



**Economic Research Service | Situation and Outlook Report** 

LDP-M-285 | March 14, 2018

Next release is April 16, 2018

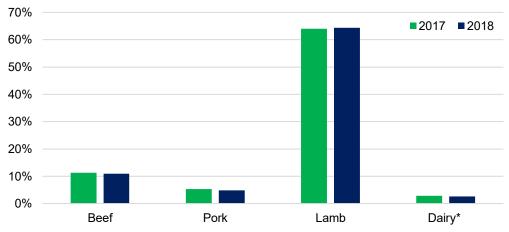
## Livestock, Dairy, and Poultry Outlook

## **Mildred Haley**

# The United States is Expected to Import a Relatively Small Share of Consumption for Most Red Meats and Dairy Products in 2018

Import data for all of 2017 shows that, consistent with past years, the United States is a relatively small importer of meat and dairy products. USDA import forecasts for 2018 show an extension of this tendency. In 2017, U.S. beef imports were 11.3 percent of total domestic disappearance. In 2018, forecasts for U.S. beef imports leave the ratio nearly unchanged (11.0 percent). The United States imports mostly lean beef from Australia, mainly for final use as hamburger and as an input to processed and prepared food products. For pork, imports accounted for 5.3 percent of disappearance last year. Based on forecasts, that ratio is expected to be somewhat smaller this year—4.8 percent—due largely to increased domestic production. Most imported pork comes from Canada and the EU. Imports from Poland, in particular, have accelerated recently. Compared with beef, pork, and dairy products, lamb is exceptional in that imports typically account for more than half of domestic disappearance. Most U.S. lamb imports originate from Oceania. In 2017, imports made up about 64 percent of disappearance; this year, the ratio is expected to be slightly larger at 64.3 percent. For imported dairy products—most of which come from the EU and New Zealand—imports comprised about 2.9 percent of U.S. disappearance last year, on a milk-fat milk-equivalent basis. The ratio of imports to disappearance based on dairy trade forecasts, is mostly unchanged for 2018, at 2.7 percent.

#### Imports as a percentage of domestic disappearance



<sup>\*</sup>Dairy imports as a percent of domestic commercial use are provided on a milk-fat milk-equivalent basis. Source: U.S. Dept. of Agriculture, World Agricultural Outlook Board.

**Cattle/Beef:** Beef production was reduced on a slower than expected pace of slaughter in the first quarter and lighter cattle weights anticipated in early 2018. However, second-quarter production was raised. Based on higher to-date cow slaughter data, first-half non-fed beef production is expected to be higher, mitigating some of the decline in the first-quarter reduction and contributing to the increase in the second-quarter forecast. With these partly offsetting factors, the beef production forecast was trimmed slightly to 27.69 billion pounds. Based on the current pace of U.S. beef imports and strong domestic demand for lean beef, imports for 2018 were revised upward.

**Poultry:** Broiler production and weights were up again in January in line with expectations, while broiler prices were generally steady during February. Table egg production in January contracted about 1 percent, contributing to a lower production forecast. Lower-than-expected production and recent price surges moved price forecasts higher. January turkey production was down on a per day slaughter basis. Production in 2018 is expected to be fractionally lower than 2017 as low wholesale prices pressure producer returns.

**Dairy:** Due to expectations of stronger growth in milk per cow, the 2018 milk production forecast has been increased to 219.0 billion pounds, 0.3 billion higher than last month's forecast. With competitive U.S. prices and recent strength in cheese and whey product exports, 2018 export forecasts have been raised to 9.6 billion pounds (+0.1 billion) on a milk-fat milk-equivalent basis and 42.8 billion (+0.3 billion) pounds on a skim-solids milk-equivalent basis. While butter and cheese price forecasts have been raised, the nonfat dry milk price forecast has been lowered. With offsetting changes in dairy product price forecasts, the all-milk price forecast for 2018 is \$15.75-\$16.35 per hundredweight (cwt), unchanged at the midpoint from last month's forecast.

**Pork/Hogs:** Commercial pork production for 2018 is revised upward to 26.9 billion pounds, 5.2 percent above a year ago, due to higher pork carcass dressed weights. Hog prices for the first quarter are expected to average \$51-\$52 per cwt, almost 4 percent above a year ago, largely on the strength of increased demand for hogs from expanded processing capacity. January pork export data showed solid demand—6.2 percent above a year ago—particularly in Asia.

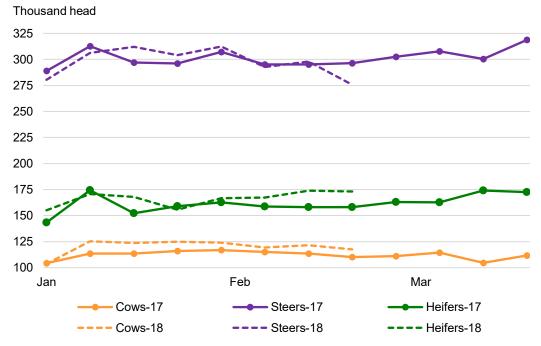
## Cattle / Beef

#### Russell Knight and Lekhnath Chalise

## Beef Production Lower on Lighter Weights and the Pace of Slaughter

This month, beef production for 2018 was revised downward by 40 million pounds (lbs) to 27.69 billion lbs. In part, this change reflects a combination of slower than expected slaughter and lighter cattle weights in the first quarter. Based on USDA Agricultural Marketing Service (AMS) reporting of 2018 federally inspected slaughter through the week of February 24, weekly cow and heifer slaughter was well above 2017 levels (see chart below). In contrast, the pace of steer slaughter remained close to last year's levels. As a result, year-to-date cow and heifer slaughter is up roughly 5.6 percent, but steer slaughter is 0.3 percent above the same period last year. The proportion of heifers and cows slaughtered relative to total slaughter has increased from last year, and heifers and cows are typically smaller and yield lower carcass weights than steers.

#### First-quarter weekly cow, steer, and heifer slaughter\*



(\*): Slaughtered under Federal inspection.
Source: U.S. Dept. of Agriculture, Agricultural Marketing Service.

In addition, through late-February steer dressed weights were at the same level, and falling at a similar pace, to 2017 (see chart below). This mix of higher cow and heifer slaughter and lighter steer dressed weights combined to push cattle dressed weights during the first quarter below expectations.

#### Weekly steer dressed weights\*



(\*): Slaughtered under Federal inspection.

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

Production was also revised downward on a slower than expected pace of fed cattle slaughter in first-quarter 2018. To the extent that this implies a slower pace of marketing, some of those animals that might have been slaughtered in the first quarter are likely to be slaughtered in the second quarter. For much of last year and through January 2018, the level of marketings maintained a rapid pace, with the percent of cattle on feed over 120 days below year-earlier levels. However, the pace of slaughter began to slow and the percentage of cattle on feed over 120 days moved above year earlier at the beginning of February. Prices offered for fed steers in the 5-Area marketing region fell nearly \$4.00 from a mid-February daily high of \$130.00 per hundredweight (cwt), compounding already weak margins. To the extent that these cattle are not marketed in the first quarter, they will likely add to an increased pool of slaughter-ready cattle in the second quarter, putting pressure on prices. If feedlots opt to slow marketings, weights in the second quarter may not show as strong a seasonal decline.

