016, while broiler production was increased for the first quarter of 2017. Expected broiler and turkey exports for 2016 were lowered on weaker-than-expected data for November. The forecasts for 2017 prices were increased slightly for broilers and lowered for turkey. For 2017, egg and product exports were increased 30 million dozen, largely due to an outbreak of avian influenza in Korea, and the first-quarter egg price was increased.

2016 Beef Production Bolstered by Increased Slaughter and Higher Dressed Weights

Commercial beef production in 2016 is estimated about 6 percent above that of 2015. This is due to a combination of increased slaughter and slightly higher dressed weights. Increased slaughter rates are expected to continue into 2017 as the placement of cattle on feed is expected to remain above year-earlier numbers through most of 2017. The timing of the placement during the first part of 2017 will likely be conditioned by the availability of winter forage and the degree to which backgrounders utilize winter wheat pasture for graze-out. USDA's semi-annual *Cattle* report will be released on January 31, providing an indication of the degree to which the herd expanded during 2016 and the availability of cattle for placement during 2017.

Federally inspected cattle dressed weights averaged 843 pounds in November. Average dressed weights have increased every year for the last 5 years, and since 2011, have been up more than 9 percent (see chart). However, the rate of increase slowed in 2016, with all-cattle dressed weights through November 2016 averaging about the same as year-earlier weights for the same period. Heifer weights increased during this period, but steer weights and cow weights were lower.

Cattle dressed weights have increased more than 9 percent since 2011



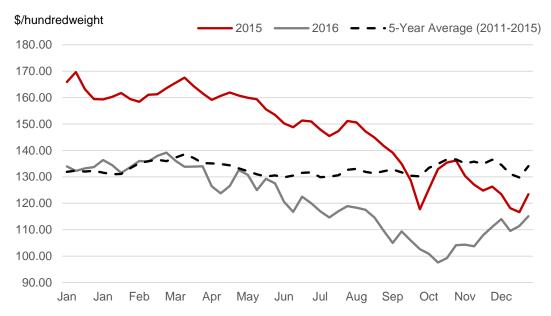
Source: U.S. Dept. of Agriculture, Agricultural Marketing Service.

Fed Cattle and Beef Prices Rebound from Lows for the Year

After declining for most of 2016 and bottoming at just under \$100.00 per cwt in late October, fed cattle prices have seen a slight resurgence, with a jump in the 5-area fed steer price in late December to \$118.00 per cwt (see chart). Fourth-quarter 2016 5-area all grade fed steer prices came in at \$107.69 per cwt, with the annual forecast averaging \$120.86. However, fed steer price increases are expected to experience headwinds during the first half of 2017, primarily due to the abundant supply of fourth-quarter cattle on feed and expected higher year-over-year marketings during the first half of the year. First-quarter

2017 5-area all grade fed steer prices are forecast to average \$112 to \$116.00 per cwt, with prices weakening during the rest of the year.

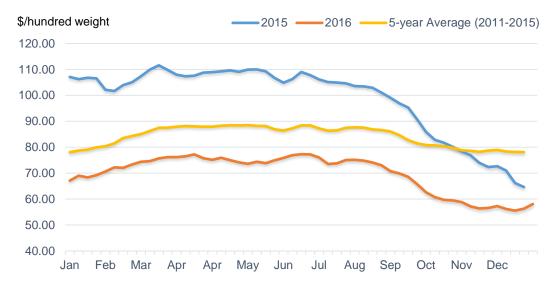
5-area all grade fed steer prices recovered slightly in fourth-quarter 2016



Source: U.S. Dept. of Agriculture, Agricultural Marketing Service.

Cutter-cow prices have seen sharp declines and, in 2016, have remained well below 2015 levels and below the 5-year average (see chart). The live equivalent of the 90-percent lean, 500-plus-pounds carcass fell below \$60 per cwt for most of November and December. Fourth-quarter live equivalent of the 90-percent lean, 500-plus-pounds price averaged \$57.75, down more than \$15 from the third quarter. Like fed cattle prices, cutter-cow prices are expected to remain under pressure well into 2017 due to the expected increase in the supply of animals available to be marketed. First-quarter 2017 live equivalent of the 90-percent lean, 500-plus-pounds price is forecast at \$61-\$63 per cwt.

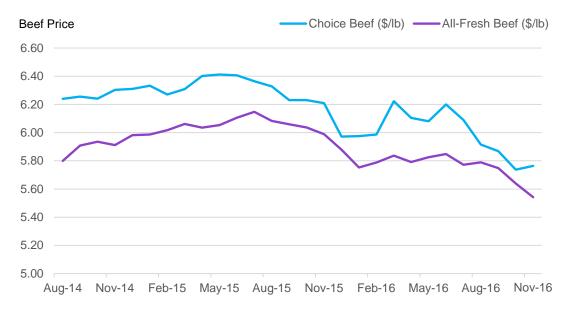
Cutter-Cow live equivalent 90% lean, 500 lbs and up, below 5-year average



Source: U.S. Dept. of Agriculture, Economic Research Service.

Though retail prices tend to be sticky, lower cattle prices weighed heavily on the retail market during fourth-quarter 2016, pushing it downward (see chart below). The November Choice retail beef price was estimated at \$5.76 per pound, 20 cents below the third-quarter average. Prices are likely to decline during 2017, with weaker cattle prices and large supplies of competing meat. First-quarter 2017 Choice retail prices are forecast in the mid-\$5.70s per pound.

Retail beef prices declined during the second half of 2016



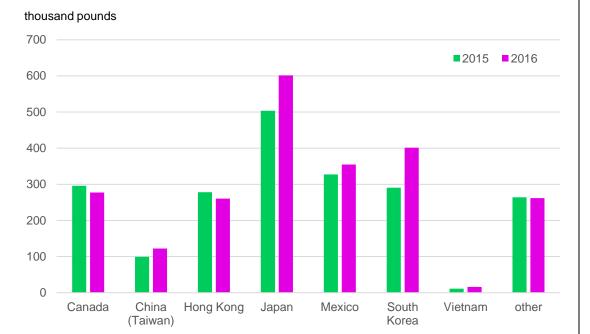
Source: U.S. Dept. of Agriculture, Economic Research Serice. Research Services.

