Total U.S. corn supply for 2017/18 is projected at 16.4 billion bushels, compared with 16.9 billion in 2016/17. Corn acreage is projected at 90.0 acres, down 4 million from last year. Corn food, seed, and industrial (FSI) use in 2017/18 is projected 80 million bushels over last year at 7.0 billion, with increases in corn for ethanol, high fructose corn syrup, and starch. This increase is offset by a 75-million-bushel decrease in projected feed and residual to 5.40 billion. Exports are projected down 350 million bushels to 1.9 billion for total use at 14.3 billion. Ending stocks, while still high, are down 185 million bushels to 2.1 billion. The forecast 2017/18 average price received by farmers is unchanged at $3.40 per bushel.

Coarse grain production is forecast to be lower than use, as declining prices in 2016/17 are expected to encourage coarse grain consumption, though about half of the increase in use is projected for China. World coarse grain ending stocks for 2017/18 are projected down 15 percent from a year earlier, with corn stocks taking the lead in total decline. Global corn ending stocks are expected to fall, the first year-over-year drop since 2010/11 and the lowest absolute level since 2013/14. The largest stock decline is forecast for China and, to a lesser extent, for the United States.
Feed Grain Supplies Lower But Still Second Highest on Record

Projected U.S. 2017/18 feed grain supplies are 4 percent below last year’s at 435.7 million metric tons but are still the second highest ever after the 2016 crop. Beginning stocks are higher than those in 2016/17, at 62.3 million tons, and imports are nearly unchanged. Production of 370.1 million tons is projected 32.1 million tons below last year. The smaller expected crop is partially due to a decline in yields and some producers switching to soybeans from corn in response to relatively low corn prices.

Feed and Residual Use

Projected U.S. 2017/18 feed and residual use for the four feed grains (corn, sorghum, barley, and oats) and wheat is 146.9 million metric tons this month, 4.6 million lower than last year’s 151.5 million on a September-August marketing-year basis. Feed and residual per grain consuming animal unit (GCAU) is projected at 1.52 tons per GCAU, 0.06 tons below last year’s estimated 1.58 tons.

Grain Consuming Animal Units Projected Higher

Grain consuming animal units for 2017/18 are initially projected at 97.0 million units, compared with 96.0 million units last year, driven largely by increasing hog and poultry numbers. Feed and residual use per GCAU is projected at 1.51 tons per GCAU, 0.14 tons per GCAU lower than 2016/17.

New-Crop Corn Production Forecast 7 percent Below Last Year, Supplies Down

Projected U.S. 2017/18 corn production is down 7 percent from last year to 14,065 million bushels but is still the third highest ever after the 2016 and 2014 crops. Planted area is projected at 90.0 million acres, 4 million below last season. Harvested area, after adjusting for silage production and losses, is expected to reach 82.4 million
A weather-adjusted trend yield (based on normal planting progress and summer weather) of 170.7 bushels per acre results in a 1,083-million bushel decline in crop size.

Beginning stocks of 2,295 million bushels are the highest since 1988/89. Adding production and imports results in the second largest supply on record—16,410 million bushels.

As of May 7, 47 percent of the crop had been planted in the major producing States according to USDA’s National Agricultural Statistics Service (NASS) Crop Progress report. This is below the 5-year average of 52 percent and well short of last year's faster start when 61 percent was planted. In Iowa, the leading producing State, plantings were 52 percent complete, compared with the average of 55 percent. However, in the eastern Corn Belt, plantings were ahead of the normal pace in spite of recent heavy rains.

Corn emergence is also behind normal. In the 18 States surveyed by NASS, 15 percent of the crop had emerged as of May 7, compared with 25 percent for the 2016 crop at this point. Average emergence for 2012-16 was 19 percent at this point. In Iowa, the largest corn-producing State, emergence was 7 percent, 18 percent below last year at this time and 8 percent behind the 5-year average.

Sorghum production is projected to decrease 31 percent to 331 million bushels, based on harvested area of 4.9 million acres and a projected yield of 67.1 bushels per acre assuming normal growing conditions. The crop is 149 million bushels smaller than last year’s on an acreage reduction of 0.9 million acres and a yield decline of 10.8 bushels per acre.

As of May 7, 30 percent of the crop had been planted in the major producing States, on track with the average and just ahead of last year when 29 percent was planted. In Texas, the leading producing State, plantings were 76 percent complete compared with the average of 69 percent. Sorghum planting in Kansas, the second largest producing State, are barely under way at 1 percent. Rainfall slowed planting progress in the lower Mississippi Valley.

Barley production is projected at 159 million bushels, down 20 percent from 2016/17. The average barley yield is projected at 72.6 bushels per acre, based on the 1990-2016 trend, down from 77.9 bushels last year. Planted acres are expected to fall 0.6 million acres from a year earlier, the lowest since USDA began reporting planted barley.
acres in 1929. Harvested acres, based on historical average harvested-to-planted ratios, is projected at 2.2 million acres. Barley prices are projected the lowest since 2010, as prices for competing spring wheat and other feed grains are also relatively low, limiting gains.

As of May 8, 53 percent of the barley crop had been planted in the major producing States, well behind the 5-year average of 68 percent and well behind last year when 76 percent was planted. In Idaho, the leading producing State, plantings were 73 percent complete compared with the average of 89 percent. Barley planting in North Dakota, the second largest producing State, reached 39 percent this week, while those in the third largest producing State, Montana were 52 percent behind the normal pace.

Oats production is projected at 67 million bushels, up 1.6 million from 2016/17. Planted acres are expected to decline to 2.7 million acres, the lowest since 2014/15, continuing the long-term downtrend. Harvested acres, based on historical average harvested-to-planted ratios, is projected at 1 million acres, up slightly. The average yield, based on the 1990-2016 trend, is projected to rise slightly to 67.0 bushels per acre from 66.0 bushels last year.