## Strong Feeder Cattle Prices May Reflect Availability of Placements in Spring 2018

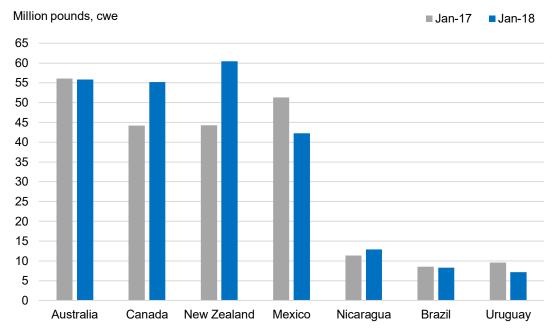
Based on the latest NASS Cattle on Feed report, net placements in January were 3.7 percent higher than last year. To the extent that drought conditions in the Southern Plains have diminished pasture availability, more cattle have been placed in feedlots in late 2017 and early 2018 than in the prior year. This likely diminishes the pool of cattle available for placement throughout first-half 2018. The price forecast for feeder steers 750-800 pounds was adjusted lower for the first quarter to \$146.00-\$149.00/cwt on current price movements. In the second quarter, fewer calves will likely be available for placement, which should keep prices relatively strong at \$144.00-\$152.00/cwt.

Packer margins have recently improved as wholesale beef prices stayed above 2017 levels and fed steer prices retreated from the mid-February high of \$130.00/cwt. Based on current cash cattle prices and expectations of wholesale beef prices expressing continued demand strength, the fed steer price forecast for the first quarter was adjusted higher to \$124.00-\$127.00/cwt.

### 2018 Beef Imports Revised Upward, Exports Unchanged

U.S. beef imports in January 2018 were 248 million pounds, up 8.6 percent from January 2017. Among the major suppliers, year-over-year higher imports from Canada (+23 percent), New Zealand (+37 percent), and Nicaragua (+14 percent) more than offset the declines from Mexico (-18 percent), Australia (-0.5 percent), Brazil (-2.3 percent), and Uruguay (-25 percent) in January 2018 (see chart below). Based on USDA, AMS weekly reports of Imported Meat and Poultry Passed for Entry (LSWIMPE), stronger year-over-year imports are expected in February, as well. Based on the current pace of imports and strong domestic demand for lean meat in the first quarter of 2018, U.S. beef imports for 2018 were revised upward by 10 million pounds, to 3.04 billion pounds.

#### Year-over-year January imports from major suppliers



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

Australia, though still in a herd-rebuilding phase, marketed a large number of cattle in late 2017, which has diminished available cattle for marketing in early 2018. Meat and Livestock Australia, the marketing, research, and development body for Australia's red meat and livestock industry (MLA), has estimated relatively lower beef supply available in 2018. Higher Australian feed grain prices may limit the time cattle are on feed, which could reduce dressed weights, further limiting Australia's beef production. Agriculture and Agri-Food Canada is reporting an 8-percent year-over-year increase in Canadian beef production through the week ending February 24, potentially providing a greater supply available to ship to the United States. Next month USDA FAS will release updated cattle and beef forecasts, providing greater insights into how these countries will impact U.S. and global trade relations.

The 2018 beef export forecast remains unchanged at 3.025 billion pounds. January exports increased by 32 million pounds from the year-earlier level to 244 million pounds. Major export destinations recorded significantly higher U.S. beef imports: South Korea (+21 percent), Hong Kong (+53 percent), and Taiwan (+22 percent). Demand from South Korea should remain strong as the tariff on U.S. beef was reduced to 21.3 percent, down from 24 percent in 2017, further increasing U.S. competitiveness with other beef exporters. Based on export sales reports from the USDA Foreign Agricultural Service, sales to South Korea, Hong Kong, and Taiwan remained firm in February. However, U.S. exports to Canada have declined slightly in early 2018, likely due to higher beef production in Canada.

## U.S. Cattle Imports Declined in January 2018

In January, cattle imports were at 114,276 head, 18,078 head lower than year-earlier levels. Imports declined from both Canada and Mexico. Poor pasture in the Southern Plains may have impacted imports of feeder cattle from Mexico, which tend to be lighter-weight animals and are often backgrounded prior to placement in U.S. feedlots. Imports from Canada were lower for both feeder cattle and steers and heifers for slaughter. U.S. cattle imports from Canada will likely moderate in early 2018 as Canadian cattle production slows, due to marginal growth in cattle production, higher slaughter, and growing domestic beef demand. The forecast for U.S. cattle imports was lowered to 1.905 million head. The 2018 cattle export forecast (200,000 head) is unchanged.

## **Poultry**

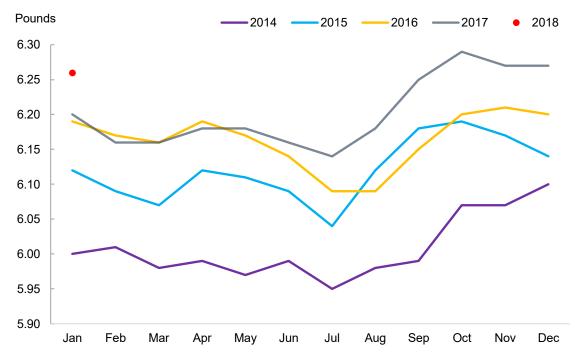
#### Sean Ramos and Alex Melton

### Broiler Weights Still Up, Expectations Steady

January broiler meat production was 3.6 billion pounds, almost 4 percent above a year earlier. Much of the growth was due to an additional slaughter day this year, while the rate of production (per slaughter day) was a bit lower. Higher bird weights, nearly a percent higher than a year earlier (see the figure below), also contributed to production growth. Hatchery data has continued to indicate growth in bird availability through the end of the current quarter. The production forecast was not changed for the current or any later quarter in 2018, totaling 42.6 billion pounds for the year.

#### Broiler weights start 2018 by showing continued growth

Average broiler weight at slaughter by month and year, since 2014



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

Broiler exports in January were 548 million pounds, about a percent lower than last year. Year-over-year declines were spread across a number of countries, including Democratic Republic of the Congo (DRC), Republic of the Congo (Brazzaville), and Canada. Export losses were partially offset by significantly higher shipments to Cuba, Taiwan, United Arab Emirates, and the Philippines.

February weekly prices for whole broilers (national composite) were fairly steady, and the price was just over 91 cents per pound for the week ending March 2. A lack of upward momentum over the past few weeks contributed to a slight reduction in the first-quarter forecast to \$0.93-\$0.94 per pound. Prices are still expected to average about 5 percent above 2017. Given current prices and expected seasonal gains in the first part of the second quarter, the price forecast for the second quarter was raised to \$0.96-\$1.00.

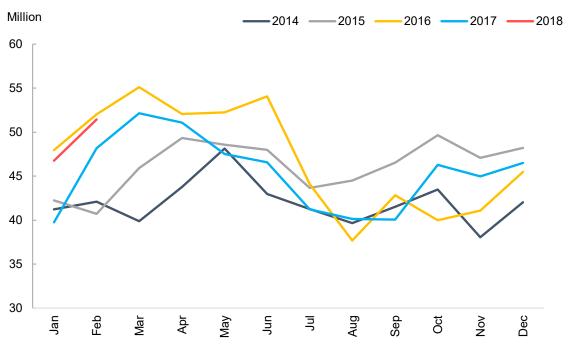
### Table Egg Production Expansion Still Delayed

Table egg production was 653 million dozen in January, down nearly 1 percent from last year despite more layers in inventory. The decline resulted from a significantly lower lay rate (eggs per layer), likely reflecting that when producers expand inventory, they retain older layers or add newer birds. Both of these types of birds lay fewer eggs.