Beef/Cattle Trade

November U.S. Beef Exports Strong

Through November, U.S. beef exports were 11 percent above year-earlier levels, boosted by increased domestic supply and a relatively weak U.S. dollar for the first three quarters of 2016. Much of the increase in U.S. exports has been to Asian trading partners, namely, South Korea (+38 percent), Japan (+19 percent), Taiwan (+23 percent), and Vietnam (+44 percent). Exports to Mexico were also 8 percent higher. Exports to Canada and Hong Kong were 6 percent lower for each country. U.S. beef export totals for 2016 are expected at 2.519 billion pounds, about 11 percent above year-earlier levels. Incredibly strong November shipments, which likely continued to persist through most of December, are the main drivers of this increase. Exports for 2017 are expected to increase to 2.64 billion pounds, largely due to continued robust export sales to Asian trading partners. However, for the last 2 months of 2016, the U.S. currency appreciated considerably relative to some of its trading partners. Continued strength in the U.S. dollar could dampen opportunities for expanded trade in 2017, but may be partly offset by generally softer U.S. beef prices and tighter competing supplies from Australia.

November through November U.S. beef exports to major trading partners, 2015 and 2016

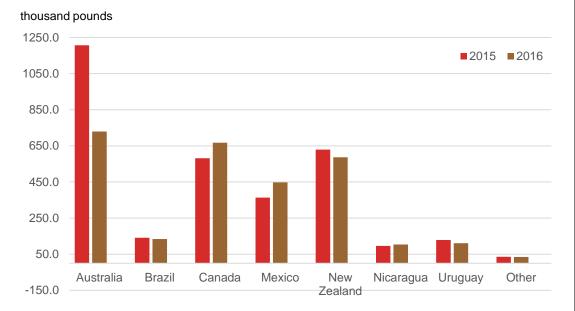


Source: U.S. Dept of Agriculture, Economic Research Service.

U.S. Beef Imports Forecast Lower

U.S. beef imports through November were 12 percent below year-earlier levels. Although above 2015, fourth-quarter shipments declined from the third quarter due to tighter supplies of imported processing-type beef and higher domestic supplies. Through November, imports from Australia dropped 40 percent. Some of this decline could be attributed to Australia's tighter cattle supplies and higher U.S. production levels. Imports from Uruguay also declined 14 percent. Some of the import loss from Australia was made up with increased imports from the North American trading partners—Canada (+15 percent) and Mexico (+23 percent). U.S. beef import totals for 2016 are expected at 3.01 billion pounds or 11 percent below year-earlier levels. Imports for 2017 are expected to decrease further to 2.70 billion pounds, largely due to the expected tighter supplies from Oceania and an increase in domestic supplies.

November through November U.S beef Imports to major trading partners, 2015 and 2016



Source: U.S. Dept. of Agriculture, Economic Research Service

Live Cattle Imports and Exports Higher

Although imports through November 2016 remain below 2015, November feeder cattle imports, were above year-earlier levels for the first time this year. The increase reflects higher imports from Mexico as November imports from Canada were below 2015. The 2016 forecast was raised to 1.70 million head. The cattle import forecast for 2017 was also raised to 1.65 million head.

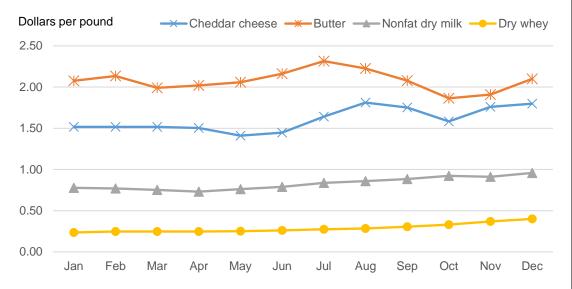
Cattle exports for 2016 were also raised to 65,000 head. November turned out to be a stellar month, recording the highest live cattle exports in 3 years. Live trade is primarily to North America, but 500 head were also exported to other markets.

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Recent Developments in Dairy Markets

Wholesale domestic prices for all major dairy products increased from November to December. The monthly average butter price rose the most, from \$1.909 to \$2.100 per pound; the butter price typically declines from November to December. December prices for cheese, nonfat dry milk (NDM), and dry whey were \$1.799, \$0.958, and \$0.399 per pound, respectively—the highest monthly prices of the year.

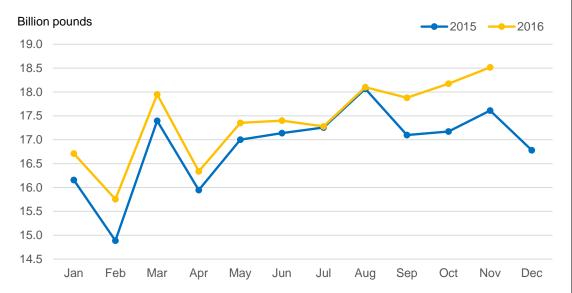
Domestic wholesale dairy product prices in 2016



Source: U.S. Dept. of Agriculture, Agricultural Marketing Service (averages used in Federal milk order price formulas).

Robust domestic demand likely contributed to the uptick in product prices. In November, domestic commercial disappearance was substantially higher than November 2015 for butter (3.8 percent), NDM (4.5 percent), American cheese (9.9 percent), and Other-than-American cheese (3.5 percent). November year-over-year commercial disappearance for milk in all products increased by 5.1 percent on a milk-fat milk-equivalent basis and 3.8 percent on a skim-solids milk-equivalent basis.