As of May 8, 79 percent of the oat crop had been planted in the major producing States, right at the 5-year average. In South Dakota, the leading producing State, plantings were 94 percent complete, compared with the average of 82 percent. Planting in North Dakota, the second largest producing State, reached 48 percent this week.

**Corn for Ethanol Boosts Food, Seed, and Industrial Use in 2017/18**

Corn use to produce fuel ethanol in 2017/18 is projected 50 million bushels higher than that in 2016/17 at 5,500 million bushels. The increase is supported by higher gasoline consumption on a crop-year basis; continued strong export prospects for Brazil, India, the Philippines, and the United Arab Emirates; and lower sorghum use for ethanol production. In addition, the U.S. Energy Information Administration (EIA) projects sideways retail gasoline prices and increased vehicle miles driven for the period. Along with the increase in ethanol is a 10-million-bushel increase in corn for high fructose corn syrup to 490 million bushels based on continued demand in the food manufacturing industry. Corn for glucose and dextrose is projected 10 million bushels higher as use for synthetic polymers, vitamins, and manufacturing products such as cups, caps, paper coatings, fabrics, and carpets expands. A 5-million-bushel increase in corn used for starch is supported by an upward trend in housing starts, which boosts drywall production, and use for paper products as the economy expands. Combined with small increases in corn used for beverage and manufacturing and cereals and other products, projected FSI corn use is projected at 7,000 million bushels, 80 million greater than the forecast for 2016/17.
Corn Exports Slip in 2017/18

U.S. corn exports are projected to decrease 350 million bushels in September-August 2017/18 to 1,875 million. Competitor corn shipments in Brazil and Argentina are forecast to rise sharply for the local marketing year 2016/17 (March 2017 to February 2018), dampening U.S. prospects. So far this marketing year, the major buyers of U.S. corn have been Mexico, Japan, South Korea and Colombia. Brazil, Argentina, and the Ukraine, major competitors in the global corn market, are projected to ship 1.4 billion bushels more corn this year than last, increasing pressure on U.S. exports.

Source: USDC, U.S. Census Bureau.

Figure 3
U.S. fuel ethanol exports
1,000 gal.

Source: USDC, U.S. Census Bureau.

Figure 4
U.S. corn for ethanol use by quarter

Source: USDA, National Agricultural Statistics Service, Grains Crushings and Co-Products Production.
Feed and Residual Use Down for Out Year

Corn feed and residual use for 2017/18 is projected at 5,425 million bushels, 75 million below the 2016/17 estimate of 5,500 million. Reduced supplies and higher FSI use (offset lower exports) are behind the decline.

Projected Corn Price Unchanged From Last Year

The projected range for the 2017/18 season-average corn price received by farmers is $3.00 to $3.80 per bushel, leaving the midpoint unchanged from last year at $3.40 per bushel.

2016/17 Use Increases on Higher FSI

For 2016/17, corn for FSI use is projected at 6,920 million bushels, 25 million higher than April’s projection, due to an increase in projected corn used to produce glucose and dextrose. Total FSI is now projected at 6,920 million bushels, and total use is raised to 14,645 million bushels. As a result, 2016/17 ending stocks are reduced 25 million bushels to 2,295 million.
Sorghum Use Declines

Total 2017/18 U.S. sorghum use is projected down 115 million bushels from last year to 355 million. Feed and residual is lowered 75 million bushels to 55 million on the downturn in production. FSI use is projected down 15 million bushels, also due to the short crop and the price relationship to corn, both of which discourage grinding sorghum for ethanol.

U.S. sorghum exports are projected to decrease 25 million bushels in 2017/18 to 200 million due to tightening supplies caused primarily by lower production. In addition, China is not expected to be a large buyer as it has been in past years. Sorghum ending stocks are projected at 23.9 million bushels, about half of last year’s level.
Projected Sorghum Price Down From Last Year

The projected range for the 2017/18 season-average sorghum price received by farmers is $2.60 to $3.40 per bushel, leaving the midpoint of $3.00, $0.30 higher than last year. Tight supplies and low ending stocks are behind the change.

Barley Use Declines

Total barley use is projected down 25 million bushels to 193 million, compared with 2016/17, with lower feed and residual accounting for the downward shift. FSI and exports are unchanged from 2016/17. Ending stocks are projected at 76.4 million bushels, 19 million below last year’s estimate.
The projected range for the 2017/18 season-average barley price received by farmers is $4.35 to $5.35 per bushel for a midpoint of $4.85 per bushel, $0.10 below last year.

**Figure 10**

**U.S. sorghum for ethanol use by quarter**

<table>
<thead>
<tr>
<th>Million bu</th>
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<tbody>
<tr>
<td>2014/15 I</td>
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<tr>
<td>2014/15 II</td>
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<td>2014/15 III</td>
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<td>2014/15 IV</td>
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<td>2015/16 IV</td>
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<tr>
<td>2016/17 I</td>
</tr>
<tr>
<td>2016/17 II</td>
</tr>
</tbody>
</table>

Note: 2014/15 II and III contain months for which data was withheld to avoid disclosing data for individual operations.
Source: USDA, National Agricultural Statistics Service, *Grain Crushings and Co-Products*

**Oats Disappearance Slightly Less in 2017/18**

Total oats disappearance in 2017/18 is projected up 1 million bushels to a total of 172.0 million bushels. A 2-million-bushel increase in FSI use is offset by a 1-million bushel decline in exports. Feed and residual is expected to be unchanged in 2017/18 at 90 million bushels. FSI use is raised based on population growth contributing to increased use of oats in food products. Exports are projected to decline 1 million bushels to 2.0 million from the past year based on increased shipments by other oats producers. Ending stocks are expected at 40.6 million bushels, 5 million below last season and the lowest since 2013/14.

