



United States Department of Agriculture

**Outlook**

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# Feed Outlook

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## Corn Use Reduced on Lower Exports and Ethanol

The 2018/19 U.S. corn supply is unchanged this month. Use is projected 100 million bushels lower to 14.8 billion on lower exports and corn use for ethanol. A compensating increase in forecast carryout to 1.8 billion bushels and a 5-cent decline in the projected season average price received by farmers are the result. The projected price is \$3.55 per bushel.

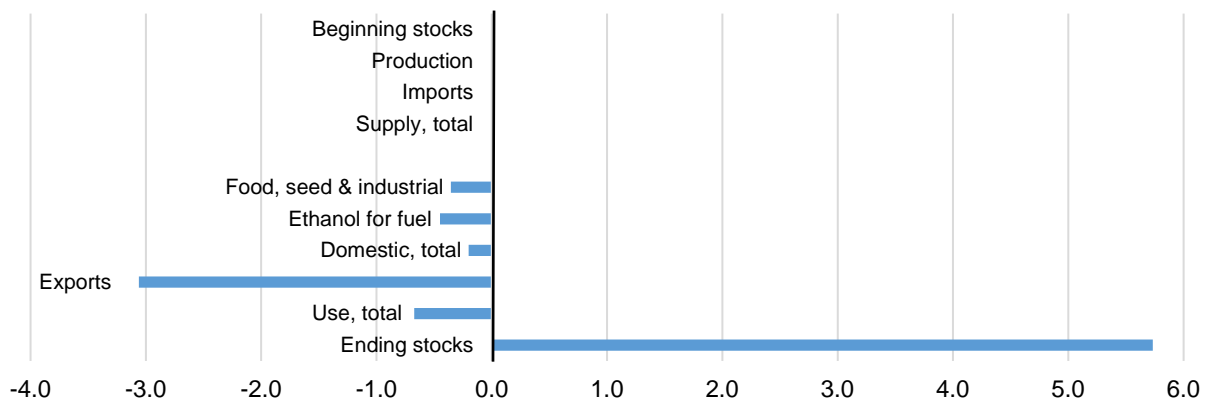
Corn trade is boosted, while the trade in sorghum and oats is reduced. All three major foreign corn exporters—Brazil, Argentina, and Ukraine—see their corn exports grow. Projected U.S. 2018/19 corn exports are lowered this month due to increased competition from South America and Ukraine that is expected to limit U.S. exports, despite record global corn trade expected in 2018/19.

# Domestic Outlook

## U.S. Feed Grain Supply and Use Lowered

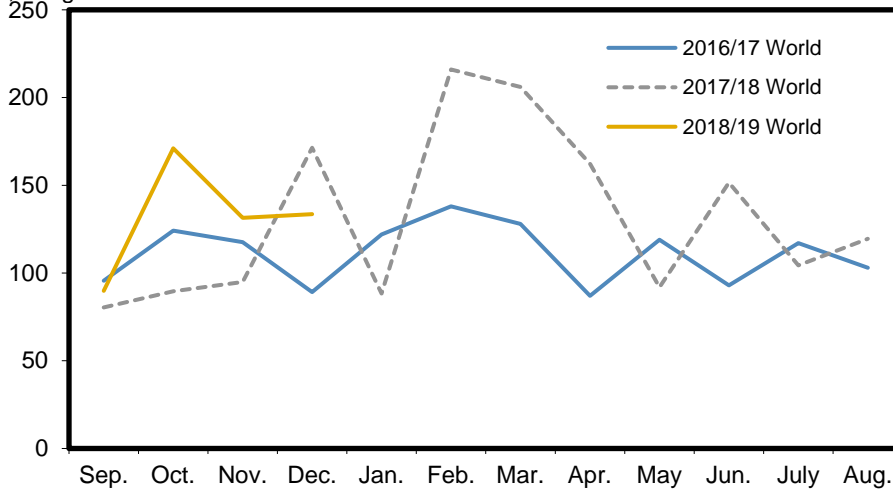
U.S. feed grain supplies for 2018/19 are lowered 0.129 million metric tons on slower imports of oats and barley, based on year-to-date pace. Supplies are projected at 440.4 million tons, 8.6 million below 2017/18. Total disappearance is projected 2.6 million tons lower at 389.6 million. Feed and residual is raised 0.4 million tons to 141.6 as sorghum is raised and oats lowered. Lower corn and sorghum exports and use for ethanol dampen total use this month by 2.6 million tons, resulting in a projection of 389.6 million, slightly below last year's level. Ending stocks are raised 2.5 million tons to 50.8 million.

Figure 1  
**Corn supply and use: percent change from last month's forecast**



Source: USDA, Economic Research Service, *Feed Grains Database*.

Figure 2  
**U.S. fuel ethanol exports**  
 1,000 gal.



Source: USDC, U.S. Census Bureau.

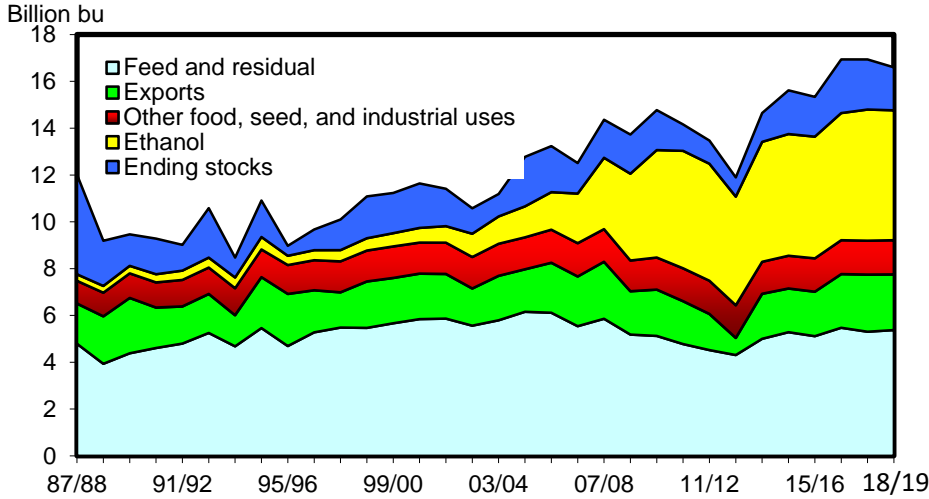
## Grain Consuming Animal Units

Grain consuming animal units (GCAU) for 2018/19 are projected at 100.6 million units, virtually unchanged from last month and 1.6 million over last year's revision of 99.0 million. Feed and residual use per GCAU is projected at 1.44 tons, slightly lower than last month and 0.02 million above last year.