Domestic commercial disappearance of milk in all products, milk-fat, milk-equivalent basis



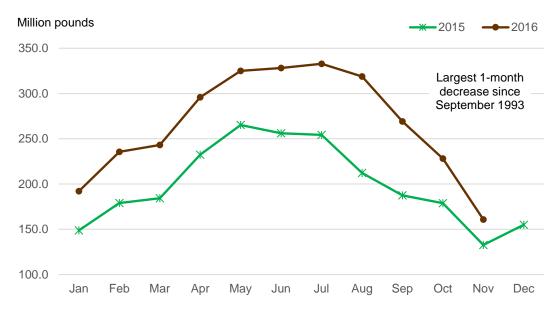
Sources: U.S. Dept. of Agriculture: National Agricultural Statistics Service, Farm Service Agency, Foreign Agriculture Service, Agricultural Marketing Service, and Economic Research Service calculations; and U.S. Department of Commerce, Bureau of the Census.

U.S. milk production continued to increase, totaling 17.1 billion pounds in November, up 2.4 percent from November 2015. Milk per cow averaged 1,829 pounds per head, 39 pounds above November 2015. Milk cows were 9.339 million head, 17 thousand more than November 2015 and 4 thousand more than October 2016.

November exports on a milk-fat basis were 870 million pounds, an increase of 64 million pounds from October. Notably, since August 1, Canada has allowed temporary supplementary imports of butterfat products and cream (in addition to imports usually allowed under tariff-rate quotas) in order to alleviate shortages. U.S. exports of cream with more than 10-percent milk fat rose from 1.2 million gallons in October to 2.0 million gallons in November, with about 90 percent of the exports to Canada. Exports of butter in November were relatively strong at 5.1 million pounds, with exports to Canada comprising 60 percent of the total. Exports on a skim-solids basis were 3.460 billion pounds in November, a decline of 107 million pounds from October, but 674 million higher than November 2015.

With robust domestic use and relatively strong exports, stock levels fell significantly from October to November. Butter ending stocks decreased by 67 million pounds, the largest 1-month fall since September 1993, a time when most butter stocks were owned by the U.S. Government. November ending stocks of dairy products on a milk-fat basis were 13.7 billion pounds, a decline of 1.8 billion from October but higher than November 2015 by 0.9 billion pounds. November stocks on a skim-solids basis were 14.3 billion pounds, 0.6 billion less than October but 0.6 billion pounds above November 2015.

Butter ending stocks



Source: U.S. Dept. of Agriculture, National Agricultural Statitstics Service.

International Outlook for Dairy Markets

Milk production of the top five major exporting countries combined (Argentina, Australia, EU, New Zealand, and the United States) is expected to grow at a modest rate of 1 percent in 2017. While U.S. milk production is expected to grow about 2 percent in 2017, growth rates of 0 percent and 1 percent are expected for the EU and New Zealand, respectively.

The United States is expected to face strong competition from the European Union (EU) for cheese exports in 2017. After a setback in 2014 and 2015 due to a Russian trade ban, EU cheese exports are expected to total 1.808 billion pounds in 2016 and are forecast to reach a record 1.819 billion pounds in 2017. A key issue facing the United States' export competitiveness with the EU is the strong dollar compared to the euro. For more information, see *Dairy: World Markets and Trade*, by USDA Foreign Agricultural Service, at https://www.fas.usda.gov/data/dairy-world-markets-and-trade.

Expectations for 2016

Although 2016 is over, fourth-quarter and annual supply and use numbers in this report reflect interagency committee expectations because data for December are not yet available. Expected annual milk production is raised slightly to 212.5 billion pounds, as the expected number of milk cows in the fourth quarter has been raised by 5 thousand head. For the year, milk cows are expected to average 9.330 million head and milk per cow is expected to be 22,770 pounds per head.

Expectations for imports are unchanged from last month's forecasts on both milk-fat and skim-solids bases. Due to recent strength in exports, expectations for fourth-quarter exports are increased by 0.3 billion pounds on a milk-fat basis and 0.2 billion pounds on a skim-solids basis. For the year, exports are expected to be 9.1 billion pounds on a milk-fat basis and 38.9 billion pounds on a skim-solids basis.

Domestic use for 2016 on a milk-fat basis is expected to be 209.4 billion pounds, 0.4 billion pounds higher than last month's forecast. On a skim-solids basis, domestic use is expected to be 178.6 billion pounds, 0.6 billion pounds lower than last month. Ending stocks on a milk-fat basis are expected to be 13.4 billion pounds, 0.6 billion pounds lower than forecast last month. On a skim-solids basis, ending stocks are expected to be 14.3 billion pounds, 0.5 billion pounds higher than last month.

While 2016 supply and use data are estimates, actual data are available for dairy product and Federal order milk-price averages. For 2016, annual product prices for butter, cheese, NDM, and dry whey are \$2.078, \$1.605, \$0.829, and \$0.288 per pound, respectively. Class III and IV milk prices for the year are \$14.87 and \$13.77 per cwt, respectively. The average all-milk price for 2016, which is an estimate since the December price has not yet been published, is expected to be about \$16.20 per cwt.

Dairy Forecasts for 2017

The feed price outlook is changed little from last month's forecast. For 2016/17, the corn price forecast is \$3.10-\$3.70 per bushel (an increase of 5 cents on both ends of the range), and the soybean meal price forecast is unchanged at \$305-\$345 per short ton. The alfalfa hay price fell from \$135 per short ton in October to \$130 in November.

The forecast for milk cows is raised by 5 thousand head to 9.365 million for 2017, as higher expected milk prices and relatively low feed costs are expected to encourage greater expansion of the herd. Similarly, the forecast for milk per cow is raised to 23,185 pounds per head, an increase of 15 pounds. These changes result in a milk production forecast of 217.1 billion pounds for the year, 0.3 billion pounds higher than forecast last month.

On both milk-fat and skim-solids bases, 2017 forecasts for imports are unchanged from last month, at 7.0 billion and 6.2 billion pounds, respectively. For exports, small changes have been made. The export forecasts are 8.3 billion pounds on a milk-fat basis (-0.1 billion) and 40.2 billion pounds on a skim-solids basis (+0.1 billion).