The projected range for the 2017/18 season-average oats price received by farmers is $1.95 to $2.45 per bushel for a midpoint of $2.20 per bushel, $0.15 above last year.
Hay Harvested Acres Prospects Lowered for 2017

The May 10 NASS Crop Production report indicates May 1, 2017, U.S. onfarm hay stocks totaled 24.4 million tons, a 3-percent decrease from the 2016 figure of 25.1 million. With December 1, 2016, stocks reported at 95.8 million tons, the implied December-May disappearance is 71.4 million, slightly higher than the disappearance indicated for the same period in 2015/16. For 2017, producers intend to harvest 52.8 million acres of all types of hay, 650,000 below the area harvested in 2016. Prices for the 2016/17 marketing year are $132 per ton for all hay, down from the 2015/16 price of $145 per ton, a reflection of continuing low prices for alternative feeds.
Foreign Coarse Grain Production Projected To Reduce Slightly in 2017/18

Global coarse grain production in 2017/18 is projected to reach 1,311.8 million tons, down about 1 percent, or 46.3 million tons, from the previous year’s record. While U.S. coarse grain production in 2017/18 is projected to slip 32.2 million tons, or 8 percent, from a year earlier, foreign production is expected to decline by merely 14.1 million tons. Because spring planting is still underway in the Northern Hemisphere and remains months away in the Southern Hemisphere, where the 2016/17 crop is still being harvested, these projections are highly tentative.

Figure 12: World corn area, production, and yield: 5-year average, 2016 and a forecast for 2017

Area in million hectares; Production in million tons

Yield, tons per hectare

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

World corn production is dominated by just 8 countries (regions) that produce more than 80 percent of the corn in the world. The United States is the top producer, though its world output share that used to be slightly above 40 percent has moved to under 40 percent since 2010. During the same period, the combined shares of Brazil and Argentina increased from 10 to 13 percent (see figure 12).
Relatively low current coarse grain prices in some areas are a disincentive to expand area, and some major producers, such as the United States, are reducing corn area in favor of more profitable crops. In other countries, such as China, eliminating state price support for corn reduced incentives and returns and is causing area to contract. On the other hand, prices in many countries, though relatively low, remain attractive enough to maintain area. Higher coarse grain area in South American countries—Brazil, Argentina, and Paraguay—as well as in the European Union (EU), Russia, and Ukraine, partly offset area drops in the United States and China. Foreign area decline is small, down just 0.4 percent. (See map 1 and figure 14).

An assumed return to trend from the previous year’s bumper yields in Brazil, Ukraine, Mexico, Russia, South Africa, and a number of other countries lead to a small decline of foreign yields for each type of coarse grain, except mixed grains.

USDA monitors production of various commodities in 80 countries, the data being recorded and continuously updated by the Foreign Agricultural Service (FAS) and reflected in FAS’s Production, Supply, and Distribution database (https://apps.fas.usda.gov/psdonline/app/index.html#/app/home). The most important developments in the new forecast for major commodities are published in FAS’s World Agriculture Production report, as well as in the special articles and features; see https://www.pecad.fas.usda.gov/.
Map 1: Major changes in corn production for 2017/18

Figure 15: Foreign corn area, production, and yield: 5-year average, 2016 and a forecast for 2017

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.
Corn area and yield changes are uneven among the regions in the world, and the fastest to expand its corn area is by far the former Soviet Union (FSU) region, mainly Ukraine and Russia, countries that produced little corn in the past (see figure 16). Importantly, these countries have also become significant, albeit smaller, corn exporters, with combined exports of both countries increasing twelvefold over the last decade.

**Figure 16: Corn area growth rates are remarkably high in the FSU region**

![Graph showing corn area growth rates for different regions](image)

Note: Index, 1997-2001 = 100

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

After the early 1990s, when the former state and collective farms were forced to reorganize, a requirement to be self-financing and new decision making freedom previously denied to them allowed these farms to switch to more profitable crops, mainly corn, sunflowerseed, and soybeans, at the expense of rye, barley, oats, and pastures. The two countries became more integrated into the world agricultural economy, such that trade, foreign agricultural investment, and technology transfer all expanded. All these developments have helped to drive the expansion of corn area and yields (see figure 17). Both countries became major importers of hybrid corn seed from the West, and their domestic seed industry is growing. Though their corn output is still small compared to the largest world producers, Ukraine has become a major corn exporter, behind the United States, Brazil, and Argentina.
The South America region, one of the most dynamic and fast-growing corn producers in the world, is forecast to produce 158.8 million tons of coarse grains in 2017/18, virtually on par with 2016/17. Corn is the region’s dominant grain, and both Brazil and Argentina are expected to increase corn area further to record highs. However, a return to trend yields takes Brazilian production down year-over-year by 1.5 million tons to 95.0 million, while Argentine corn output is projected to stay flat with a return to trend yield. Brazilian farmers are expected to continue to expand area of their low-cost second-crop (safrinha) corn area, converting pastures and idle land to soybeans and corn. The first-crop corn area, which is about one-third of total planted area, keeps declining, but this decline cannot offset the expansion of safrinha area where there are few limitations on area expansion in the Center-West. (see “COUNTRY FOCUS – BRAZIL. Second Crop Corn Area Expansion and Rising Yields Continue to Boost Brazilian Exports” in the ERS report: http://usda.mannlib.cornell.edu/usda/ers/FDS//2010s/2016/FDS-12-14-2016.pdf).