## Feed and Residual Use: Four Feed Grains and Wheat Lowered

Feed and residual use for the four feed grains (corn, sorghum, barley, and oats) and wheat, on a September–August marketing year basis for 2018/19, is projected at 144.8 tons, 3.6 million below last month. Feed and residual use is raised for sorghum but more than offset by a 4-million ton decline for wheat. The current projection is ahead of last year by 3.6 million tons.

Figure 3  
**U.S. corn utilization**

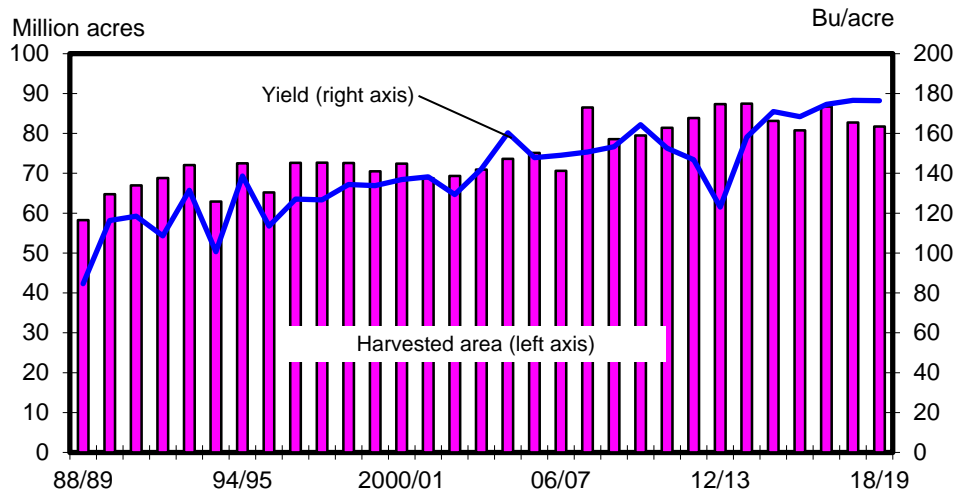


Note: Marketing year 2018/19 is projected.  
 Source: USDA, World Agricultural Outlook Board, WASDE.

## Corn Supply Steady

There are no changes on the corn supply side of the balance sheet this month.

Figure 4  
**U.S. corn harvested area and yield**



Sources: USDA, National Agricultural Statistics Service, *QuickStats* and USDA, World Agricultural Outlook Board, *Crop Projections, 2018*.

## Lower Corn Disappearance Projected for 2018/19

Projected corn disappearance is lowered 100 million bushels this month to 14,765 million. The projection is only 34 million bushels lower than last year's record, making it the second-highest.

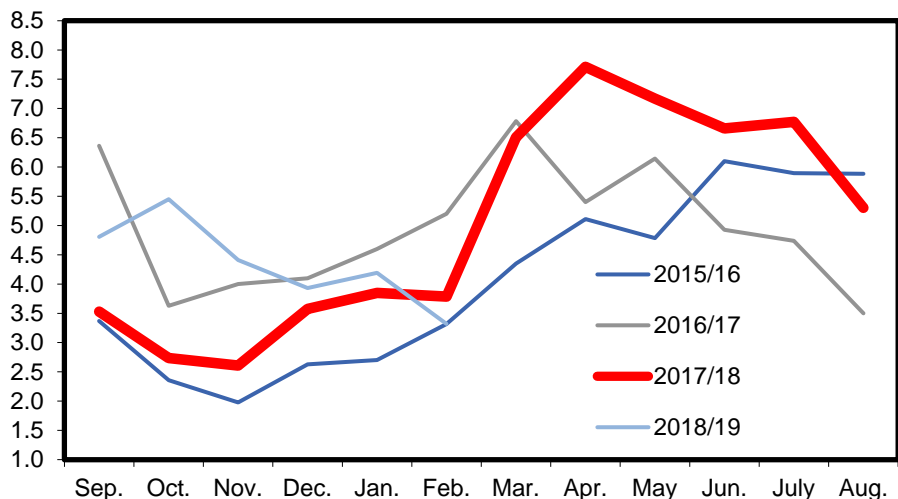
Food, seed, and industrial (FSI) use is lowered 25 million bushels to 7,015 million on reduced prospects for ethanol production. The March 1 NASS *Grain Crushings and Co-Products Production* report indicates the pace of corn used for fuel ethanol this marketing year (through January) is trailing last year by 4 percent. Energy Information Administration data for February indicates lower levels of ethanol production, leading to a projection of corn for ethanol of 5,550 million bushels for 2018/19. On the positive side, exports of ethanol for the first 4 months of the marketing year are 18 percent higher than last year at 2.093 million liters. Brazil, Canada, India, and the Netherlands are the major destinations.

## Exports Lowered Amid Strong Competition

Projected 2018/19 corn exports are lowered 75 million bushels to 2,375 million. The United States continues to face stiff price competition from Brazil and Argentina. Projected exports are 63 million bushels below 2017/18. Mexico, Japan, Colombia, and South Korea are the major destinations this marketing year through December, accounting for nearly 70 percent of U.S. shipments.

Resulting ending stocks are projected at 1,835 million bushels, 100 above last month and 305 million below 2017/18. The stocks-to-use ratio is increased this month to 12.4 from last month's 11.7.

Figure 5  
**Monthly U.S. corn exports**  
 Million metric tons

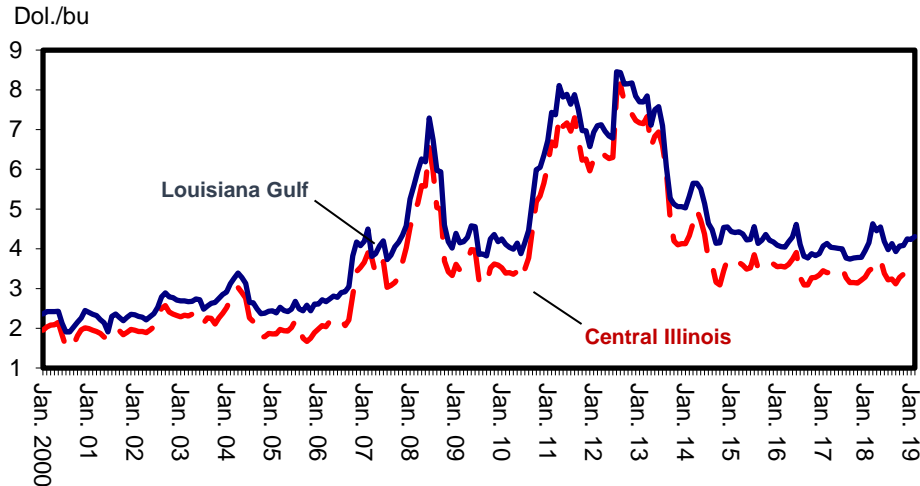


Source: USDC, U.S. Census Bureau, February 2019 *Grain Inspections*.