Based on recent commercial disappearance data and a strengthening economy, the 2017 domestic use forecast has been raised from last month's forecast to 215.0 billion pounds on a milk-fat basis (+0.2 billion) and to 183.5 billion pounds on a skim-solids basis (+1.0 billion). Ending stock forecasts for 2017 are lowered to 13.2 billion pounds on a milk-fat basis (-0.5 billion) and 12.9 billion pounds on a skim-solids basis (-0.3 billion).

With higher expected demand, 2017 dairy product price forecasts have been raised for butter, cheese, NDM, and dry whey to \$2.095-\$2.205, \$1.675-\$1.755, \$0.990-\$1.050, and \$0.415-\$0.445 per pound, respectively. Lower expected beginning stocks on a milk-fat basis will also support higher butter prices. With higher dairy product prices, the Class III and IV price forecasts have been raised to \$16.35-\$17.15 and \$15.25-\$16.15 per cwt, respectively. The all-milk price forecast has been raised to \$17.60-\$18.40 per cwt, an increase from \$16.85-\$17.65 forecast last month.

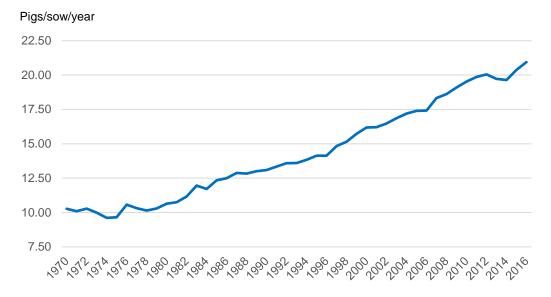
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December Quarterly Hogs and Pigs Report Shows Robust Productivity Gains in 2016

The *Quarterly Hogs and Pigs* report issued by USDA on December 23 showed the highest hog inventory since 1943, and the highest recorded breeding herd productivity. The inventory of all hogs and pigs was 71.5 million head, 4 percent higher than numbers for the same period a year ago. Litter rates for the September-November pig crop were record-high, averaging 10.63 pigs per litter, compared with 10.53 in September-November 2015. This breaks the record established in the June-August quarter of 2016.

It is interesting that the September-November 2016 pig crop—derived from record litter rates and farrowings that were 4 percent higher than a year ago and 115-thousand head more than producers indicated in the September report—did not yield the highest-ever pig crop; the March-May pig crop of 1970 holds that record. At 32.355 million head, that crop was 22 thousand head higher than the November-September 2016 pig crop. However, enormous productivity gains have been achieved in the last 46 years by the U.S. hog industry. The 1970 record reflects 4.389 million sows farrowing with 7.37 pigs per litter, but only fractionally fewer pigs were produced this year with almost 31 percent fewer sows farrowing. The hog industry often uses the pigs-per-sow-per year to measure productivity gains. That metric is pictured below. Since 1970, the number of pigs produced by 1 sow in 1 year has more than doubled, from 10.26 pigs in 1970 to 20.95 in 2016.

Pigs per sow per year, 1970-2016

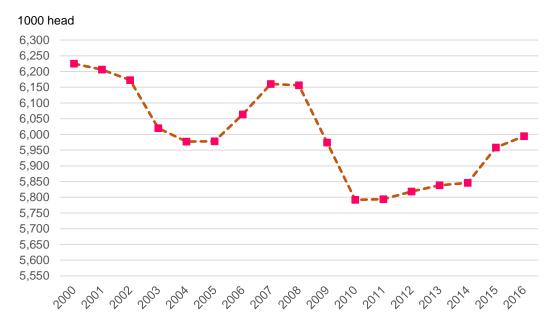


Source: National Agricultural Statistics Service. U.S. Dept. of Agriculture.

Record Hog Production Foreshadows Lower Hog Prices in 2017

Increased hog inventories reported in the December *Hogs and Pigs* reflect industry expansion that has been underway since 2011. Compared with earlier in the decade, breeding inventory growth accelerated in 2015 and 2016, enabled by strong profitability in 2014 and expectation of expanded slaughter capacity in 2017.

Average breeding inventory, 2000-2016



Source: National Agricultural Statistics Service, U.S. Dept. of Agriculture.

The 4 percent higher September-November pig crop, combined with 1-percent year-over-year increases in first-half farrowing intentions, points to significantly higher pork production in 2017. Even with assumptions for modest gains in dressed weights, pork production in 2017 is expected to exceed 26.2 billion pounds, about 5.1 percent higher than production last year. By quarter, production is forecast at about 6.4 billion pounds in the first, second, and third quarters (3.6 percent, 6.8 percent, and 5.2 percent higher than in the same periods of 2016, respectively), and almost 7 billion pounds (4.9 percent higher than a year earlier) in the fourth quarter. Hog prices are expected to reflect very large numbers available throughout 2017. Prices of 2017 live equivalent 51-52-percent lean hogs are expected to average \$38-\$41 per cwt, 15 percent below average prices last year. First-quarter prices are expected to average \$39-\$41 per cwt, 10 percent lower than in the same period last year. Second-quarter price forecasts of \$38-\$40 cwt average 27 percent below the second quarter of 2016. Third-quarter price forecasts of \$41-\$45 per cwt average 13 percent below a year earlier, and expected fourth-quarter prices of \$34-\$36 fall 5.5 percent below prices of fourth quarter of 2016.

Iowa State University's calculated break-even price (live, per cwt) averaged in the mid-\$40s in 2016. Slightly lower USDA forecasts for 2017 corn and soybean meal, together with hog prices forecast to average \$38-\$41 per cwt this year, suggest that, at least on paper, most hog producers will struggle to break even in 2017.