In Argentina, the reforms eliminating taxes and quotas for corn exports boosted farmers’ incentives to expand area. The reforms reversed trade protection policies that had burdened farmers for the past 15 years. Argentina is one of the world’s lowest cost producers of grain (as well as of oilseeds and beef) and is expected to continue to expand its market share of world grain production and exports. See also “Corn and Soybean Production Costs and Export Competitiveness in Argentina, Brazil, and the United States,” https://www.ers.usda.gov/publications/pub-details/?pubid=44093

Coarse grain production in China, the largest foreign producer of coarse grains, is expected to decrease 4.4 million tons in 2017/18 to 223.0 million tons, despite record-high projected yields. China is projected to reduce area planted to corn by almost 5 percent (1.8 million hectares), as elimination of Government support followed by a sharp decline in corn prices lowered incentives for corn production. The Government is providing support to feed producers and industrial processors to stimulate higher usage of domestic corn, decelerating a decline in corn prices.
Coarse grain production in the EU is projected up 3.0 million tons to 155.0 million in 2017/18, as increased area (corn) and output is likely in several countries that suffered from hot, dry summer conditions in 2016/17 (such as France and Romania). However, the high price of rapeseed is expected to limit the expansion of coarse grain area in the EU region.

Coarse grain production in Sub-Saharan Africa is projected down 3.8 million tons to 105.9 million. The largest corn producer, South Africa, is projected to have a crop of 12.5 million tons, down 2.8 million from the previous record year. A reduction in corn area is expected, while yields are unlikely to match the record of the last year. Nigeria’s production is expected to decrease with some area decline.

In India, where most coarse grains are used for food, a year-over-year reduction in production of 2.0 million tons is expected in 2017/18 with a return to trend yields. While 2016 monsoon rains secured good conditions for last year’s summer crops, the 2017 monsoon expected to begin in September will be critical for the current production forecasts.

**World Coarse Grain Use To Grow Slowly in 2017/18**

Increased competition among exporters and sharply lower prices in 2016/17 boosted coarse grain feed and residual use around the globe by an estimated 4 percent, with an 8-percent increase in the United States, driven largely by a record corn crop. In the following year of 2017/18, prices are expected to remain attractive for users, but the growth in domestic consumption of coarse grains is projected to slow to less than 1 percent, partly on account of a reduction of (mainly sorghum) consumption in the United States. While global corn use is up, the reductions in world barley and sorghum consumption are partly offsetting.

Foreign feed and residual use of coarse grains is forecast to grow by 2.3 percent in 2017/18 to a record 671.1 million tons, generally consistent with the growth rate of just under 3 percent seen over the past two decades. The Chinese policy of supporting feed producers encourages a shift to corn in feed rations at the expense of sorghum and barley. China is expected to feed almost 3 million tons more of coarse grains (4.0 million tons more of corn, 0.8 million tons less of barley, and 0.3 million tons less sorghum). An increase in animal numbers is expected in many countries as GDP growth supports higher per capita consumption of animal protein, and feeding is adjusted accordingly.

Foreign food, seed, and industrial (FSI) use of coarse grains is projected to stay almost flat with a growth of 2.1 million tons, or about 0.5 percent, in 2017/18 to 344.1 million tons. Expansion in China of the corn processing industry for both domestic use and exports promotes increased corn use. This month, historical revisions were made to China’s oat balance sheet based on area and production data available from China’s *Rural Statistical Yearbook*. With the expansion of food processing capacity in both the north and south, there has been robust growth in the use of imported oats for food in China (particularly from Australia), and although small in volume, the trend is strong. Chinese FSI use of coarse grains is expected to be up 1.9 million tons, almost the same as the increase in total foreign FSI, as other countries’ changes are largely offsetting.

The most important trends in the world balance and trade for grains are presented in FAS’s *Wheat: World Markets and Trade* report, see [https://apps.fas.usda.gov/psdonline/circulars/grain.pdf](https://apps.fas.usda.gov/psdonline/circulars/grain.pdf)

**China Leads Coarse Grain Stocks’ Decline**

With coarse grain production forecast to be lower than use, projected world ending stocks for 2017/18 are 221.4 million tons, down 38.1 million from a year earlier. Global corn ending stocks are expected to decline 28.6 million tons to 195.3 million, the first year-over-year decline since 2010/11 and the lowest
absolute level since 2013/14. Barley is projected to decline by 7.2 million tons, sorghum by 1.3 million tons, and by smaller amounts for all other coarse grains. With a 5.8-million-ton decline in U.S coarse grain stocks, foreign stocks are projected down by 32.3 million.

**Figure 18:** World 2017/18 coarse grain use to surpass output, driving stocks down

<table>
<thead>
<tr>
<th>Billion tons</th>
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<tbody>
<tr>
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Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

A decline in foreign coarse grain stocks is driven mainly by China, where they are projected to drop in 2017/18 by a whopping 20 percent, or 20.5 million tons, to 82.1 million. China’s share in world corn stocks is projected to fall to 42 percent from 52 percent 2 years ago (2015/16), before the policy reforms aimed at reducing huge Government-owned corn stocks were implemented. Still, the share of Chinese stocks is twice as large as the country’s share of global corn output (see figure 19).

**Figure 19 -- China: share in global corn stocks is still twice the share in output**

<table>
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<td>50</td>
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<td>60</td>
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Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.
EU coarse grain stocks are projected down 1.0 million tons to 12.5 million. Ending stocks are projected 1.6 million tons lower in the FSU, and up slightly in Brazil. Declines are expected for Canada and several other countries.

**U.S. 2017/18 Corn Export Prospects Face Tough Competition**

Global corn trade in October-September 2017/18 is projected to reach 149.7 million tons, up 3.7 million from corn trade forecast for 2016/17. For many importers, attractive corn prices and expanding meat production combine to support an increase in corn imports.