# 2018/19 Corn Price Lowered This Month

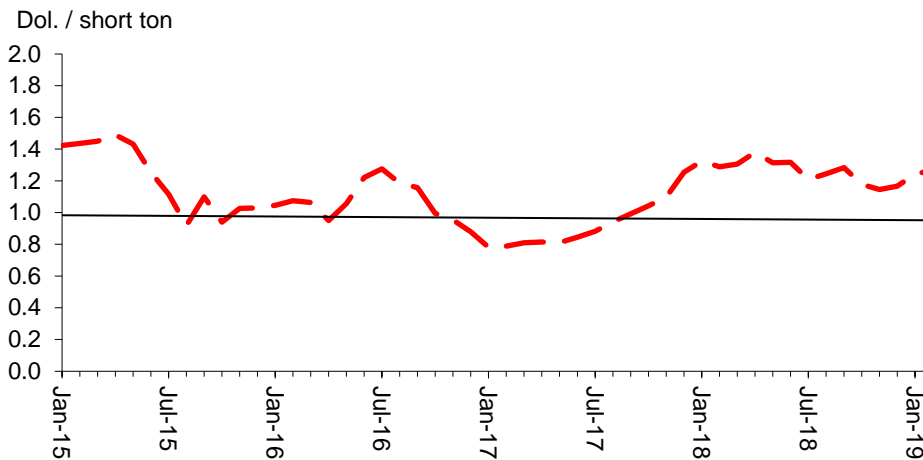
The projected average corn price received by farmers for 2018/19 is lowered \$0.05 per bushel to \$3.55 with a range of \$3.35 to \$3.75 per bushel, down \$0.10 per bushel on the high end. The lower forecast is due to reduced use and higher ending stocks.

Figure 6  
**Monthly corn (yellow #2) prices for Central Illinois and Louisiana Gulf**



Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lg>.

Figure 7  
**Monthly price ratio: Central Illinois distillers dried grain and corn**



Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lg>.

## Month-End NASS Reports Will Impact Markets

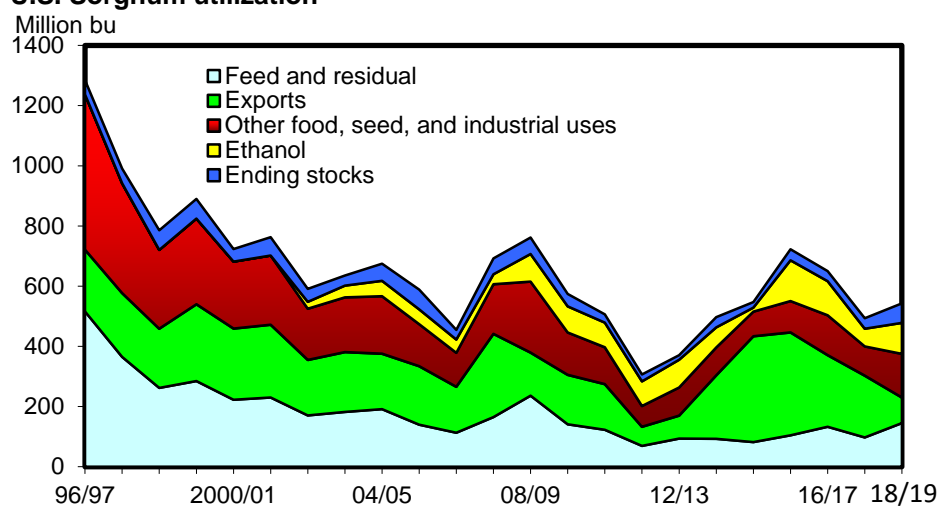
NASS (USDA National Agricultural Statistics Service) will release the *Prospective Plantings* and *Grain Stocks* reports on March 29. *Prospective Plantings* provides the first survey-based indication of 2019 plantings, and is based on producer intentions as of early March. Producer intentions are always subject to change from the *Prospective Plantings* survey as planting decisions shift with weather and economic conditions closer to planting time. For 2018, March intentions were 1.1 million bushels lower than the final planted estimate. In the past 5 years, the March intentions were below the final estimate of corn acres three times, and above the final planted area estimate twice.

The *Grain Stocks* report will provide a survey-based estimate of March 1 stocks, the ending stocks for the December–February quarter of the 2018/19 marketing year and will provide an estimate of disappearance over that 3-month period.

## 2018/19 Sorghum Supply Projected Unchanged

Total supply remains unchanged at 400.0 million bushels with production at 365.0 million bushels and beginning stocks of 34.9 million.

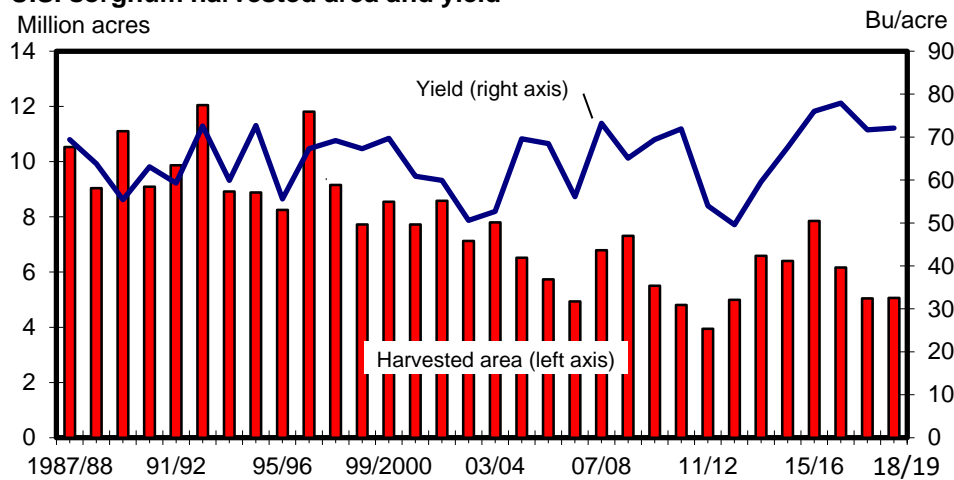
Figure 8  
**U.S. Sorghum utilization**



Note: Marketing year 2018/19 is projected.  
Source: USDA, World Agricultural Outlook Board, WASDE.