Hatchery data, such as egg-type chickens in incubators (see the figure below), continue to show that producers intend to increase egg production this year. However, the delays associated with lower lay rates have contributed to lower expectations, with the first-quarter production forecast reduced by 10 million dozen.

#### Hatchery data still suggest future layer flock expansion

Egg-type chicken eggs in incubators for hatching, first of the month, since 2014



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

January exports of eggs and egg products were 26 million dozen (shell-egg equivalent), nearly 25 percent above last year. Export growth was led by more shipments to Japan, up 3.4 million dozen, while Canada and Hong Kong were up 1.6 and 1.4 million dozen, respectively. January U.S. egg imports continued to be very low, about 4 million dozen below last year. The 2018 import forecast was lowered to 32 million dozen.

Wholesale egg prices (large grade A eggs, New York) as of March 5 were significantly higher than expected, reaching a midpoint of 193 cents per dozen between high and low prices. This development and the downward revision to expected production led to a significantly higher price forecast for the first quarter in 2018. The first-quarter projection was increased about 29 cents per dozen to 162-165 cents per dozen, and each subsequent quarter was increased a lesser amount as production growth is expected to replenish the marketing channels.

## Turkey Production Down in January on a Per Day Slaughter Basis

January 2018 production totaled 509 million pounds, a 2-percent increase from January 2017, but a 3-percent decrease based on a per day slaughter basis. Turkey hatchery data for January is below the same period in 2017, indicating lower production totals in the coming months. Eggs hatched and poult placements fell by over 4 and 2 percent, respectively, compared with a year earlier, and eggs in incubators to start February were down 5 percent. The declines suggest that producers are likely responding to reduced returns brought about by low wholesale prices. The 2018 turkey production forecast is 5.975 billion pounds, fractionally below 2017 levels.

## Whole Turkey Prices Remain Below Historical Averages Heading Into 2018

Wholesale whole-hen frozen turkey prices remain low in comparison to past years. The latest price data, covering the first full week of March 2018, shows whole hen prices at just under 80 cents per pound, well below early-March prices for the past several years. The low wholesale prices indicate that turkey meat demand has not kept pace with recent production. Turkey prices are expected to average \$0.86 to \$0.91 per pound for the year, about 8 percent below the annual average price for 2017.

## Turkey Exports Increased Again in January

January turkey exports were 15 percent higher than a year earlier, totaling 49 million pounds. Mexico remains the largest destination for U.S. turkey shipments, with 34 million pounds shipped in December, or 70 percent of all U.S. shipments. Exports are expected to reach 635 million pounds in 2018, a 10 million pound decrease since last month's forecast, but a 2-percent increase over 2017.

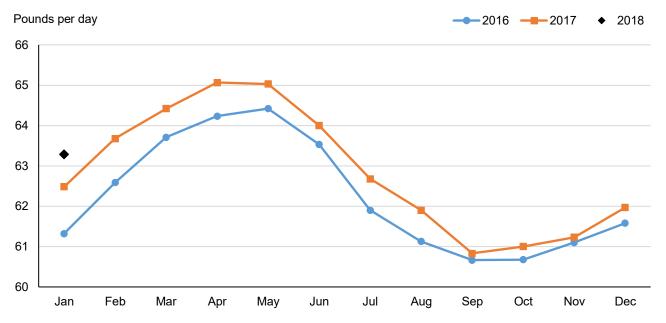
## **Dairy**

Jerry Cessna and Jonathan Law

## Recent Developments in Dairy Markets

U.S. milk production was 18.5 billion pounds in January, up 1.8 percent from January 2017. Milk per cow averaged 1,962 pounds in January (63.3 pounds per day) and was 1.3 percent above January 2017. This year-over-year growth rate in yield per cow was an increase from 0.2 percent in November and 0.6 percent in December. January milk cows numbered 9.405 million head, 46 thousand head more than January 2017 and 5 thousand head more than December 2017.

#### Milk production per cow



Source: USDA National Agricultural Statistics Service.

From the week ending January 27 to the week ending March 3, wholesale dairy product prices, as reported in the USDA *National Dairy Products Sales Report* (NDPSR), decreased for butter, nonfat dry milk (NDM), and dry whey but increased for cheddar cheese. The largest changes were for cheddar cheese, with 40-pound blocks and 500-pound barrels increasing by 2.1 and 6.1 cents, respectively. Prices for butter on the Chicago Mercantile Exchange (CME) have been running higher than NDPSR prices. For the trading week ending March 9,¹ the average CME butter price was \$2.2175 per pound. CME weekly-average prices for cheddar cheese blocks and barrels were \$1.5830 and \$1.5090 per pound, respectively. Changes in NDPSR prices usually lag CME prices by a week for butter and 1 to 2 weeks for cheese. Prices for NDM on the CME have been running lower than NDPSR prices. For the trading week ending March 9, the CME NDM price averaged \$0.6555 per pound.

<sup>&</sup>lt;sup>1</sup> For the *National Dairy Product Sales Report*, prices are reported for each calendar week ending on Saturday. For the Chicago Mercantile Exchange, prices are reported for each trading week ending on Friday.

#### Dairy wholesale product prices (dollars per pound)

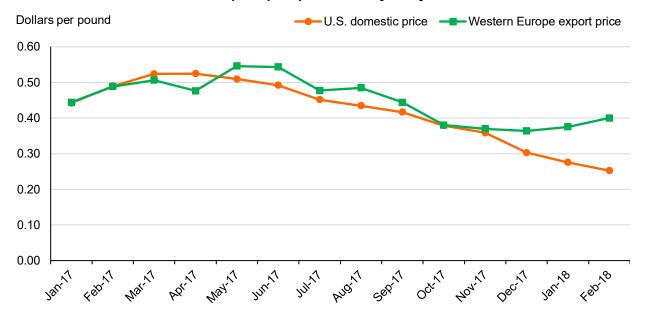
|                                | For the we |        |         |
|--------------------------------|------------|--------|---------|
|                                | Jan. 27    | Mar. 3 | Change  |
| Butter                         | 2.1550     | 2.1373 | -0.0177 |
| Cheddar cheese                 |            |        |         |
| 40-pound blocks                | 1.5300     | 1.5513 | 0.0213  |
| 500-pound barrels <sup>1</sup> | 1.3964     | 1.4574 | 0.0610  |
| Nonfat dry milk                | 0.7036     | 0.7012 | -0.0024 |
| Dry whey                       | 0.2709     | 0.2589 | -0.0120 |

<sup>&</sup>lt;sup>1</sup> Adjusted to 38-percent moisture.

Source: USDA, Agricultural Marketing Service, National Dairy Products Sales Report.

It appears that U.S. domestic prices have been competitive with foreign export prices.<sup>2</sup> In February, Oceania export prices for butter, cheese, and skim milk powder (SMP) were \$2.39, \$1.69, and \$0.90 per pound, respectively. Western Europe export prices for butter, SMP, and dry whey were \$2.56, \$0.76, and \$0.40 per pound, respectively.

#### U.S. domestic and Western Europe export prices for dry whey



Source: USDA, Agricultural Marketing Service, National Dairy Products Sales Report and Dairy Market News.