**Map 2: Major changes in corn imports for 2017/18**

Ample supplies in most exporting countries in 2017/18 are expected to support strong competition and limit price increases. The shift in global corn production in favor of **South American** and **FSU** countries modified global trade, with the U.S. share of world corn trade trending lower (see figure 20).
U.S. corn exports in 2017/18 (October-September) are projected to reach just 47.5 million tons, down 8.5 million from the previous year (for the September-August local marketing year, U.S. exports are projected at 1.9 billion bushels, down from 2.2 billion). Competition from South America is expected to weigh down on U.S exports. Marketings of the record 2016/17 Brazilian crop that is going to begin in July-August and continue through March 2018 is expected to affect export markets going into the 2017/18 October-September trade year. Use of the subsidy program is expected to influence the pace of sales and shipments. The Government has just announced a release of funds to support corn marketing. In addition, after a period of appreciation, the Brazilian Real has recently started to depreciate vis-à-vis both the U.S. dollar and Argentine peso. If that continues, it could boost export activity further. Brazilian corn exports are expected to reach 33.0 million tons, up 10.0 million, a large increase after the results of the previous year, though still below the record of 2015/16. Argentina, with a large crop in 2016/17, is projected to increase exports 0.5 million tons to 27.5 million supported by high supplies and the lack of Government market interference. Even Paraguay’s corn exports are forecast up 0.2 million tons to 2.5 million. Outside of South America, Ukraine, Russia, and Canada are expected to increase corn exports. High projected output and access to the lucrative EU market is expected to boost Ukrainian corn exports 1.0 million tons to 20.0 million. Ample corn supplies in Russia support a 0.2-million-ton increase in corn exports to 5.5 million. Higher projected corn output in Canada is expected to support a rebound in corn exports, up 0.4 million tons to 1.5 million.
Map 3: Major changes in corn exports for 2017/18

Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.
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Feed Monthly Tables, (http://www.ers.usda.gov/publications/fds-feed-outlook/)

Data
Feed Grains Database (http://ers.usda.gov/data-products/feed-grains-database.aspx) is a queryable database that contains monthly, quarterly, and annual data on prices, supply, and use of corn and other feed grains. This includes data published in the monthly Feed Outlook and the annual Feed Yearbook reports.

Related Websites
Feed Outlook (http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1273 WASDE)
Grain Circular (http://www.fas.usda.gov/grain/Current/default.asp)
World Agricultural Production (http://www.fas.usda.gov/wap_arc.asp)
Corn Briefing Room (http://ers.usda.gov/topics/crops/corn.aspx)

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<table>
<thead>
<tr>
<th>Commodity, market year, and quarter</th>
<th>Beginning stocks</th>
<th>Production</th>
<th>Imports</th>
<th>Food, seed, and industrial use</th>
<th>Feed and residual use</th>
<th>Exports</th>
<th>Total disappearance</th>
<th>Ending stocks</th>
<th>Farm price 2/ (dollars per bushel)</th>
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<td>1,615</td>
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<td>200.00</td>
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<td>23.89</td>
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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 5/12/2017

Feed Outlook / FDS-17e / May 12, 2017
Economic Research Service, USDA
Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 5/12/2017

<table>
<thead>
<tr>
<th>Commodity, market year, and quarter 1/</th>
<th>Beginning stocks</th>
<th>Production</th>
<th>Imports</th>
<th>Total supply</th>
<th>Food, seed, and industrial use</th>
<th>Feed and residual use</th>
<th>Exports</th>
<th>Total disappearance</th>
<th>Ending stocks</th>
<th>Farm price 2/ (dollars per bushel)</th>
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<tr>
<td>Jun-Aug</td>
<td>82</td>
<td>182</td>
<td>5</td>
<td>271</td>
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<td>48</td>
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<td>146</td>
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<td>4</td>
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<td>4.86</td>
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<tr>
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<td>287</td>
<td>152</td>
<td>43</td>
<td>14</td>
<td>209</td>
<td>79</td>
<td>5.30</td>
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</table>

| 2015/16                              |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Jun-Aug                              | 79               | 218        | 4       | 301          | 40                            | 38                    | 3       | 82               | 219          | 5.39                             |
| Sep-Nov                              | 219              | 223        | 4       | 223          | 38                            | 0                     | 4       | 43               | 180          | 5.52                             |
| Dec-Feb                              | 180              | 187        | 7       | 187          | 37                            | 10                    | 3       | 50               | 138          | 5.66                             |
| Mar-May                              | 138              | 141        | 4       | 141          | 38                            | 1                     | 1       | 39               | 102          | 5.43                             |
| Mkt yr                               | 79               | 218        | 19      | 315          | 153                           | 50                    | 11      | 213              | 102          | 5.52                             |

| 2016/17                              |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Jun-Aug                              | 102              | 199        | 2       | 304          | 40                            | 32                    | 1       | 73               | 230          | 4.99                             |
| Sep-Nov                              | 230              | 232        | 2       | 232          | 39                            | 0                     | 1       | 40               | 193          | 4.73                             |
| Dec-Feb                              | 193              | 195        | 7       | 195          | 37                            | 10                    | 1       | 48               | 147          | 5.04                             |
| Mkt yr                               | 102              | 199        | 12      | 313          | 153                           | 60                    | 5       | 218              | 95           | 4.95                             |

| 2017/18                              |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Mkt yr                               | 95               | 159        | 15      | 269          | 153                           | 35                    | 5       | 193              | 76           | 4.35-5.35                        |

| Oats 2014/15                         |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Jun-Aug                              | 25               | 70         | 27      | 122          | 18                            | 30                    | 1       | 48               | 74           | 3.34                             |
| Sep-Nov                              | 74               | 99         | 25      | 99           | 18                            | 14                    | 0       | 32               | 67           | 3.16                             |
| Dec-Feb                              | 67               | 99         | 32      | 99           | 17                            | 22                    | 0       | 40               | 59           | 3.08                             |
| Mar-May                              | 59               | 84         | 25      | 84           | 24                            | 6                     | 1       | 31               | 54           | 2.89                             |
| Mkt yr                               | 25               | 109        | 70      | 204          | 77                            | 71                    | 2       | 150              | 54           | 3.21                             |