Domestic use is increased by 15.0 million bushels to 250.0 million bushels, offsetting an equal change in exports. Exports were reduced to 85.0 million bushels due to trade data signaling slower than expected export volume. If realized, this would be the lowest volume since 2012/13. Additionally, sorghum use for ethanol production is reduced 5.0 million bushels to 103.0 million and Food, Seed, and Industrial use is reduced by 5.0 million bushels from 110.0 million to 105.0 million bushels. All of these changes are offset by a 20.0 million bushel increase in feed and residual use, from 125.0 million to 145.0 million bushels. Total use remains unchanged at 335.0 million bushels.

Figure 9  
**U.S. sorghum harvested area and yield**

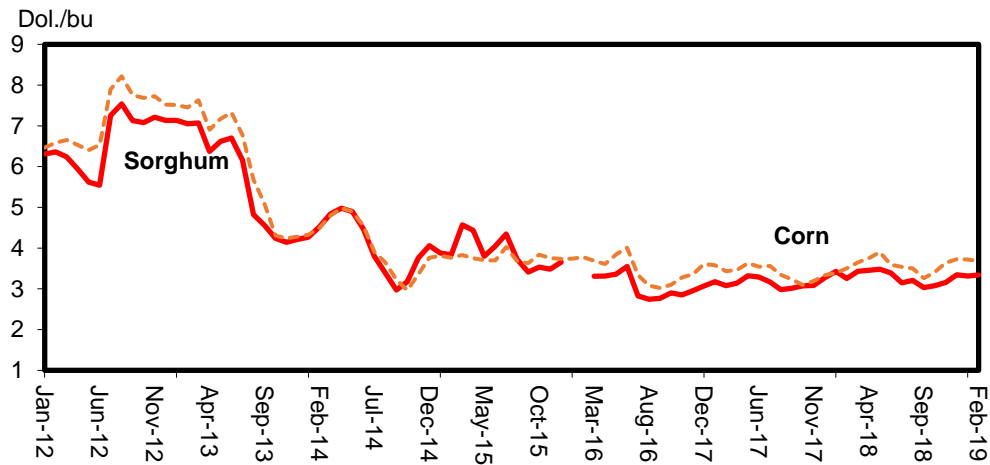


Sources: USDA, National Agricultural Statistics Service, *Quick Stats* and USDA, World Agricultural Outlook Board, *WASDE*.

The projected season average price of sorghum is down slightly from last month, with a range of \$3.10 per bushel to \$3.50 per bushel and an average of \$3.30 per bushel, down from \$3.35 per bushel in February.

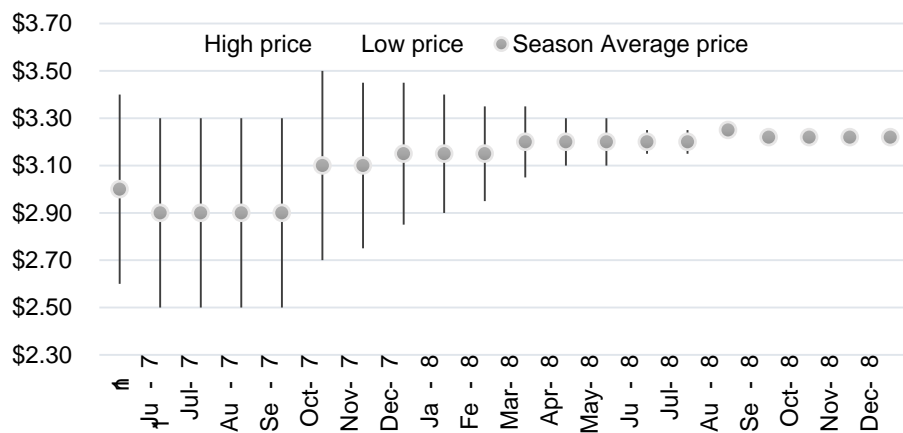


Figure 10  
**Monthly yellow #2 grain sorghum and corn prices for Kansas City**



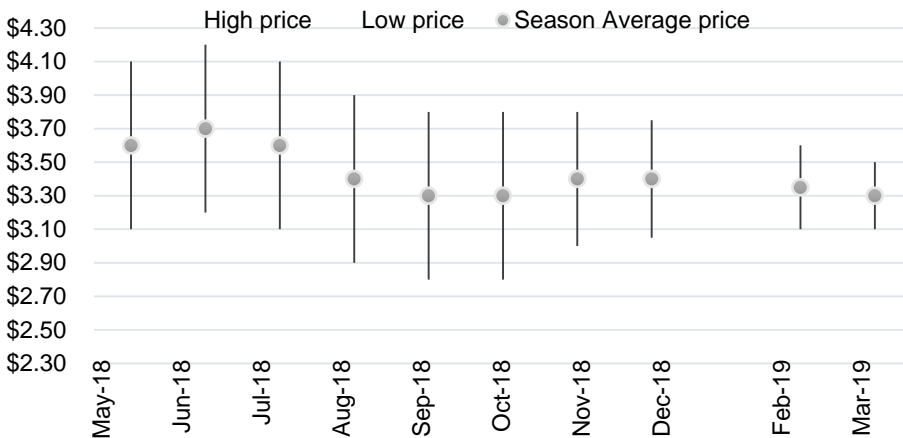
Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lq>.

Figure 11a  
**WASDE sorghum price projections for 2017/18**



Source: USDA WASDE reports, June 2017 to February 2019.

Figure 11b  
**WASDE sorghum price projections for 2018/19**



Source: USDA WASDE reports, May 2018 to March 2019.

## Oats Supply Lower on Reduced Imports

Production of oats in 2018/19 remains unchanged from the February 2019 report at 56.1 million bushels. Imports are cut by 5.0 million bushels from 95.0 million bushels to 90.0 million. This drives a 5.0 million decrease in the total supply of oats, from 192.1 million bushels to 187.1 million.

The 5.0 million bushel decrease in supply is absorbed and offset by a 5.0 million use decrease in total use. Total use is projected to be 151.0 million bushels, down from 156.0 million bushels.