November Exports Record-High

November pork exports, at 510 million pounds, were the highest since the United States began reporting data under the Harmonized Tariff Schedule in 1989. The 10 largest U.S. pork export markets in November 2016 are summarized below. Fully one-third of the exports went to Mexico. U.S. trade data indicate that a large part of shipments to Mexico were classified under tariff codes carrying ham/shoulder descriptions. It is notable that heavy shipments to Mexico took place in November despite the sharp depreciation of the peso—almost 6 percent from October to November—providing potential evidence that

low prices can offset some of the negative effects from exchange rate dynamics to support exports.

Lower prices from large pork supplies are expected to drive U.S. pork exports to 5.44 billion pounds in 2017, 4 percent greater than in 2016.

U.S. pork exports: Volumes shipped to the 10 largest foreign destinations, November 2015, 2016.

	Country	Exports November 2015	Exports November 2016	Percent change		
		(mil. lbs)	(mil. lbs)	(2016/2015)		
	World	432	510	18.0		
1	Mexico	138	169	22.7		
2	Japan	96	117	21.4		
3	Canada	48	49	2.7		
4	China\Hong Kong	43	43	-0.2		
5	South Korea	39	40	1.2		
6	Colombia	10	20	104.7		
7	Australia	12	14	13.9		
8	Honduras	7	9	32.0		
9	Chile	3	8	143.9		
10	Dominican Republic	6	6	9.5		

Source: U.S Dept. of Agriculture, Economic Research Service.

Per Capital Pork Disappearance in 2017 Likely the Highest in More Than 10 Years

After accounting for 5.1-percent increases in pork production, 4 percent higher exports, steady pork imports, and slightly higher cold stocks (as a proportion of pork production), per capita pork disappearance in 2017 is expected to be 51.8 pounds, almost 2 pounds higher than last year and the highest since 2003. The ERS composite retail pork value, which will likely end up averaging in the mid-\$3.70s in 2016, is expected to average in the mid \$3.50s per pound in 2017, in response to greater pork availability.

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Poultry

Broiler Industry

Preliminary broiler production data indicated slightly lower December production than previously forecast, leading the fourth-quarter estimate to be lowered 25 million pounds. First-quarter 2017 production was slightly increased due to recent strong hatchery data and an apparent recovery in bird weights during the fourth quarter.

Exports in November were lower than expected. The broad trade-weighted index for the U.S. dollar reached its highest levels in November and may have been a contributing factor in the slower-than-expected export growth. In late December, the dollar stood just short of its highest level since the broad trade-weighted index series started in 1995. Expectations for 2016 exports have been lowered 40 million pounds.

The export forecast for 2017 remained unchanged. There is uncertainty on the export demand effects of avian influenza outbreaks in several important European and Asian countries, including The Netherlands, France, Germany, Japan, and South Korea. The United States may experience higher export demand from markets such as South Africa and the Philippines, where trade restrictions have reportedly been put in place.² It is not yet clear to what extent this will occur, since many trade restrictions may be applied only to the regions experiencing an outbreak, and unaffected regions in the same vicinity may continue exporting.

Weekly prices for whole broilers (national composite) increased slightly above expectations as prices remained above 2015 levels for the last 8 weeks of the year and reached 87 cents per pound for the week ending January 13. The first-quarter forecast was increased slightly to 79-83 cents per pound, and the 2017 forecast is now 80-86 cents per pound.

Weekly prices for boneless/skinless breast meat remained below a dollar per pound throughout December as the typically lower seasonal pricing held. The December price for breasts with rib meat atypically outperformed the boneless/skinless variety by 5 cents, whereas a spread in the opposite direction is far more common. The favorable December price spread for boneless/skinless breasts has been declining for more than 10 years.

Turkey Industry

Preliminary turkey production data indicated slightly lower December production than previously forecast, leading the fourth-quarter estimate to be lowered 10 million pounds. Expectations for 2016 year-ending turkey stocks in cold storage were increased to 245 million pounds due to higher-than-expected stocks as of November 30. This would be the highest year-ending stock figure since 2012. Year-ending stocks for 2017 were increased to 275 million pounds.

December prices for frozen hens were lower than expected as the market remained mostly below the 2014 price level. Turkey prices in 2016 averaged 109 cents per pound, slightly

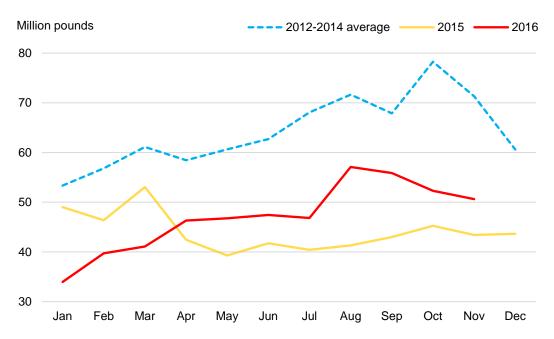
² U.S. Department of Agriculture, Foreign Agricultural Service. *Status of Bird Flu Outbreaks in The Netherlands*. December 7, 2016. Also: Manila Standard. "*DA bans import of Holland Birds*." December 15, 2016.

¹ Board of Governors of the Federal Reserve System (US). *Trade Weighted U.S. Dollar Index: Broad.* https://fred.stlouisfed.org/series/TWEXB. Retrieved January 12, 2016.

higher than 2015. Weaker demand is expected to pressure prices lower in 2017, averaging 105-113 cents per pound.

After increasing much of the year, turkey exports from August to November trended down. Year-to-date exports through November remained well below the 2012-2014 average (see figure below, "Monthly Turkey Exports in Recent Years"), with much of the decline due to lower exports to Mexico. Mexico's turkey industry has expanded, in part due to the 2015 outbreak of avian influenza in the United States. U.S. turkey exports through November have increased in some Asian markets, such as Hong Kong, Japan, and Taiwan, as well as in several markets in the Caribbean (see table below, "January-November Turkey Exports in 2015 and 2016").

Monthly Turkey Exports in Recent Years



Source: U.S. Census Bureau, U.S. Department of Agriculture, Economic Research Service.