| 2015/16                              |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Jun-Aug                              | 54               | 90         | 18      | 161          | 18                            | 49                    | 0       | 68               | 94           | 2.15                             |
| Sep-Nov                              | 94               | 120        | 26      | 120          | 18                            | 19                    | 1       | 37               | 83           | 2.08                             |
| Dec-Feb                              | 83               | 108        | 25      | 108          | 17                            | 15                    | 0       | 33               | 75           | 2.09                             |
| Mar-May                              | 75               | 91         | 16      | 91           | 24                            | 10                    | 1       | 34               | 57           | 2.11                             |
| Mkt yr                               | 54               | 90         | 86      | 229          | 77                            | 93                    | 2       | 172              | 57           | 2.12                             |

| 2016/17                              |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Jun-Aug                              | 57               | 65         | 21      | 142          | 18                            | 45                    | 1       | 64               | 79           | 1.86                             |
| Sep-Nov                              | 79               | 106        | 28      | 106          | 19                            | 12                    | 1       | 31               | 75           | 2.03                             |
| Dec-Feb                              | 75               | 100        | 24      | 100          | 18                            | 18                    | 1       | 37               | 63           | 2.35                             |
| Mkt yr                               | 57               | 95         | 65      | 217          | 78                            | 90                    | 3       | 171              | 46           | 2.05                             |

| 2017/18                              |                  |            |         |              |                               |                       |         |                  |              |                                  |
| Mkt yr                               | 46               | 67         | 100     | 213          | 80                            | 90                    | 2       | 172              | 41           | 1.95-2.45                        |

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.
1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year.
2/ Average price received by farmers based on monthly price weighted by monthly marketings. For the latest market year, quarterly prices are calculated by using the current monthly prices weighted by the monthly marketings for those months for the previous 5 years divided by the sum of marketings for those months.

Data run: 5/12/2017
### Table 2--Feed and residual use of wheat and coarse grains, 5/12/2017

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<tr>
<th>Market year and quarter 1/</th>
<th>Corn (million metric tons)</th>
<th>Sorghum (million metric tons)</th>
<th>Barley (million metric tons)</th>
<th>Oats (million metric tons)</th>
<th>Feed grains (million metric tons)</th>
<th>Wheat (million metric tons)</th>
<th>Energy feeds (million metric tons)</th>
<th>Energy feeds per grain consuming animal unit</th>
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<td>5.1</td>
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1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year.


### Table 3--Cash feed grain prices, 5/12/2017

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<th>Mkt year and month 1/</th>
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<th>Corn, No. 2 yellow, Gulf ports, LA (dollars per bushel)</th>
<th>Corn, No. 2 yellow, Gulf ports, LA (dollars per cwt)</th>
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<td>7.91 8.08</td>
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<td>8.52 8.23</td>
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<td>4.54 4.22 3.83</td>
<td>9.04 7.89</td>
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<tr>
<td>Dec</td>
<td>3.75 3.62 3.34</td>
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<td>3.67 3.55 3.45</td>
<td>4.44 4.09 4.07</td>
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<td>Feb</td>
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<td>4.41 4.06 4.14</td>
<td>10.70</td>
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<td>4.43 4.05 4.04</td>
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<td>9.97</td>
</tr>
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<td>3.49 3.74</td>
<td>4.23 4.30 7.44</td>
<td></td>
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<tr>
<td>Jun</td>
<td>3.52 3.91</td>
<td>4.24 4.62</td>
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</tr>
<tr>
<td>Jul</td>
<td>3.85 3.28</td>
<td>4.56 4.11</td>
<td></td>
</tr>
<tr>
<td>Aug</td>
<td>3.51 3.09</td>
<td>4.14 3.82 8.09</td>
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</tr>
<tr>
<td>Mkt year</td>
<td>3.53 3.56</td>
<td>4.35 4.18 9.10</td>
<td>8.07</td>
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<table>
<thead>
<tr>
<th></th>
<th>Barley, No. 2 feed, Minneapolis, MN (dollars per bushel)</th>
<th>Barley, No. 3 malting, Minneapolis, MN (dollars per bushel)</th>
<th>Oats, No. 2 white heavy, Minneapolis, MN (dollars per bushel)</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Jun</td>
<td>3.49 2.59 2.36</td>
<td>5.71</td>
<td>3.88 2.89 2.58</td>
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<tr>
<td>Jul</td>
<td>3.01 2.70 2.33</td>
<td>5.62</td>
<td>3.85 2.82 2.61</td>
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<tr>
<td>Aug</td>
<td>2.58 2.41 2.08</td>
<td>5.79</td>
<td>3.83 2.63 2.34</td>
</tr>
<tr>
<td>Sep</td>
<td>2.30 2.39 1.95</td>
<td>5.98 4.95</td>
<td>3.86 2.70 2.29</td>
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<td>2.44 2.57 2.00</td>
<td>7.28 4.95</td>
<td>3.68 2.58 2.67</td>
</tr>
<tr>
<td>Nov</td>
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<td>7.35</td>
<td>3.53 2.67 2.84</td>
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<tr>
<td>Dec</td>
<td>2.68 2.60 2.00</td>
<td>7.35</td>
<td>3.49 2.64 2.92</td>
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<td>7.10</td>
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<td>2.94 2.49 2.86</td>
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<td>May</td>
<td>2.76 2.44</td>
<td>6.23</td>
<td>2.75 2.49</td>
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<td>6.50 4.95</td>
<td>3.44 2.63</td>
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1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year. Simple average of monthly prices for the marketing year.