Projected 2018/19 season average price remains unchanged at \$2.65 per bushel; however, the range is tightened by \$0.05 on the low side from \$2.50 to \$2.55 per bushel and a \$0.05 decrease on the high side of the range to \$2.75 per bushel.

## Barley Supply Lowered, Use Unchanged

Barley production in 2018/19 is projected to remain unchanged at 153.1 million bushels; however, total supply is down 2.0 million tons due to fewer than expected bushels imported. Imports are cut from 10 million bushels to 8.0 million, with total supply for the year at 255.6 million bushels—down from 257.6 million.

Domestic and total use remain unchanged from February projections at 160.0 million bushels and 165.0 million bushels respectively. The change in imports is banked into the ending stocks, with a 2.0 million decrease anticipated. Ending stocks are projected to be 90.6 million bushels, down from 92.6 million bushels.

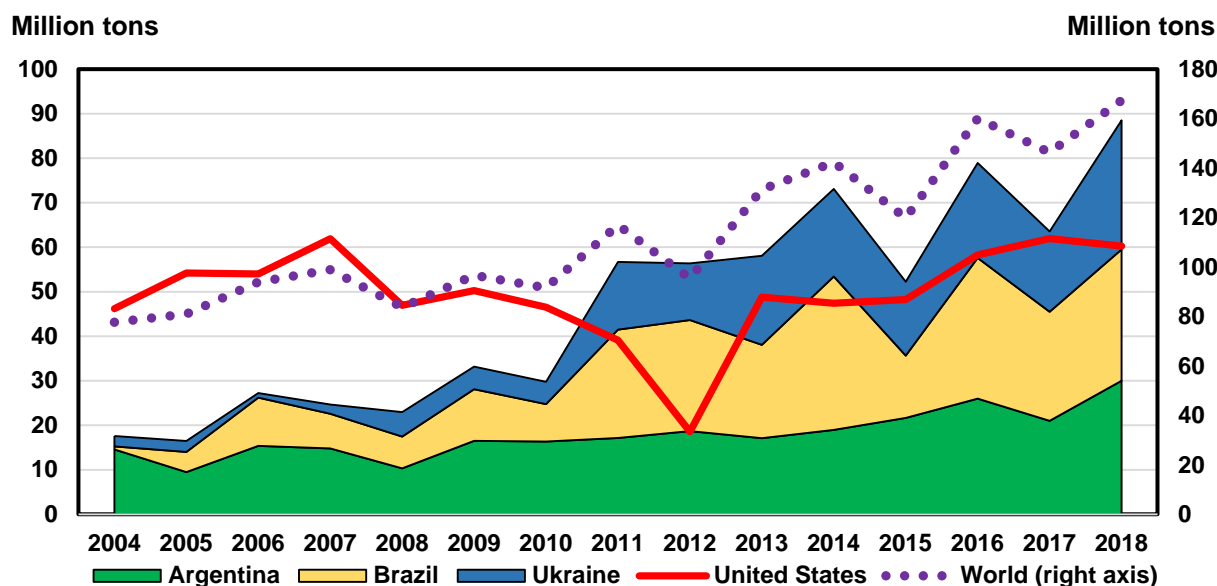
The projected season average barley price remains unchanged from February with the midpoint of the range at \$4.60 per bushel, with the high price of \$4.85 per bushel and the low price of \$4.35 per bushel.

# International Outlook

## U.S. Coarse Grain Exports Are Reduced

Projected **U.S.** 2018/19 corn exports are lowered this month due to increased expected competition mainly from South America, but also from Ukraine that is limiting U.S. exports. This is despite record global **corn trade** expected in 2018/19, up 1.0 million tons to 164.6 million. U.S. market share in the major corn importing countries has become highly dependent on the crop size in **Brazil, Argentina, and Ukraine**, as large crops in those countries boost their price competitiveness and tend to curb U.S. exports. Even in traditional U.S. import markets, such as Japan, Korea, and Taiwan, where the United States is still by far a major exporter, the United States can lose market share in years with large crops in those three countries (see fig. 12).

**Figure 12. Argentina, Brazil, and Ukraine capture growth in global corn trade.**

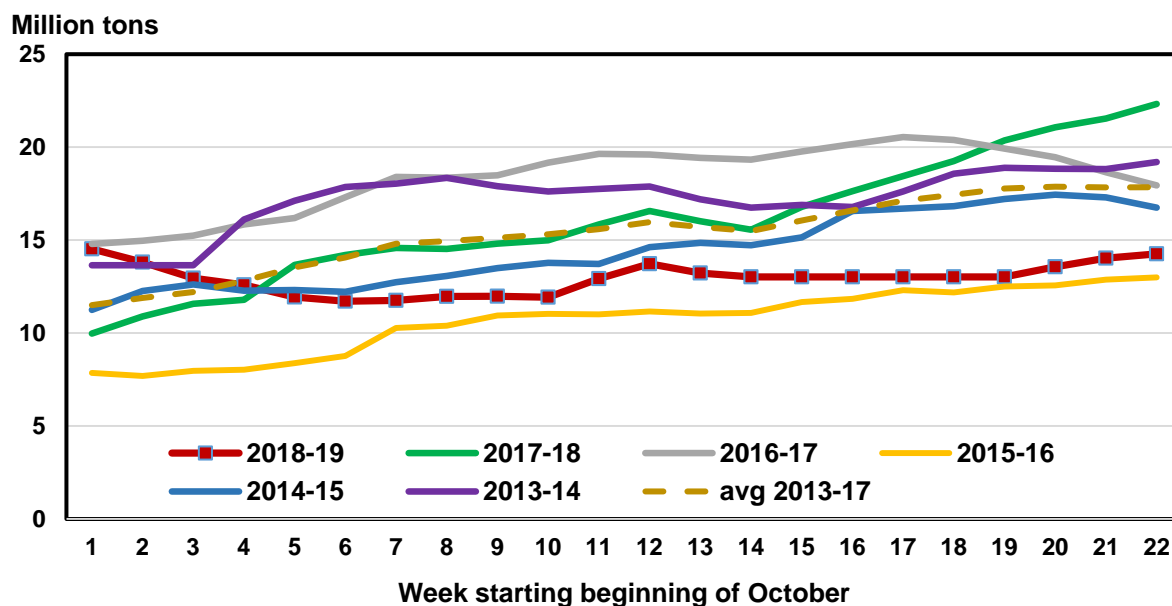


Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.