In January, exports on a milk-fat milk-equivalent basis were 685 million pounds, 76 million less than December but 60 million more than January 2017. January exports on a skim-solids milk-equivalent basis were 3.395 billion pounds, a decrease of 514 million from December 2017 but 253 million more than January 2017. January exports of NDM/SMP were 109 million pounds, 24 million less than December. Exports of whey products remained relatively high; dry whey exports were 44 million

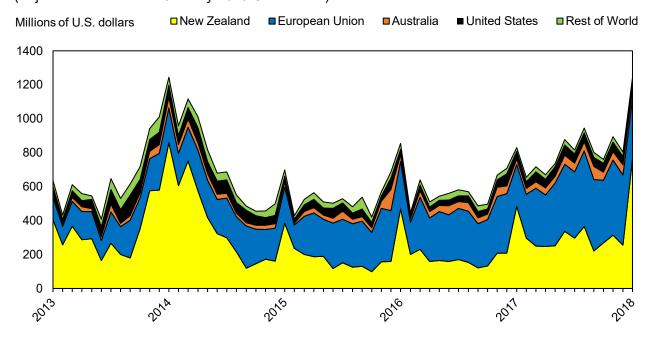
<sup>&</sup>lt;sup>2</sup> U.S. domestic prices are for products that have been shipped with title transferred. Monthly average foreign export prices are reported free on board (f.o.b.) port of the exporting country, and products may be shipped in subsequent months.

pounds in January, down 1 million from December, and whey protein concentrate exports were 34 million pounds, up 1 million. China was the top destination for U.S. whey-product exports.

The value of China's dairy imports from countries around the world in January totaled 1.241 billion U.S. dollars. Adjusted for inflation, this is about the same as the level reached in January 2014. Most of China's dairy imports by value come from New Zealand and the European Union (EU); Australia and the United States vie for distant third. China's highest dairy import values by trading partner are for whole milk powder from New Zealand, infant formula from the European Union and Australia, and whey products from the United States. China's imports of cheese increased substantially in January; effective Dec. 1, 2017, China unilaterally lowered its cheese tariffs for most countries, including the United States and the EU, from 12 to 8 percent. New Zealand benefits from preferential treatment due to its free trade agreement with China. Australia also has a free trade agreement with China, but benefits are smaller since the agreement is only in its third full year and tariff reductions are being phased in.

#### **China's Dairy Import Values**

(Adjusted for inflation in January 2018 U.S. dollars)



Sources: Global Trade Atlas, U.S. Bureau of Labor Statistics, and USDA, Economic Research Service Calculations.

In January, U.S. imports of dairy products fell both year over year and month over month. Imports on a milk-fat basis were 424 million pounds, 151 million less than December and 123 million less than January 2017. On a skim-solids basis, January imports were 487 million pounds, 34 million less than December and 91 million less than January 2017. Much of the decrease on both bases is due to lower milk solids imported in food preparations.

With recent historical stock revisions, beginning stocks for 2018 were lowered to 11.8 billion pounds on a skim-solids basis, 0.1 billion lower than reported last month; they were unchanged on a milk-fat basis. U.S. ending stocks remained very high at the end of January for most dairy products with a high skim-solids content. Compared to January 2017, stocks of NDM, dry whey, and whey protein concentrate were up 50.0 percent, 28.6 percent, and 42.4 percent, respectively. On a skim-solids basis, January ending stocks were 11.9 billion pounds, 2.3 billion above the previous year. On a milk-fat basis, January ending stocks were 14.6 billion pounds, 0.6 billion above the previous year.

In January, domestic use on a milk-fat basis was 17.0 billion pounds, an increase from January 2017 of about 0.3 billion pounds (2.0 percent). On a skim-solids basis, domestic use was 15.4 billion pounds, about the same as January 2017.

## Dairy Forecasts for 2018

Due to recent growth in milk production per cow, forecasts for milk yields have been increased for the first half of 2018, resulting in a 2018 forecast of 23,255 pounds per head, 25 pounds higher than last month's forecast. The forecast for the size of the milking herd in 2018 is unchanged at 9.415 million head. The milk production forecast for 2018 is 219.0 billion pounds, 0.3 billion pounds higher than last month's forecast.

Feed price forecasts have been raised since last month. The 2017/18 corn price forecast is \$3.15-\$3.55 per bushel, an increase of 5 cents at the midpoint of the range. The soybean meal price forecast is \$325-\$355 per short ton, an increase of \$20 at the midpoint of the range. The alfalfa hay price was \$152 per short ton in January, an increase of \$4 from December and \$26 from January 2017. Drought in alfalfa hay production areas has contributed to higher prices. For more information, see the USDA Economic Research Service publication *Feed Outlook*, at

http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1273.

With competitive prices and recent strength in exports of cheese and whey products, the 2018 export forecasts have been raised from last month's forecast to 9.6 billion pounds on a milk-fat basis (+0.1 billion) and to 42.8 billion pounds on a skim-solids basis (+0.3 billion). Forecasts for imports have been lowered from last month's forecast to 5.7 billion pounds (-0.3 billion) on a milk-fat basis and to 5.9 billion pounds (-0.1 billion) on a skim-solids basis due to lower expected dairy-related food preparations.

The 2018 domestic use forecasts are 214.8 billion pounds on a milk-fat basis, 0.1 billion less than last month's forecast, and 181.6 billion pounds on a skim-solids basis, unchanged from last month. Ending stock forecasts are 12.8 billion pounds on a milk-fat basis, down 0.1 billion from last month. On a skim-solids basis, the ending stock forecast has been lowered to 11.3 billion pounds, 0.3 billion less than last month, due to the downward revision of beginning stocks and stronger expected exports.

Forecasts for product prices in 2018 have changed only slightly from last month. The cheddar cheese price is forecast slightly higher than the last forecast at \$1.545-\$1.605 per pound, while the dry whey price forecast has been slightly lowered to \$0.265-\$0.295. The butter price forecast has been raised to \$2.210-\$2.300 per pound, based on recent gains in prices. The NDM price forecast has been lowered to \$0.700-\$0.750 as stocks continued to build last month and global supply remains high.

The Class III price forecast for the year is slightly higher than last month's forecast at \$14.30-\$14.90 per cwt, while the Class IV forecast is slightly lower, at \$13.25-\$13.95 per cwt. Changes in Class III and IV forecasts balance each other out; therefore, the all-milk price forecast is \$15.75-\$16.35 per cwt for the year, unchanged at the midpoint from last month's forecast.

## Pork / Hogs

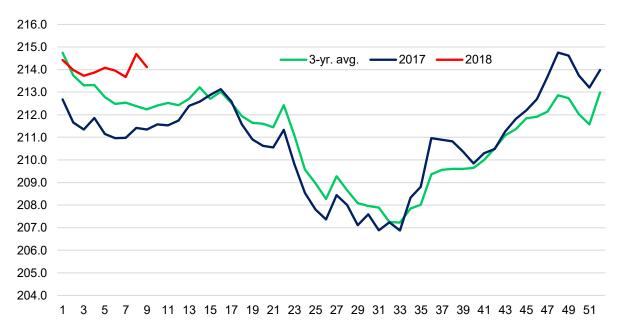
#### Mildred Haley

## Heavier Dressed Weights Nudge 2018 Pork Production Higher

Commercial pork production is expected to be 26.9 billion pounds in 2018, 5.2 percent above a year ago. This forecast represents an increase of 25 million pounds from last month's forecast and is due to higher than expected dressed weights of slaughtered hog carcasses. This upward revision is notable because the pace of slaughter so far this year has been slower than expected. Higher carcass weights have more than offset lower than expected slaughter numbers.

The figure below shows weekly averages of daily carcass weights for federally inspected slaughtered hogs. A number of factors likely explain the year-over-year higher weights registered so far in 2018. First, despite recent feed price increases related to South American weather events, costs of feeding hogs—which typically constitute more than half of production costs—remain moderate, and producer returns in the first 2 months of the year have been positive. Further, winter weather conditions in principle hog production areas have not been unduly harsh. In addition, most packer pricing grids tend to favor heavier carcasses, which drive down processing costs.