³ U.S. Department of Agriculture. Foreign Agricultural Service. *Mexico Improves Biosecurity to Address AI Outbreaks*. October 14, 2016. Also: Imagen Agropecuaria. "Desplaza importación de pavo de EU producción nacional.." ["U.S. Turkey Imports Displaced by Domestic Production"]. December 12, 2016.

January-November Turkey Exports in 2015 and 2016*

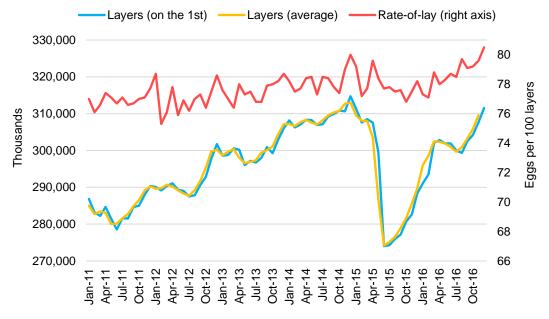
	Millio	n pounds	2015/2016		
Importer	2015	2016	Change		
Total	485	518	7%		
Mexico	309	305	-1%		
Hong Kong	17	49	182%		
Japan	14	20	41%		
Dominican Republic	8	15	101%		
Canada	16	11	-33%		
Panama	11	9	-18%		
Haiti	4	8	129%		
China (Taiwan)	6	7	26%		
Guatemala	6	6	-2%		
Costa Rica	5	6	17%		
Others	90	82	-9%		

Source: US Census Bureau, USDA-ERS.

Eggs and Egg Product Industries

December 1 data for table egg layers showed a record number of eggs produced per 100 chickens, while the number of layers reached its second highest level (see figure, "Monthly Layer Inventory and Lay Rates"). The fourth-quarter 2016 production estimate was unchanged, indicating production just below the record of 2014. The forecast for the first quarter of 2017 was increased 10 million dozen eggs.

Monthly Layer Inventory and Lay Rates



Source: U.S. Department of Agriculture, National Agricultural Statistics Service.

December shell egg prices saw a late seasonal rally that peaked near Christmas, with wholesale prices for grade A large eggs reaching 135 cents per dozen on the New York market before Christmas weekend. Typically, egg prices increase before Thanksgiving;

^{*}Note: Percent changes are based on unrounded trade totals.

however, this year's prices were at multi-year lows until December, when daily prices nearly doubled. Prices have since declined to average 78 cents per dozen in the second week of January. The first-quarter price forecast is forecast at 78-82 cents per dozen.

The egg export forecast for 2017 was increased 30 million dozen eggs (equivalent basis), largely due to an outbreak of avian influenza in South Korea that increased the expected level of export demand for U.S. eggs and egg product. Over 30 million birds have been recently culled in Korea, including an estimated 33 percent of the layer stock and 52 percent of the total layer breeding stock. As a result, the Korean Government implemented a tariff rate quota of 35,000 metric tons for shell eggs, with a zero tariff until June 30, 2017, and air freight subsidies will initially be available from the Government. The Korean and U.S. Governments finalized a protocol to facilitate the export of U.S. shell eggs to Korea on January 8, 2017. Until 2015, when avian influenza disrupted U.S. egg production, the United States held a stable market share above 50 percent of Korea's egg imports, a market that included cooked or dry products.

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⁴ U.S. Department of Agriculture. Foreign Agriculture Service. *U.S. Eggs Break Into the Korean Egg Market*. January 2017.

⁵ Including HS codes 0407, 0408, and 3502. Source: Korea Customs and Trade Development Institution via Global Trade Atlas. Retrieved January 12, 2017.