U.S. October–September 2018/19 corn exports are projected down 2.0 million tons this month to 60.0 million (down 75 million bushels to 2,375 million for the September–August local marketing year). Unlike last year when both Brazil and Argentina had disappointing harvests that allowed the United States to accelerate its corn exports in the second half of the marketing year, this year corn exports are expected to be frontloaded, pushed aside by highly price-competitive corn from Brazil, Argentina, and Ukraine.

The pace of corn shipments in the beginning of the year has been strong, with Census data for October–December 2018 at 15.2 million tons, the highest since 2007/08. In addition, January–February 2019 corn export inspections (adjusted up for trade with Mexico) were still higher than a year ago. However, since the beginning of November, U.S. outstanding sales started to lag behind not only last year, but also a 5-year average (fig 13) below.

**Figure 13. U.S. outstanding export sales for corn**



Source: USDA, Foreign Agricultural Service, U.S. Export Sales, Weekly Sales.

During these months, **Brazil** has been exporting corn at a record pace. However, in coming months Brazil's corn exports are expected to drop sharply, as highly profitable soybeans are currently being harvested and will soon be exported, thereby shifting port capacity use from corn to soybeans. Yet, when Brazil starts to harvest its second corn crop in July, corn exports are expected to boom. **Argentina** and **Ukraine** also are expected to provide stiff competition with record-high harvests, strong ship line-up for March and April exports, and competitive prices. These three countries ship to South Korea, Taiwan, Japan, China, Egypt, and other destinations affecting U.S. share. Corn exports are projected 1.0 million tons higher for each of Brazil and Argentina, and up 0.5 million tons for Ukraine this month. U.S. corn forward prices for delivery through July are at a premium compared to Brazil, Argentina, and Ukraine on a free-on-board basis, with the strong U.S. currency and logistics hurting U.S. competitiveness.

Strong competition between exporters is keeping corn prices attractive to importers. The weak corn prices support world trade despite sluggish macro-economic growth and political unrest in some importing regions. **Canadian** and **European Union (EU)** corn imports are raised each by

0.5 million tons. Ukraine is expected to ship additional corn to the EU, while Canada has a reported higher-than-expected pace of imports from the United States to the Prairies. Corn import prospects are raised for the **Dominican Republic**.

Sorghum global exports are reduced this month to the lowest volume in 55 years, down 1.1 million tons to 3.9 million. The change follows slashed projected sorghum output for **Australia**, with its exports more than halved by 0.7 million tons from 1.3 million last year to 0.6 million this year. Consequently, **Chinese** sorghum imports are down 1.0 million tons to 0.7 million this month. **U.S.** sorghum exports are down 0.4 million tons to 2.6 million based on a slow pace of sales and shipments to date.

Barley global trade is down 0.5 million tons this month to 26.5 million based on the slow export pace from **Australia**. The announcement by the Chinese Government of the investigation into barley imports from Australia slowed down Chinese imports from its major supplier. The pace of **Chinese** barley imports is slower than expected, as the country is shifting to feed more domestic corn supplies, and are projected down 0.5 million tons to 7.5 million, 0.6 million lower than a year ago. Lower Chinese appetite for barley is making its price more attractive for other users. **Tunisia** is expected to take 0.3 million tons of additional barley.

## World Coarse Grain Production Prospects Largely Offsetting

Global coarse grain production in 2018/19 is forecast down a mere 0.2 million tons this month to 1371.9 million, as higher corn and barley production is more than offset by a reduction in sorghum and millet with the largest changes made for **Australia** and **India**.

A number of changes are made for the countries in the Middle East. Two data series are revised this month: for **Chile**, barley data are revised starting in 2000, while revision of the corn series for the **Dominican Republic** goes back to 2010.

Although the total projected 2018/19 corn output for **Brazil** is left unchanged this month (and not reflected in table A2 below), yields are expected to be higher while harvested area is reduced. The first corn crop is already being harvested (about 30 percent), and area estimates are getting more reliable, indicating that area is lower than projected before. The second corn crop area, which is being planted now (about 70 percent completed), is also reduced slightly based on the reported expansion of competing cotton area in Mato Grosso, by far the largest producer—almost 40 percent—of the Brazilian second corn crop.

For at-a-glance information of global changes for coarse grain this month, see table A1.

<b>Table A1 - World and U.S. coarse grain production at a glance (2018/19), March 2019</b>					
	Region or country	Production	Change from previous month <sup>1</sup>	YoY Change <sup>2</sup>	Comments
<i>Million tons</i>					
<b>Coarse grain production (total)</b>					
↓	World	1,371.9	-0.2	+14.9	
↓	Foreign	992.0	-0.2	-4.5	Changes are made for a number of countries and commodities. See table A2.
	United States	379.9	No change	+19.4	See section on U.S. domestic output.
<b>World production of coarse grains by type of grain</b>					
<b>CORN</b>					
↑	World	1,101.2	+1.6	+24.9	
↑	Foreign	734.9	+1.6	+29.7	Higher prospects in India are partly offset by reductions in South Africa and Paraguay. See table A2 and map A1.
	United States	366.3	No change	-4.8	See section on U.S. domestic output.
<b>BARLEY</b>					
↑	World	140.7	+0.1	-3.0	
↑	Foreign	137.4	+0.1	-3.2	Higher output projected for Australia is almost offset by lower output in a number of countries. See table A2 and map A2.
	United States	3.3	No change	+0.2	See section on U.S. domestic output.
<b>SORGHUM</b>					
↓	World	56.9	-1.5	-0.8	
↓	Foreign	47.7	-1.5	-0.9	A reduction in India and a downward adjustment for South Africa. See table A2.
	United States	9.3	No change	+0.1	See section on U.S. domestic output.
<b>MILLET</b>					
↓	World/Foreign	25.4	-0.5	-2.5	Adjustments for Russia and Ukraine.
<sup>1</sup> Change from previous month. <sup>2</sup> YoY: year over year changes.					
Changes smaller than 0.1 million tons are made for oats and rye. <b>For changes and notes by country, see table A2.</b>					
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.					

See table A2 below for the specific causes of the revisions and details of this month's changes in coarse grain production, by country and type of grain.