Data run: 5/11/2017

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Feed Outlook / FDS-17e / May 12, 2017
Economic Research Service, USDA
Table 4--Selected feed and feed byproduct prices (dollars per ton), 5/12/2017

<table>
<thead>
<tr>
<th>Mkt year and month</th>
<th>Soybean meal, high protein, Central Illinois, IL</th>
<th>Cottonseed meal, 41% solvent, Memphis, TN</th>
<th>Corn gluten feed, 21% protein, Midwest</th>
<th>Corn gluten meal, 60% protein, Midwest</th>
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<tbody>
<tr>
<td>Oct</td>
<td>381.50</td>
<td>327.97</td>
<td>323.26</td>
<td>346.88</td>
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<tr>
<td>Nov</td>
<td>441.40</td>
<td>308.60</td>
<td>322.42</td>
<td>313.13</td>
</tr>
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<td>Dec</td>
<td>431.74</td>
<td>289.78</td>
<td>321.03</td>
<td>334.38</td>
</tr>
<tr>
<td>Jan</td>
<td>380.03</td>
<td>279.57</td>
<td>332.34</td>
<td>313.75</td>
</tr>
<tr>
<td>Feb</td>
<td>370.39</td>
<td>273.61</td>
<td>334.32</td>
<td>302.50</td>
</tr>
<tr>
<td>Mar</td>
<td>357.83</td>
<td>276.23</td>
<td>320.34</td>
<td>310.50</td>
</tr>
<tr>
<td>Apr</td>
<td>336.61</td>
<td>303.81</td>
<td>305.67</td>
<td>288.13</td>
</tr>
<tr>
<td>May</td>
<td>320.23</td>
<td>376.36</td>
<td>274.38</td>
<td>242.50</td>
</tr>
<tr>
<td>Jun</td>
<td>335.03</td>
<td>408.58</td>
<td>281.00</td>
<td>284.00</td>
</tr>
<tr>
<td>Jul</td>
<td>375.48</td>
<td>371.49</td>
<td>299.38</td>
<td>280.00</td>
</tr>
<tr>
<td>Aug</td>
<td>357.85</td>
<td>340.80</td>
<td>295.63</td>
<td>280.00</td>
</tr>
<tr>
<td>Sep</td>
<td>333.63</td>
<td>337.95</td>
<td>293.50</td>
<td>285.00</td>
</tr>
<tr>
<td>Mkt yr</td>
<td>368.48</td>
<td>324.56</td>
<td>304.43</td>
<td>260.98</td>
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</table>

Table 5--Corn: Food, seed, and industrial use (million bushels), 5/12/2017

<table>
<thead>
<tr>
<th>Mkt year and qtr 1/</th>
<th>High-fructose corn syrup (HFCS)</th>
<th>Glucose and dextrose</th>
<th>Starch</th>
<th>Alcohol for fuel</th>
<th>Alcohol for beverages and manufacturing</th>
<th>Cereals and other products</th>
<th>Seed</th>
<th>Total food, seed, and industrial use</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015/16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1 Sep-Nov</td>
<td>110.81</td>
<td>72.34</td>
<td>62.30</td>
<td>1,300.20</td>
<td>34.89</td>
<td>50.62</td>
<td>0.00</td>
<td>1,631.16</td>
</tr>
<tr>
<td>Q2 Dec-Feb</td>
<td>108.82</td>
<td>81.40</td>
<td>58.34</td>
<td>1,316.28</td>
<td>36.58</td>
<td>50.43</td>
<td>0.00</td>
<td>1,651.84</td>
</tr>
<tr>
<td>Q3 Mar-May</td>
<td>125.19</td>
<td>90.02</td>
<td>59.43</td>
<td>1,264.80</td>
<td>38.27</td>
<td>50.92</td>
<td>27.93</td>
<td>1,656.55</td>
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<tr>
<td>Q4 Jun-Aug</td>
<td>127.31</td>
<td>85.13</td>
<td>61.67</td>
<td>1,342.34</td>
<td>33.27</td>
<td>51.13</td>
<td>2.63</td>
<td>1,703.48</td>
</tr>
<tr>
<td>MY Sep-Aug</td>
<td>472.13</td>
<td>328.89</td>
<td>241.74</td>
<td>5,223.61</td>
<td>143.00</td>
<td>203.10</td>
<td>30.56</td>
<td>6,643.03</td>
</tr>
</tbody>
</table>

2016/17              |                                 |                      |        |                 |                                        |                           |      |                                   |
| Q1 Sep-Nov           | 113.16                          | 88.84                | 59.90  | 1,343.08        | 35.78                                  | 49.92                      | 0.00 | 1,690.67                          |
| Q2 Dec-Feb           | 106.39                          | 90.20                | 56.08  | 1,371.14        | 36.35                                  | 52.33                      | 0.00 | 1,712.49                          |
| MY Sep-Aug           | 480.00                          | 360.00               | 250.00 | 5,450.00        | 146.00                                 | 204.60                     | 29.40| 6,920.00                          |

2017/18              |                                 |                      |        |                 |                                        |                           |      |                                   |
| MY Sep-Aug           | 490.00                          | 370.00               | 255.00 | 5,500.00        | 149.00                                 | 206.50                     | 29.50| 7,000.00                          |

1/ September-August. Latest data may be preliminary or projected.

Source: Calculated by USDA, Economic Research Service.