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U.S. red meat and poultry forecasts																									
	2013	п	III	IV	Annual	2014	II	Ш	IV	Annual	2015	II	III	IV	Annual	2016 I	п	III	IV	Annual	2017	п	III	IV	Annual
					Aimuai	-			14	Aimuai	•	-11		11	Annuai _				- 11	Aiiiiuai				11	Aiiiuai
Production, million lb																									
Beef	6,175	6,513	6,609	6,423	25,720	5,866	6,184	6,179	6,021	24,250	5,665	5,856	6,068	6,109	23,698	5,935	6,187	6,468	6,635	25,225	6,070	6,405	6,745	6,735	25,955
Pork	5,775	5,516	5,622	6,274	23,187	5,784	5,504	5,424	6,131	22,843	6,162	5,925	5,958	6,457	24,501	6,230	5,962	6,099	6,645	24,936	6,455	6,365	6,415	6,970	26,205
Lamb and mutton	38	41	40	38	156	37	43	38	38	156	38	39	37	37	150	38	39	36	36	149	38	39	37	38	152
Broilers	9,144	9,466	9,683	9,537	37,830	9,299	9,618	9,835	9,814	38,565	9,718	10,021	10,372	9,937	40,048	10,039	10,253	10,333	10,050	40,675	10,175	10,450	10,600	10,350	41,575
Turkeys	1,459	1,486	1,440	1,420	5,806	1,332	1,428	1,478	1,517	5,756	1,429	1,389	1,352	1,458	5,627	1,435	1,520	1,515	1,515	5,985	1,445	1,525	1,550	1,600	6,120
Total red meat & poultry	22,743	23,183	23,563	23,844	93,333	22,469	22,934	23,111	23,671	92,185	23,157	23,382	23,940	24,150	94,630	23,830	24,117	24,610	25,031	97,589	24,332	24,947	25,508	25,853	100,640
Table eggs, mil. doz.	1,733	1,746	1,775	1,829	7,083	1,794	1,823	1,852	1,894	7,364	1,809	1,711	1,646	1,700	6,866	1,761	1,796	1,830	1,890	7,277	1,850	1,830	1,835	1,885	7,400
Per capita disappearance, retail lb 1/																									
Beef	13.7	14.5	14.3	13.9	56.3	13.1	14.0	13.7	13.4	54.1	13.1	13.6	13.9	13.3	53.9	13.6	13.9	14.0	14.2	55.7	13.4	14.1	14.5	14.2	56.1
Pork	11.5	11.3	11.4	12.7	46.8	11.2	10.8	11.0	12.8	45.8	12.2	11.8	12.1	13.5	49.7	12.6	11.8	12.1	13.4	49.9	12.6	12.6	12.6	13.9	51.8
Lamb and mutton	0.3	0.2	0.2	0.2	0.9	0.2	0.2	0.2	0.3	0.9	0.2	0.3	0.2	0.3	1.0	0.3	3.0	0.3	0.2	1.1	0.2	0.2	2.0	0.2	0.9
Broilers	20.0	20.3	21.0	20.5	81.8	20.3	20.8	21.2	21.1	83.3	21.4	22.1	23.3	22.1	88.9	22.5	22.7	22.7	21.7	89.6	22.5	22.9	22.9	22.3	90.6
Turkeys	3.7	3.6	4.0	4.8	16.0	3.4	3.5	3.9	5.0	15.8	3.5	3.6	3.9	4.9	16.0	3.6	3.9	4.2	5.0	16.7	3.6	3.8	4.3	5.1	16.9
Total red meat & poultry	49.5	50.2	51.3	52.4	203.5	48.5	49.7	50.3	52.9	201.6	50.8	51.8	53.7	54.5	210.8	52.9	52.9	53.5	55.0	214.3	52.7	54.0	54.9	56.2	217.7
Eggs, number	64.2	63.3	64.5	66.0	258.0	65.5	66.1	67.1	68.4	267.1	65.2	62.2	61.1	64.5	252.9	66.1	66.0	66.8	68.6	267.5	66.7	65.9	66.5	67.7	266.8
Market prices																									
Choice steers, 5-area Direct, \$/cwt	125.52	124.95	122.30	130.77	125.89	146.34	147.82	158.49	165.60	154.56	162.43	158.11	144.22	127.71	148.12	134.81	127.68	113.26	107.69	120.86	112-116	105-113	102-110	104-112	106-113
Feeder steers, Ok City, \$/cwt	141.36	133.12	152.08	161.69	147.06	168.49	188.64	220.90	234.25	203.07	210.31	219.65	208.11	173.59	202.92	155.83	146.49	140.66	128.30	142.82	130-134	129-137	136-144	139-147	134-141
Cutter Cows, National L.E., \$/cwt	77.87	77.46	78.36	76.55	77.56	89.12	98.57	111.27	109.21	102.04	107.61	109.50	103.34	77.80	99.56	73.50	75.87	73.16	57.75	70.07	60-64	62-70	62-70	62-70	62-69
Choice slaughter lambs, San Angelo, \$/cwt	107.53	91.72	94.26	150.97	111.12	166.69	148.99	156.02	162.69	158.60	147.17	140.09	146.23	142.52	144.00	133.33	136.15	137.52	131.88	134.72	133-137	126-134	128-136	128-136	129-136
Nat'l base cost, 51-52 % lean, live equivalent, \$/cwt	59.03	65.46	70.59	61.11	64.05	68.69	85.40	83.30	66.74	76.03	48.47	53.20	54.59	44.66	50.23	44.63	53.71	49.26	37.04	46.16	39-41	38-40	41-45	34-36	38-41
Broilers, 12 City, cents/lb	103.50	108.60	93.90	92.80	99.70	98.40	113.70	104.60	102.80	104.90	97.00	104.20	83.70	77.20	90.50	84.60	93.00	81.7	78.00	84.33	79-83	81-87	81-87	79-85	80-86
Turkeys, Eastern, cents/lb	96.00	97.70	99.90	105.40	99.80	100.70	105.60	110.20	113.90	107.60	99.60	108.50	126.40	130.10	116.20	114.70	116.50	120.7	116.60	117.13	102-106	102-110	108-116	109-119	105-113
Eggs, New York, cents/doz.	126.90	109.90	119.00	143.00	124.70	142.70	134.60	129.30	162.70	142.30	146.90	170.30	235.70	174.10	181.80	121.50	67.90	71.60	81.70	85.68	78-82	87-93	93-101	106-114	91-97
U.S. trade, million lb																									
Beef & veal exports	557	636	716	680	2,588	583	667	679	643	2,572	523	607	542	594	2,265	534	621	659	705	2,519	580	660	710	690	2,640
Beef & veal imports	590	629	515	516	2,250	597	767	765	818	2,947	878	990	890	613	3,371	793	832	751	630	3,006	690	795	645	570	2,700
Lamb and mutton imports	49	44	36	44	173	46	49	45	55	195	53	56	46	59	214	68	55	41	52	216	50	47	43	48	188
Pork exports	1,216	1,225	1,205	1,341	4,986	1,399	1,342	1,146	1,205	5,092	1,223	1,338	1,173	1,274	5,009	1,223	1,320	1,236	1,450	5,229	1,285	1,360	1,335	1,460	5,440
Pork imports	208	210	229	233	880	213	241	257	301	1,011	279	266	270	300	1,116	293	257	266	280	1,096	280	255	265	285	1,085
Broiler exports	1,752	1,865	1,855	1,874	7,345	1,827	1,834	1,858	1,779	7,298	1,624	1,713	1,487	1,496	6,321	1,573	1,607	1,736	1,710	6,626	1,660	1,730	1,765	1,770	6,925
Turkey exports	175	179	192	195	741	159	182	215	219	775	148	123	125	132	529	115	140	160	155	570	140	145	165	180	630
Live swine imports (thousand head)	1,326	1,285	1,223	1,113	4,948	1,195	1,216	1,264	1,272	4,947	1,309	1.541	1.371	1.519	5.740	1.475	1.405	1.376	1,420	5,676	1,490	1,375	1,480	1,470	5,815

Broiler exports 1.752 1.865 1.857 1.851 7.95 1.857 1.851 1.858 1.779
Turkey exports 1.752 1.866 1.855 1.874 7.345 1.827 1.834 1.858 1.779
Turkey exports 1.759 1.92 1.95 7.41 1.59 1.827 1.834 1.858 1.779
Live swine imports (thousand head) 1.350 1.285 1.285 1.213 1.95 1.95 1.216 1.264 1.272
Live swine imports (thousand head) 1.350 1.285 1.285 1.213 1.948 1.195 1.216 1.264 1.272
Live swine imports (thousand head) 1.350 1.285 1.285 1.218 1.218 1.95 1.216 1.264 1.272
Live swine imports (thousand head) 1.350 1.285 1.