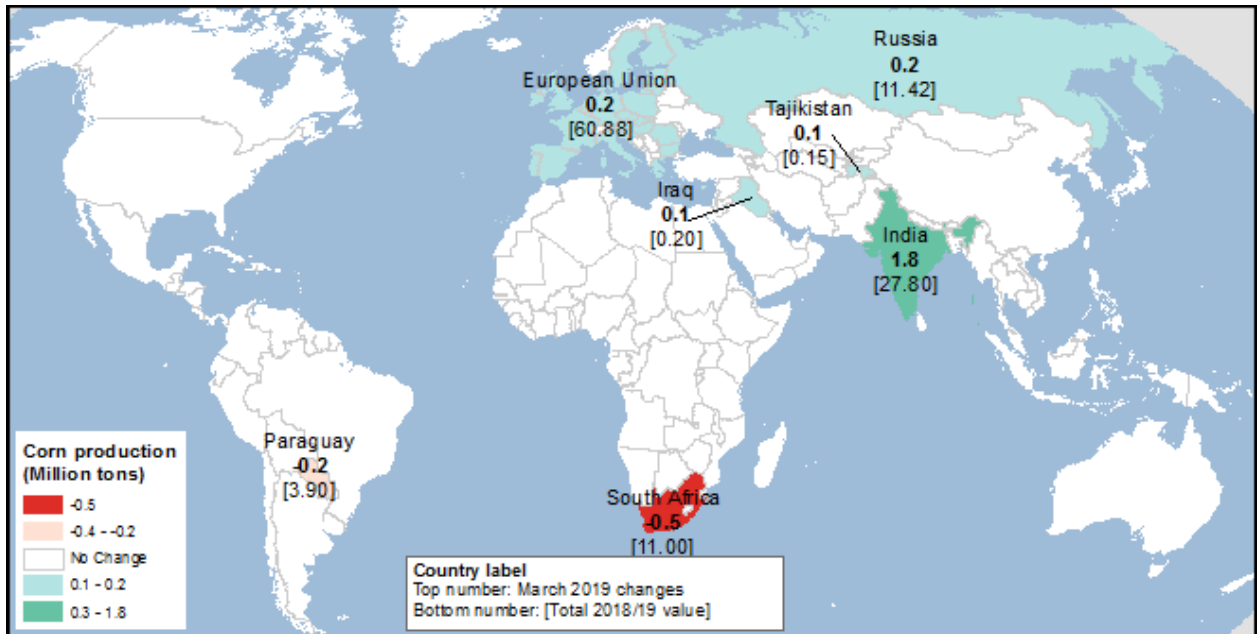
**Table A2 - Coarse grain foreign production by country at a glance, March 2019**

	Type of crop	Crop year	Production	Change in forecast <sup>1</sup>	YoY <sup>2</sup> change	Comments
<i>Million tons</i>						
<b>Coarse grain production by country and by type of grain (2018/19)</b>						
<b>AUSTRALIA</b>						
↑	<b>Barley</b>	<i>Nov-Oct</i>	<b>8.3</b>	<b>+1.0</b>	<b>-0.6</b>	Barley output is projected higher than expected based on higher area and excellent yields in the State of Western Australia.
↓	<b>Sorghum</b>	<i>Mar-Feb</i>	<b>1.3</b>	<b>-0.7</b>	<b>-0.1</b>	Persistent heat and dryness in the east of the continent, the only area where sorghum is grown, reduced both projected area and yield. Corn and oats are slightly adjusted down.
<b>PARAGUAY</b>						
↓	<b>Corn</b>	<i>Jun-May</i>	<b>3.9</b>	<b>-0.2</b>	<b>+0.6</b>	Observed below normal soil moisture is expected to reduce the 1 <sup>st</sup> corn crop yields.
<b>SOUTH AFRICA</b>						
↓	<b>Corn</b>	<i>May-Apr</i>	<b>11.0</b>	<b>-0.5</b>	<b>-2.1</b>	Although corn got favorable rains in February, the dryness in November through mid-January affected vulnerable corn-growing areas in the west of the country throughout planting period and crop emergence leaving bare soil in some western areas and is expected to reduce yields. The country's Crop Estimates Committee (CEC) issued its first production forecast in line with the reduction.
<b>INDIA</b>						
↑	<b>Corn</b>	<i>Nov-Oct</i>	<b>27.8</b>	<b>+1.8</b>	<b>-0.9</b>	A change in line with the second advanced estimate of the Indian Ministry of Agriculture.
↓	<b>Sorghum</b>	<i>Nov-Oct</i>	<b>3.8</b>	<b>-0.9</b>	<b>-1.2</b>	A change in line with the second advanced estimate of the Indian Ministry of Agriculture. Sorghum is grown as both rabi (winter) and kharif (summer) crops. This year, area for the rabi part of sorghum is down.
↓	<b>Millet</b>	<i>Nov-Oct</i>	<b>9.4</b>	<b>-0.5</b>	<b>-2.2</b>	A change in line with the second advanced estimate of the Indian Ministry of Agriculture.
↑	<b>Barley</b>	<i>Apr-Mar</i>	<b>2.0</b>	<b>+0.2</b>	<b>+0.2</b>	A change in line with the second advanced estimate of the Indian Ministry of Agriculture. Excellent weather in the northern part of India that grows barley and timely rains boosted yields.
<b>EUROPEAN UNION (EU)</b>						
↓	<b>Corn</b>	<i>Oct-Sep</i>	<b>60.9</b>	<b>-0.2</b>	<b>-1.0</b>	Slightly lower projection for corn yields reflects the latest estimates of the FranceAgriMer - a French official public agricultural service.
↓	<b>Barley</b>	<i>Jul-Jun</i>	<b>56.2</b>	<b>-0.1</b>	<b>-2.6</b>	Slightly lower projection for barley area reflects the latest estimates of the FranceAgriMer - a French official public agricultural service.
<b>IRAN</b>						
↓	<b>Barley</b>	<i>Jul-Jun</i>	<b>2.8</b>	<b>-0.3</b>	<b>-0.3</b>	The change is in line with various sources. Barley area is reduced.
<b>IRAQ</b>						
↓	<b>Barley</b>	<i>Jul-Jun</i>	<b>0.8</b>	<b>-0.2</b>	<b>-0.2</b>	Barley area is projected sharply (40 percent) lower due to the conflict. Yields are expected slightly higher as the rest of the country (especially the South) is irrigated, while in the conflict areas that are likely to be abandoned wheat is rainfed.
<sup>1</sup> Change from previous month. Smaller changes for coarse grain output are made for several countries, see map A1 and A2 for changes in corn and barley.						
<sup>2</sup> YoY: year over year changes.						
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.						

For a visual display of this month's changes in corn and barley production, see maps A1 and A2 below.