Date run: 5/11/2017

Feed Outlook / FDS-17e / May 12, 2017
Economic Research Service, USDA
### Table 6--Wholesale corn milling product and byproduct prices, 5/12/2017

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<th></th>
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<th></th>
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<th></th>
<th></th>
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</thead>
<tbody>
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<td>Sep</td>
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<td>16.71</td>
<td>19.47</td>
<td>18.38</td>
<td>14.20</td>
<td>13.21</td>
<td>37.00</td>
<td>39.00</td>
<td>23.25</td>
<td>26.75</td>
</tr>
<tr>
<td>Oct</td>
<td>17.96</td>
<td>17.06</td>
<td>19.63</td>
<td>18.73</td>
<td>14.29</td>
<td>13.39</td>
<td>37.00</td>
<td>39.00</td>
<td>23.25</td>
<td>26.75</td>
</tr>
<tr>
<td>Nov</td>
<td>17.53</td>
<td>16.89</td>
<td>19.20</td>
<td>18.56</td>
<td>14.95</td>
<td>13.87</td>
<td>37.00</td>
<td>39.00</td>
<td>23.25</td>
<td>26.75</td>
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<tr>
<td>Dec</td>
<td>17.50</td>
<td>16.84</td>
<td>19.17</td>
<td>18.51</td>
<td>14.80</td>
<td>14.23</td>
<td>37.00</td>
<td>39.00</td>
<td>23.25</td>
<td>26.75</td>
</tr>
<tr>
<td>Jan</td>
<td>17.42</td>
<td>17.07</td>
<td>19.09</td>
<td>18.74</td>
<td>14.62</td>
<td>14.05</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td>28.25</td>
</tr>
<tr>
<td>Feb</td>
<td>17.44</td>
<td>17.13</td>
<td>19.11</td>
<td>18.80</td>
<td>14.35</td>
<td>14.20</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td>28.25</td>
</tr>
<tr>
<td>Mar</td>
<td>17.13</td>
<td>17.06</td>
<td>18.92</td>
<td>18.40</td>
<td>14.71</td>
<td>14.41</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td>28.25</td>
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<td>Apr</td>
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<td>16.99</td>
<td>19.37</td>
<td>18.58</td>
<td>14.71</td>
<td>14.29</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td>28.25</td>
</tr>
<tr>
<td>May</td>
<td>18.21</td>
<td>19.88</td>
<td>15.10</td>
<td>15.00</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jun</td>
<td>18.27</td>
<td>19.94</td>
<td>15.40</td>
<td>15.00</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jul</td>
<td>17.03</td>
<td>18.70</td>
<td>15.43</td>
<td>15.00</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td></td>
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<tr>
<td>Aug</td>
<td>16.64</td>
<td>18.31</td>
<td>13.63</td>
<td>13.00</td>
<td>39.00</td>
<td>39.00</td>
<td>26.75</td>
<td></td>
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</tr>
<tr>
<td>Mkt year 2/</td>
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<td>19.23</td>
<td>14.68</td>
<td>14.88</td>
<td>38.33</td>
<td>38.00</td>
<td>25.58</td>
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<td></td>
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</tbody>
</table>

1/ September-August. Latest month is preliminary.
2/ Simple average of monthly prices for the marketing year.
3/ Bulk-industrial, unmodified.
Source: Milling and Baking News, except for corn starch which is from private industry.

### Date run: 5/11/2017

### Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 5/12/2017

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<th></th>
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<tbody>
<tr>
<td>Oats</td>
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<td>1,379</td>
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<td>72</td>
<td>62</td>
</tr>
<tr>
<td>Finland</td>
<td>62</td>
<td>62</td>
<td>34</td>
</tr>
<tr>
<td>All other countries</td>
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<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Total 2/</td>
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<td>1,639</td>
<td>1,475</td>
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<td>Malting barley</td>
<td>334</td>
<td>292</td>
<td>283</td>
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<td>All other countries</td>
<td>28</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td>Total 2/</td>
<td>362</td>
<td>320</td>
<td>284</td>
</tr>
<tr>
<td>Other barley 3/</td>
<td>147</td>
<td>123</td>
<td>116</td>
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<td>All other countries</td>
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<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Total 2/</td>
<td>152</td>
<td>126</td>
<td>119</td>
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1/ Grain only. Market year (June-May) and market year to date.
2/ Totals may not add due to rounding.
3/ Grain for purposes other than malting, such as feed and seed use.

Date run: 5/11/2017

Feed Outlook / FDS-17e / May 12, 2017
Economic Research Service, USDA
<table>
<thead>
<tr>
<th>Export and country/region</th>
<th>2014/15 Mkt year</th>
<th>2015/16 Mkt year</th>
<th>2016/17 Mkt year</th>
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<td>Mexico</td>
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<td>4,371</td>
<td>4,548</td>
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<td>2,964</td>
<td>3,710</td>
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<td>544</td>
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<td>Costa Rica</td>
<td>774</td>
<td>552</td>
<td>431</td>
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<td>China (Mainland)</td>
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<td>Iran</td>
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<td>0.031</td>
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<tr>
<td>Trinidad And Tobago</td>
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<td>92</td>
<td>44</td>
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<td>2,726</td>
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<tr>
<td>Total 2/</td>
<td>47,421</td>
<td>48,202</td>
<td>34,611</td>
</tr>
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<table>
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<th>Sorghum</th>
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<td>China (Mainland)</td>
<td>8,328</td>
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<td>593</td>
<td>416</td>
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<td>Japan</td>
<td>83</td>
<td>79</td>
<td>58</td>
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<tr>
<td>Mexico</td>
<td>21</td>
<td>625</td>
<td>337</td>
</tr>
<tr>
<td>All other countries</td>
<td>17</td>
<td>296</td>
<td>20</td>
</tr>
<tr>
<td>Total 2/</td>
<td>8,935</td>
<td>8,600</td>
<td>5,972</td>
</tr>
</tbody>
</table>

1/ Grain only. Market year (September-August for corn and sorghum, June-May for barley) and market year to date.
2/ Totals may not add due to rounding.