#### Weekly averages of daily federally inspected hog carcass weights



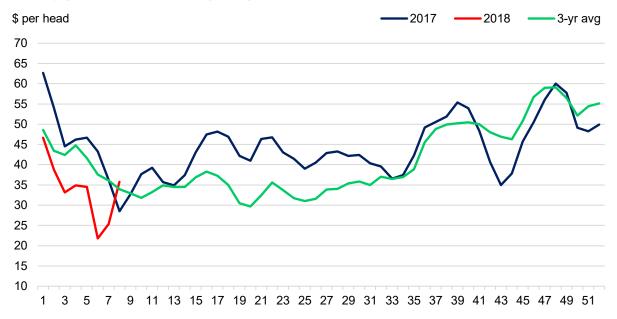
Source: Agricultural Marketing Service, USDA.

Apart from these factors, two additional elements, related to the recent expansion of Midwestern processing capacity, may help to explain higher first-quarter dressed weights. The first is likely a timing issue: although many sow farms are currently in multiple stages of start-up, hog-finishing capacity associated with the ongoing industry expansion—which requires far less complex facilities to site, permit, and construct— may be running ahead of sow farms' current ability to supply pigs. This would leave excess finishing space, creating somewhat less pressure to market existing animal inventories.

This relative absence of "push-through pressure" is likely to disappear, however, once sow farms come online and begin to supply animals to finishing barns constructed for that use.

A second factor likely contributing to higher dressed weights is the apparent ongoing tug-of-war between producers and packers to maintain processing margins. Margins have been under particular pressure since the increase in processing capacity late last year. There is anecdotal evidence suggesting that since early February, some packers have slowed slaughter rates and limited Saturday slaughters in efforts to boost margins, which started out the year sharply lower than a year earlier. Producers, for their part, likely have some added leverage with excess finishing capacity, which may allow more marketing flexibility. Weekly gross processing margins for January through the week of March 2 are shown below.

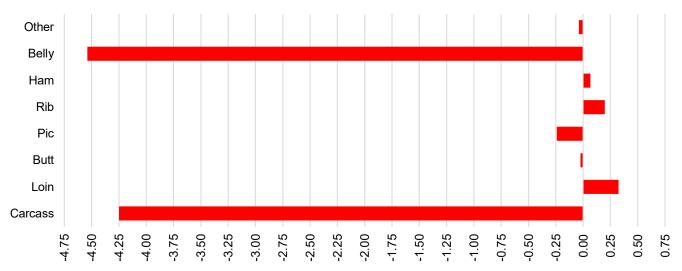
#### Weekly gross pork processing margin, drop value included



Source: Economic Research Service, USDA.

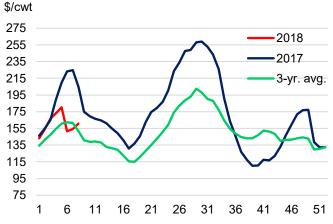
It is notable that processor margins have recovered since early February. Although both hog prices and the wholesale pork carcass cutout fell during the month, the decline in wholesale pork values was more than offset by lower hog prices. The figure below indicates that most of the February decline in the wholesale value of the hog carcass was attributable to lower belly prices. While belly prices remain below a year ago—when depleted stocks drove prices to record highs—prices into March are above 3-year averages. Belly prices are likely being supported by moderate cold stocks volumes and the year-over-year higher retail-wholesale bacon price spread.

#### Primal contributions to -\$4.25 difference in carcass cutout value, between Feb. 1-Feb. 28, 2018

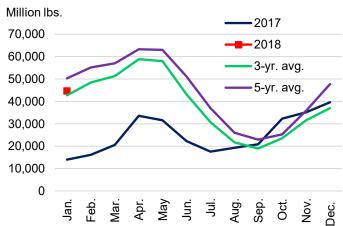


Source: Economic Research Service, USDA.

#### Weekly prices of 13-17 pound pork bellies



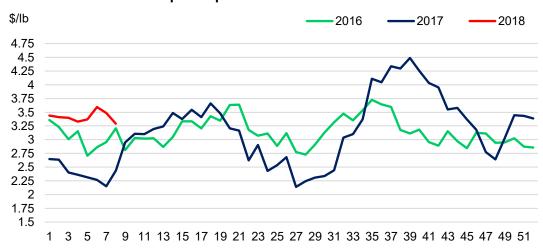
#### Pork bellies: monthly ending stocks



Source: National Agricultural Statistics Service, USDA.

#### Retail-Wholesale bacon price spread

Source: Agricultural Marketing Service, USDA.



Source: Economic Research Service, USDA.

First-quarter prices of live equivalent 51-52 percent lean hogs are expected to be \$51-\$52 per cwt, almost 4 percent above a year earlier. Next-quarter accelerated pork production—almost 5 percent above second-quarter 2017—will weigh on hog prices. A second-quarter average of \$50-52\$ per cwt, about 1 percent below a year earlier, is anticipated.

## Pork Exports Begin 2018 on a High Note

January pork exports kicked off the year at 486 million pounds, more than 6 percent above January a year earlier. Shipments to Asia were particularly strong, likely helped by competitive U.S. pork prices and a lower-valued U.S. dollar. Exports to major foreign markets are summarized below.

U.S. pork exports: Volumes and export shares of the 10 largest foreign destinations, January 2017 and 2018

|    | Country            | Exports<br>Jan. 2017<br>(mil. lbs) | Exports<br>Jan. 2018<br>(mil. lbs) | Percent<br>change<br>(2018/2017) | Export share<br>Jan. 2017<br>% | Export share<br>Jan. 2018<br>% |
|----|--------------------|------------------------------------|------------------------------------|----------------------------------|--------------------------------|--------------------------------|
|    | World              | 458                                | 486                                | 6.2                              |                                |                                |
| 1  | Mexico             | 162                                | 163                                | 0.3                              | 35.4                           | 33.5                           |
| 2  | Japan              | 98                                 | 109                                | 11.2                             | 21.5                           | 22.5                           |
| 3  | South Korea        | 49                                 | 56                                 | 13.8                             | 10.7                           | 11.5                           |
| 4  | Canada             | 38                                 | 37                                 | -3.1                             | 8.3                            | 7.6                            |
| 5  | China/Hong Kong    | 34                                 | 39                                 | 14.4                             | 7.5                            | 8.1                            |
| 6  | Australia          | 19                                 | 21                                 | 6.8                              | 4.2                            | 4.2                            |
| 7  | Colombia           | 17                                 | 19                                 | 14.4                             | 3.7                            | 4.0                            |
| 8  | Dominican Republic | 8.3                                | 7.6                                | -8.3                             | 1.8                            | 1.6                            |
| 9  | Honduras           | 7.0                                | 7.6                                | 7.6                              | 1.5                            | 1.6                            |
| 10 | Philippines        | 3.5                                | 3.9                                | 11.6                             | 0.8                            | 0.8                            |

Source: Economic Research Service, USDA.

Forecasts for the first and second quarter of 2018 were each raised by 25 million pounds, based on strong weekly sales data, export load volumes, strong U.S. pork production, and a continued weaker U.S. dollar exchange rate. First-quarter exports are expected to total 1.5 billion pounds, about 4.7 percent above a year earlier. Second-quarter shipments of 1.450 are forecast, an increase of 1.7 percent over the same period last year. Exports for 2018 are expected to total 5.925 billion pounds, 5.2 percent above 2017.