Dairy Forecasts

Dairy Forecasts	2015			2016					2017		
	Annual	I	II	III	IV	Annual	1	II	III	IV	Annual
Milk cows (thousands) 1/	9,317	9,319	9,327	9,336	9,340	9,330	9,350	9,360	9,370	9,375	9,365
Milk per cow (pounds)	22,394	5,692	5,828	5,632	5,620	22,770	5,755	5,940	5,750	5,740	23,185
Milk production (billion pounds)	208.6	53.0	54.4	52.6	52.5	212.5	53.8	55.6	53.9	53.8	217.1
Farm use	1.0	0.2	0.2	0.2	0.2	1.0	0.2	0.2	0.2	0.2	1.0
Milk marketings	207.7	52.8	54.1	52.3	52.2	211.5	53.6	55.4	53.6	53.6	216.1
Milk-fat (billion pounds milk equiv.)											
Milk marketings	207.7	52.8	54.1	52.3	52.2	211.5	53.6	55.4	53.6	53.6	216.1
Beginning commercial stocks	11.2	13.3	15.6	18.0	16.6	13.3	13.4	15.0	17.1	15.6	13.4
Imports	5.7	2.1	1.6	1.7	1.7	7.0	1.7	1.7	1.7	1.8	7.0
Total supply	224.6	68.3	71.3	72.0	70.5	231.9	68.7	72.0	72.5	71.0	236.5
Commercial exports	8.8	2.2	2.2	2.2	2.5	9.1	2.0	2.1	2.1	2.0	8.3
Ending commercial stocks	13.3	15.6	18.0	16.6	13.4	13.4	15.0	17.1	15.6	13.2	13.2
Net removals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic commercial use	202.5	50.4	51.1	53.3	54.6	209.4	51.7	52.8	54.7	55.8	215.0
Skim solids (billion pounds milk equiv.)											
Milk marketings	207.7	52.8	54.1	52.3	52.2	211.5	53.6	55.4	53.6	53.6	216.1
Beginning commercial stocks	13.1	13.9	14.7	15.3	14.9	13.9	14.3	13.2	13.4	13.0	14.3
Imports	6.0	1.6	1.6	1.6	1.6	6.4	1.5	1.5	1.5	1.6	6.2
Total supply	226.7	68.3	70.4	69.2	68.7	231.8	69.4	70.1	68.6	68.1	236.6
Commercial exports	37.3	8.5	9.7	10.2	10.4	38.9	9.8	10.1	10.3	10.0	40.2
Ending commercial stocks	13.9	14.7	15.3	14.9	14.3	14.3	13.2	13.4	13.0	12.9	12.9
Net removals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic commercial use	175.5	45.2	45.4	44.0	44.0	178.6	46.5	46.6	45.3	45.2	183.5
Milk prices (dollars/cwt) 2/											
All milk	17.12	15.70	14.77	16.83	17.40	16.20	18.00	17.30	17.45	17.70	17.60
					-17.50		-18.40	-18.00	-18.45	-18.70	-18.40
01 111	45.00	10.75	40.00	10.10	40.00	44.07	40.40	10.10	10.15	40.00	10.05
Class III	15.80	13.75	13.20	16.18	16.33	14.87	16.40 -16.80	16.40 -17.10	16.45 -17.45	16.20 -17.20	16.35 -17.15
							-10.00	-17.10	-17.45	-17.20	-17.13
Class IV	14.35	13.18	13.18	14.58	14.13	13.77	15.65	15.30	15.20	14.95	15.25
							-16.15	-16.10	-16.30	-16.05	-16.15
Product prices (dollars/pound) 2/											
Cheddar cheese	1.645	1.517	1.454	1.735	1.714	1.605	1.680	1.675	1.680	1.660	1.675
							-1.720	-1.745	-1.780	-1.760	-1.755
Dry whey	0.380	0.243	0.252	0.288	0.366	0.288	0.410	0.415	0.415	0.415	0.415
Diy wiloy	0.000	0.240	0.202	0.200	0.000	0.200	-0.430	-0.445	-0.445	-0.445	-0.445
Butter	2.067	2.067	2.080	2.206	1.958	2.078	2.170	2.100	2.075	2.035	2.095
							-2.240	-2.200	-2.205	-2.165	-2.205
Nonfat dry milk	0.902	0.766	0.760	0.860	0.931	0.829	0.995	0.990	0.995	0.985	0.990
	0.002	3 00	300	3.000	3.00.	3.020	-1.035	-1.050	-1.065	-1.055	-1.050

^{1/} Simple averages of monthly prices. May not match reported annual averages.

Sources: U.S. Dept. of Agriculture: National Agricultural Statistics Service, Agricultural Marketing Service, Foreign Agricultural Service, and World Agricultural Outlook Board. For further information, contact Jerry Cessna, 202-694-5171, jgcessna@ers.usda.gov, or contact Jonathan Law, 202-694-5544, jonathan.law@ers.usda.gov. Published in Livestock, Dairy, and Poultry Outlook, http://www.ers.usda.gov/publications/ldpm-livestock,-dairy,-and-poultry-outlook.aspx.

^{2/} Simple averages of monthly prices calculated by the Agricultural Marketing Service for use in class price formulas. Based on weekly U.S. Dept. of Agriculture National Dairy Products Sales Report.