## Pork Sector Recovery Continues in China

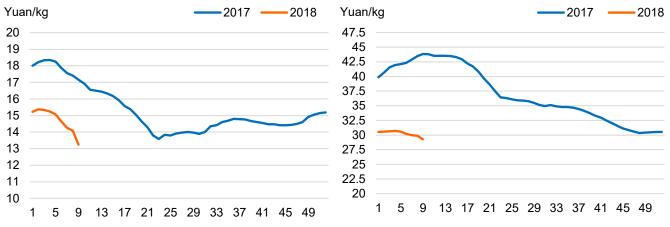
Falling hog prices in China suggest that the country's closure of pig farms to comply with stricter environmental regulations has not restricted supplies. While authorities report removing hundreds of thousands of hog farms during a multi-year environmental remediation campaign, at least a dozen companies launched aggressive expansion plans featuring construction of large farms with updated manure collection and treatment facilities.

The figures below, tracking weekly Chinese prices of live hogs, feeder pigs and pork carcasses from 2017 through February 2018, show a continuing trend of lower prices that began mid-2016, when hog and pork numbers bottomed out and sector recovery began. Increased domestic pork supplies last year reduced Chinese demand for imported pork products. World Trade Atlas data indicate that Chinese pork imports last year, at 1.2 million MT, were almost 9 percent lower than imports in 2016. While import data for January 2018 shows a moderate year-over-year increase, China's 2018 imports are expected to be about 3 percent below 2017 levels. USDA's Foreign Agricultural Service will update 2018 foreign production and trade forecasts in *Livestock and Poultry: World Markets and Trade*, on April 12, 2018.

The table below summarizes countries of origin for China's 2017 pork imports. The European Union accounted for the largest share of Chinese imports last year—65.2 percent—with Canada and the United States each accounting for about 14 percent. More than 71 percent of China's January 2018 pork imports were attributable to the EU. Phytosanitary issues, trade-servicing, and aggressive marketing are among the factors most often cited to explain Europe's dominant share of Chinese pork imports.

#### China weekly live hog price

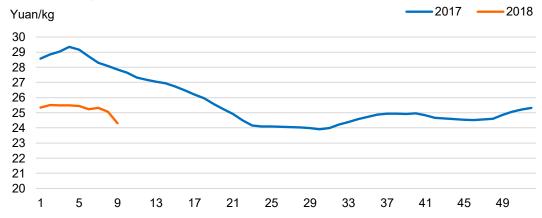
#### China weekly feeder price



Source: China Ministry of Agriculture.

#### Source: China Ministry of Agriculture.

#### China weekly pork carcass price



Source: China Ministry of Agriculture.

China pork imports: Volumes and shares of major exporting countries, 2017 and January 2018

| Exporting Country | 2017<br>JanDec.<br>(MT) | 2017<br>Jan.<br>(MT) | 2018<br>Jan.<br>(MT) | 2017<br>Import Share<br>% | Jan. 2017<br>Import Share<br>% | Jan. 2018<br>Import Share<br>% |
|-------------------|-------------------------|----------------------|----------------------|---------------------------|--------------------------------|--------------------------------|
| World             | 1,217,392               | 111,807              | 116,403              |                           |                                |                                |
| United States     | 165,778                 | 11,446               | 8,583                | 13.6                      | 10.2                           | 7.4                            |
| EU                | 794,150                 | 78,326               | 83,163               | 65.2                      | 70.1                           | 71.4                           |
| Canada            | 166,754                 | 14,892               | 8,830                | 13.7                      | 13.3                           | 7.6                            |
| Brazil            | 48,716                  | 4,503                | 3,903                | 4.0                       | 4.0                            | 3.4                            |
| Mexico            | 1,434                   | 0                    | 300                  | 0.1                       | 0.0                            | 0.3                            |
| Other             | 40,560                  | 2,640                | 11,624               | 3.3                       | 2.4                            | 10.0                           |

Source: World Trade Atlas.

#### U.S. red meat and poultry forecasts

|  | 2015 2016 |        |        |        |        |        |        | 2017   |        |        |        | 2018   |        |        |         |         |         |         |         |         |
|--|-----------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
|  | I         | II     | III    | IV     | Annual | I      | II     | III    | IV     | Annual | I      | II     | III    | IV     | Annual  | I       | II      | III     | IV      | Annual  |
| B 1 (* 195 1)  |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |         |         |         |         |         |
| Production, million lb                                 | 5 ((5     | 5.05/  | C 0/0  | c 100  | 22.600 | 5.020  | C 107  | C 472  | ( (25  | 25 221 | c 200  | C 101  | 6.721  | 6.720  | 26 172  | C 490   | 7.225   | C 005   | 7.005   | 27.695  |
| Beef   | 5,665     | 5,856  | 6,068  | 6,109  | 23,698 | 5,938  | 6,187  | 6,472  | 6,625  | 25,221 | 6,300  | 6,404  | 6,731  | 6,738  | 26,173  | 6,480   | 7,225   | 6,885   | 7,095   | 27,685  |
| Pork   | 6,162     | 5,925  | 5,958  | 6,457  | 24,501 | 6,230  | 5,963  | 6,100  | 6,648  | 24,941 | 6,409  | 6,137  | 6,239  | 6,796  | 25,581  | 6,590   | 6,435   | 6,595   | 7,290   | 26,910  |
| Lamb and mutton  | 38        | 39     | 37     | 37     | 150    | 38     | 39     | 36     | 37     | 150    | 37     | 36     | 35     | 37     | 145     | 37      | 35      | 35      | 37      | 144     |
| Broilers   | 9,718     | 10,021 | 10,372 | 9,937  | 40,048 | 10,039 | 10,253 | 10,338 | 10,065 | 40,696 | 10,233 | 10,407 | 10,551 | 10,472 | 41,662  | 10,475  | 10,675  | 10,800  | 10,650  | 42,600  |
| Turkeys  | 1,429     | 1,389  | 1,351  | 1,458  | 5,627  | 1,435  | 1,520  | 1,515  | 1,511  | 5,981  | 1,488  | 1,482  | 1,479  | 1,533  | 5,981   | 1,475   | 1,465   | 1,490   | 1,545   | 5,975   |
| Total red meat & poultry                               | 23,157    | 23,382 | 23,940 | 24,150 | 94,629 | 23,834 | 24,119 | 24,622 | 25,038 | 97,613 | 24,613 | 24,618 | 25,190 | 25,729 | 100,151 | 25,200  | 25,992  | 25,963  | 26,771  | 103,926 |
| Table eggs, mil. doz.                                  | 1,820     | 1,726  | 1,664  | 1,728  | 6,938  | 1,793  | 1,827  | 1,876  | 1,940  | 7,436  | 1,906  | 1,904  | 1,916  | 1,950  | 7,677   | 1,915   | 1,930   | 1,950   | 2,000   | 7,795   |
| Per capita disappearance, retail lb 1/                 |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |         |         |         |         |         |
| Beef   | 13.1      | 13.6   | 13.9   | 13.3   | 54.0   | 13.6   | 13.9   | 14.0   | 14.0   | 55.5   | 14.0   | 14.2   | 14.4   | 14.3   | 56.9    | 14.0    | 15.7    | 14.6    | 14.9    | 59.1    |
| Pork   | 12.2      | 11.8   | 12.1   | 13.6   | 49.7   | 12.6   | 11.8   | 12.1   | 13.5   | 50.1   | 12.4   | 11.8   | 12.4   | 13.5   | 50.1    | 12.3    | 12.5    | 13.0    | 14.2    | 52.0    |
| Lamb and mutton  | 0.2       | 0.3    | 0.2    | 0.3    | 1.0    | 0.3    | 0.3    | 0.2    | 0.3    | 1.0    | 0.3    | 0.3    | 0.2    | 0.3    | 1.1     | 0.3     | 0.2     | 0.2     | 0.3     | 1.1     |
| Broilers   | 21.4      | 22.1   | 23.3   | 22.1   | 89.0   | 22.5   | 22.7   | 22.7   | 21.8   | 89.7   | 22.4   | 22.9   | 23.1   | 22.4   | 90.9    | 22.8    | 23.2    | 23.4    | 23.0    | 92.5    |
| Turkeys  | 3.5       | 3.6    | 3.9    | 4.9    | 16.0   | 3.6    | 3.9    | 4.2    | 4.9    | 16.6   | 3.7    | 3.7    | 4.0    | 5.0    | 16.4    | 3.7     | 3.6     | 4.0     | 4.9     | 16.4    |
| Total red meat & poultry                               | 50.8      | 51.8   | 53.8   | 54.5   | 211.0  | 52.9   | 53.0   | 53.7   | 54.9   | 214.4  | 53.2   | 53.2   | 54.6   | 55.8   | 216.8   | 53.6    | 55.6    | 55.6    | 57.7    | 222.4   |
| Eggs, number   | 65.7      | 62.9   | 61.9   | 65.7   | 256.2  | 67.6   | 67.5   | 68.8   | 71.1   | 274.9  | 68.7   | 68.6   | 68.9   | 69.5   | 275.7   | 68.2    | 68.6    | 69.5    | 71.2    | 277.6   |
|  |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |         |         |         |         |         |
| Market prices  |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |         |         |         |         |         |
| Choice steers, 5-area Direct, \$/cwt                   | 162.43    | 158.11 | 144.22 | 127.71 | 148.12 | 134.81 | 127.68 | 113.26 | 107.69 | 120.86 | 122.96 | 132.76 | 112.46 | 117.88 | 121.52  | 124-127 | 118-124 |         | 112-122 | 116-123 |
| Feeder steers, Ok City, \$/cwt                         | 210.31    | 219.65 | 208.11 | 173.59 | 202.92 | 155.83 | 146.49 | 140.66 | 128.30 | 142.82 | 129.56 | 147.75 | 148.12 | 154.88 | 145.08  | 146-149 | 145-151 | 136-146 | 134-144 | 140-147 |
| Cutter Cows, National L.E., \$/cwt                     | 107.61    | 109.50 | 103.34 | 77.80  | 99.56  | 73.50  | 75.87  | 73.16  | 57.75  | 70.07  | 62.63  | 69.55  | 69.78  | 58.68  | 65.16   | 61-64   | 61-67   | 58-68   | 57-67   | 59-66   |
| Choice slaughter lambs, San Angelo, \$/cwt             | 147.17    | 140.09 | 146.23 | 142.52 | 144.00 | 133.33 | 136.15 | 137.52 | 131.88 | 134.72 | 138.91 | 153.46 | 141.29 | 131.22 | 141.22  | 130-133 | 130-136 | 131-141 | 128-138 | 130-137 |
| Nat'l base cost, 51-52 % lean, live equivalent, \$/cwt | 48.47     | 53.20  | 54.59  | 44.66  | 50.23  | 44.63  | 53.71  | 49.26  | 37.02  | 46.16  | 49.73  | 51.70  | 55.59  | 44.89  | 50.48   | 51-52   | 50-52   | 47-51   | 40-44   | 47-50   |
| Broilers, national composite, cents/lb                 | 97.00     | 104.20 | 83.70  | 77.20  | 90.50  | 84.60  | 93.00  | 81.7   | 78.00  | 84.30  | 88.50  | 104.70 | 94.9   | 86.10  | 93.50   | 93-94   | 96-100  | 84-92   | 83-89   | 89-94   |
| Turkeys, national, cents/lb                            | 99.60     | 108.50 | 126.40 | 130.10 | 116.20 | 114.70 | 116.50 | 120.70 | 116.60 | 117.10 | 100.40 | 99.10  | 96.9   | 88.0   | 96.10   | 78-79   | 83-87   | 86-94   | 96-104  | 86-91   |
| Eggs, New York, cents/doz.                             | 146.90    | 170.30 | 235.70 | 174.10 | 181.80 | 121.50 | 67.90  | 71.60  | 81.70  | 85.70  | 80.00  | 74.70  | 102.1  | 147.0  | 100.9   | 162-165 | 113-119 | 113-123 | 120-130 | 127-134 |
| U.S. trade, million lb, carcass wt. equivalent         |           |        |        |        |        |        |        |        |        |        |        |        |        |        |         |         |         |         |         |         |
| Beef & veal exports                                    | 523       | 607    | 542    | 595    | 2,267  | 535    | 621    | 661    | 738    | 2,556  | 651    | 683    | 746    | 782    | 2,862   | 710     | 740     | 785     | 790     | 3,025   |
| Beef & veal imports                                    | 878       | 990    | 890    | 613    | 3,371  | 793    | 831    | 751    | 639    | 3,015  | 699    | 813    | 814    | 668    | 2,994   | 730     | 810     | 820     | 680     | 3,040   |
| Lamb and mutton imports                                | 53        | 56     | 46     | 59     | 214    | 68     | 55     | 41     | 52     | 216    | 80     | 58     | 57     | 57     | 252     | 82      | 57      | 56      | 59      | 254     |
| Pork exports   | 1,224     | 1,339  | 1,173  | 1,274  | 5,010  | 1,229  | 1,318  | 1,235  | 1,457  | 5,239  | 1,432  | 1,426  | 1,230  | 1,544  | 5,632   | 1,500   | 1,450   | 1,300   | 1,675   | 5,925   |
| Pork imports   | 279       | 266    | 270    | 300    | 1,116  | 293    | 257    | 266    | 275    | 1,091  | 264    | 281    | 283    | 287    | 1,116   | 280     | 255     | 265     | 265     | 1,065   |
| Broiler exports  | 1,624     | 1,713  | 1,487  | 1,496  | 6,321  | 1,585  | 1,605  | 1,734  | 1,720  | 6,644  | 1,711  | 1,618  | 1,664  | 1,787  | 6,780   | 1,720   | 1,740   | 1,760   | 1,730   | 6,950   |
| Turkey exports   | 148       | 123    | 125    | 132    | 529    | 116    | 141    | 160    | 153    | 569    | 133    | 148    | 167    | 173    | 621     | 140     | 150     | 170     | 175     | 635     |
| Live swine imports (thousand head)                     | 1,309     | 1,541  | 1,371  | 1,519  | 5,740  | 1,468  | 1,406  | 1,371  | 1,412  | 5,656  | 1,449  | 1,458  | 1,298  | 1,395  | 5,600   | 1,450   | 1,450   | 1,350   | 1,450   | 5,700   |

Note: Forecasts are in bold.

Source: World Agricultural Supply and Demand Estimates and Supporting Materials. For further information, contact: Mildred M. Haley, mhaley@ers.usda.gov

Updated 3/8/2018

<sup>1/</sup> Per capita meat and egg disappearance data are calculated using the Resident Population Plus Armed Forces Overseas series from the Census Bureau of the Department of Commerce.

#### **Dairy Forecasts**

| Daily I Orecasts                            | 2016   |       |       | 2017  |        |        |                  |                 | 2018            |                 |        |
|---|--------|-------|-------|-------|--------|--------|------------------|-----------------|-----------------|-----------------|--------|
|   | Annual | ı     | II    | III   | IV     | Annual | ı                | II              | III             | IV              | Annual |
| Milk cows (thousands)                       | 9,325  | 9,369 | 9,399 | 9,402 | 9,398  | 9,392  | 9,410            | 9,415           | 9,420           | 9,420           | 9,415  |
| Milk per cow (pounds)                       | 22,778 | 5,717 | 5,888 | 5,687 | 5,649  | 22,941 | 5,780            | 5,970           | 5,755           | 5,750           | 23,255 |
| Milk production (billion pounds)            | 212.4  | 53.6  | 55.3  | 53.5  | 53.1   | 215.5  | 54.4             | 56.2            | 54.2            | 54.2            | 219.0  |
| Farm use                                    | 1.0    | 0.2   | 0.2   | 0.3   | 0.3    | 1.0    | 0.2              | 0.2             | 0.3             | 0.3             | 1.0    |
| Milk marketings                             | 211.4  | 53.3  | 55.1  | 53.2  | 52.8   | 214.5  | 54.1             | 56.0            | 54.0            | 53.9            | 218.0  |
| Milk-fat (billion pounds milk equiv.)       |        |       |       |       |        |        |                  |                 |                 |                 |        |
| Milk marketings                             | 211.4  | 53.3  | 55.1  | 53.2  | 52.8   | 214.5  | 54.1             | 56.0            | 54.0            | 53.9            | 218.0  |
| Beginning commercial stocks                 | 12.3   | 12.7  | 16.0  | 17.9  | 16.3   | 12.7   | 13.5             | 16.8            | 18.5            | 16.0            | 13.5   |
| Imports                                     | 7.0    | 1.5   | 1.4   | 1.5   | 1.6    | 6.0    | 1.3              | 1.4             | 1.4             | 1.6             | 5.7    |
| Total supply                                | 230.8  | 67.6  | 72.5  | 72.6  | 70.7   | 233.2  | 69.0             | 74.1            | 73.9            | 71.5            | 237.2  |
| Commercial exports                          | 8.4    | 2.1   | 2.5   | 2.3   | 2.4    | 9.3    | 2.2              | 2.6             | 2.4             | 2.3             | 9.6    |
| Ending commercial stocks                    | 12.7   | 16.0  | 17.9  | 16.3  | 13.5   | 13.5   | 16.8             | 18.5            | 16.0            | 12.8            | 12.8   |
| 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                     | 209.6  | 49.5  | 52.1  | 54.0  | 54.8   | 210.4  | 50.0             | 53.1            | 55.4            | 56.3            | 214.8  |
| Skim solids (billion pounds milk equiv.)    |        |       |       |       |        |        |                  |                 |                 |                 |        |
| Milk marketings                             | 211.4  | 53.3  | 55.1  | 53.2  | 52.8   | 214.5  | 54.1             | 56.0            | 54.0            | 53.9            | 218.0  |
| Beginning commercial stocks                 | 9.2    | 9.5   | 10.5  | 11.6  | 12.1   | 9.5    | 11.8             | 11.9            | 12.4            | 11.6            | 11.8   |
| Imports                                     | 6.5    | 1.7   | 1.5   | 1.4   | 1.5    | 6.1    | 1.5              | 1.4             | 1.5             | 1.5             | 5.9    |
| Total supply                                | 227.1  | 64.5  | 67.0  | 66.2  | 66.5   | 230.0  | 67.4             | 69.3            | 67.8            | 67.0            | 235.7  |
| Commercial exports                          | 39.0   | 9.8   | 10.3  | 9.7   | 11.0   | 40.8   | 10.4             | 11.0            | 10.7            | 10.7            | 42.8   |
| Ending commercial stocks                    | 9.5    | 10.5  | 11.6  | 12.1  | 11.8   | 11.8   | 11.9             | 12.4            | 11.6            | 11.3            | 11.3   |
| 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                     | 178.5  | 44.3  | 45.2  | 44.4  | 43.6   | 177.5  | 45.1             | 45.9            | 45.5            | 45.1            | 181.6  |
| Milk prices (dollars/cwt) 1                 |        |       |       |       |        |        |                  |                 |                 |                 |        |
| All milk                                    | 16.30  | 18.23 | 16.83 | 17.70 | 17.73  | 17.63  | 15.55            | 15.25           | 15.60           | 16.60           | 15.75  |
| ,   | 10.00  | 10.20 | 10.00 |       |        |        | -15.75           | -15.75          | -16.40          | -17.60          | -16.35 |
| Class III                                   | 14.87  | 16.49 | 15.74 | 16.13 | 16.34  | 16.17  | 13.70            | 14.15           | 14.50           | 14.85           | 14.30  |
|   |        |       |       |       |        |        | -13.90           | -14.65          | -15.30          | -15.85          | -14.90 |
| Class IV                                    | 13.77  | 15.37 | 14.80 | 16.36 | 14.12  | 15.16  | 12.90            | 13.15           | 13.30           | 13.65           | 13.25  |
|   |        |       |       |       |        |        | -13.20           | -13.75          | -14.20          | -14.75          | -13.95 |
| Product prices (dollars/pound) <sup>2</sup> |        |       |       |       |        |        |                  |                 |                 |                 |        |
| Cheddar cheese                              | 1.605  | 1.648 | 1.555 | 1.623 | 1.712  | 1.634  | 1.495            | 1.525           | 1.560           | 1.590           | 1.545  |
| Cheddar Greese                              | 1.005  | 1.040 | 1.000 | 1.020 | 1.7 12 | 1.004  | -1.515           | -1.575          | -1.640          | -1.690          | -1.605 |
| Dry whey                                    | 0.288  | 0.485 | 0.509 | 0.434 | 0.347  | 0.444  | 0.250            | 0.270           | 0.265           | 0.285           | 0.265  |
| Dry whoy                                    | 0.200  | 0.400 | 0.505 | 0.404 | 0.547  | 0.444  | -0.270           | -0.300          | -0.295          | -0.315          | -0.295 |
| Butter                                      | 2.078  | 2.200 | 2.229 | 2.597 | 2.295  | 2.330  | 2.145            | 2.200           | 2.265           | 2.235           | 2.210  |
| Duttei                                      | 2.076  | 2.200 | 2.229 | 2.591 | 2.293  | 2.330  | -2.145<br>-2.185 | -2.280          | -2.375          | -2.365          | -2.300 |
| Nonfat dry milk                             | 0.829  | 0.955 | 0.974 | 0.874 | 0.763  | 0.867  | 0.605            | 0.600           | 0.690           | 0.725           | 0.700  |
| Nonfat dry milk                             | 0.829  | 0.955 | 0.874 | 0.674 | 0.763  | 0.867  | 0.695<br>-0.715  | 0.690<br>-0.730 | 0.680<br>-0.740 | 0.735<br>-0.805 | -0.750 |
|   | I      | ĺ     |       |       |        |        |                  |                 |                 |                 |        |

Totals may not add due to rounding.

Sources: USDA, National Agricultural Statistics Service; USDA, Agricultural Marketing Service; USDA, Foreign Agricultural Service; and USDA, 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://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1350.

<sup>&</sup>lt;sup>1</sup> Simple averages of monthly prices. May not match reported annual averages.

 $<sup>^2</sup>$  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*.