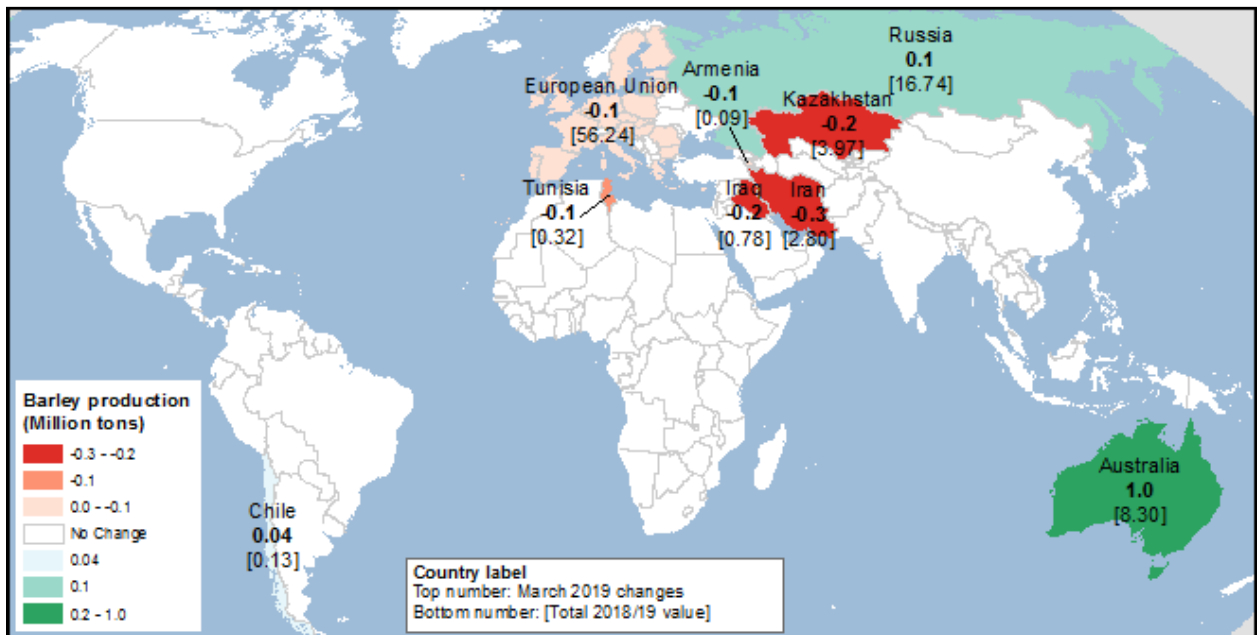


**Map A1 – Corn production changes for 2018/19, March 2019**



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

**Map A2 – Barley production changes for 2018/19, March 2019**



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

## Coarse Grain Feed Use Projected Higher

Global coarse grain feed and residual use projected for 2018/19 is raised 3.6 million tons this month to 855.2 million.

The largest increase in foreign coarse grain use is projected for **China**, where reduced sorghum and barley imports pushed prices for these commodities up, making feeding of domestic corn supplies more attractive. Chinese corn feed and residual use is projected up 3.0 million tons to 198.0 million, more than offsetting lower sorghum (down 1.0 million tons) and barley (down 0.5 million tons) feed use.

For **Australia**, barley feeding is up 0.7 million tons, as larger projected output and lower exports free up additional supplies to satisfy higher demand for grain feeding. Because of the drought in the eastern part of the country that destroyed pastures, the number of cattle moving to feed lots from being grass fed is increasing. Although large numbers of animals are expected to be slaughtered this year, the remaining livestock is going to boost Australian grain feeding.

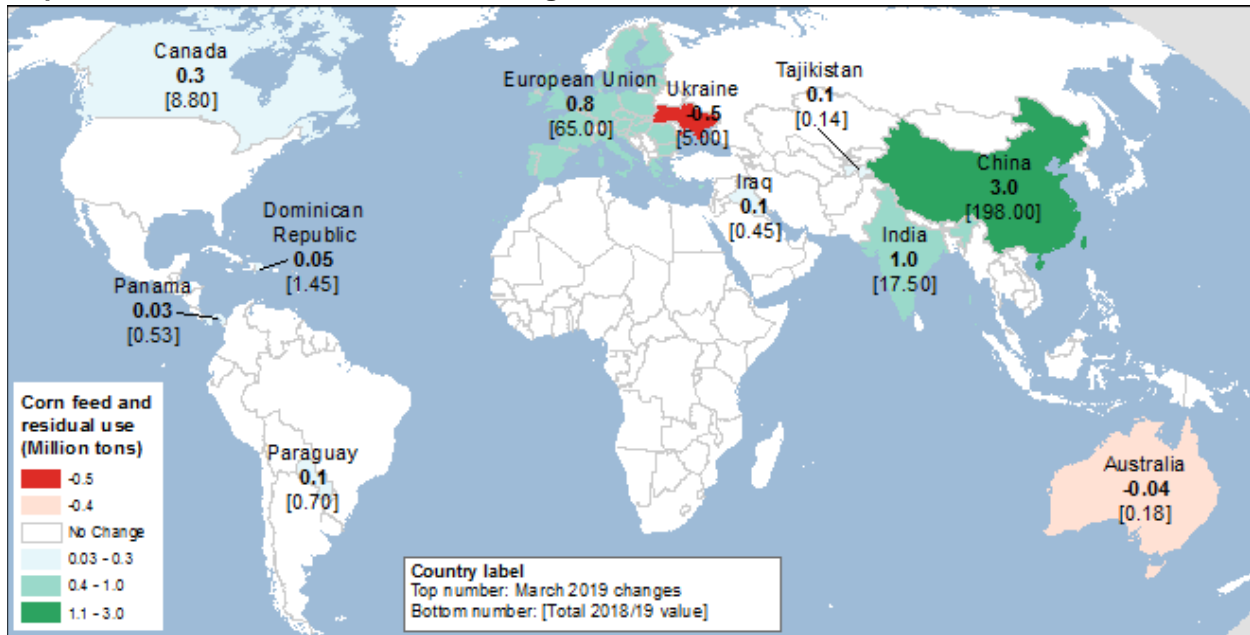
Corn feeding is raised for the **EU**, up 0.8 million tons, as larger supplies of low-quality corn from Ukraine are expected to be available.

Corn feeding is projected 0.5 million tons lower in **Ukraine**, as the country is expected to export more corn to the EU.

Corn use is also projected 0.3 million tons higher in **Canada**, which is expected to import more corn into its Prairies from the United States.

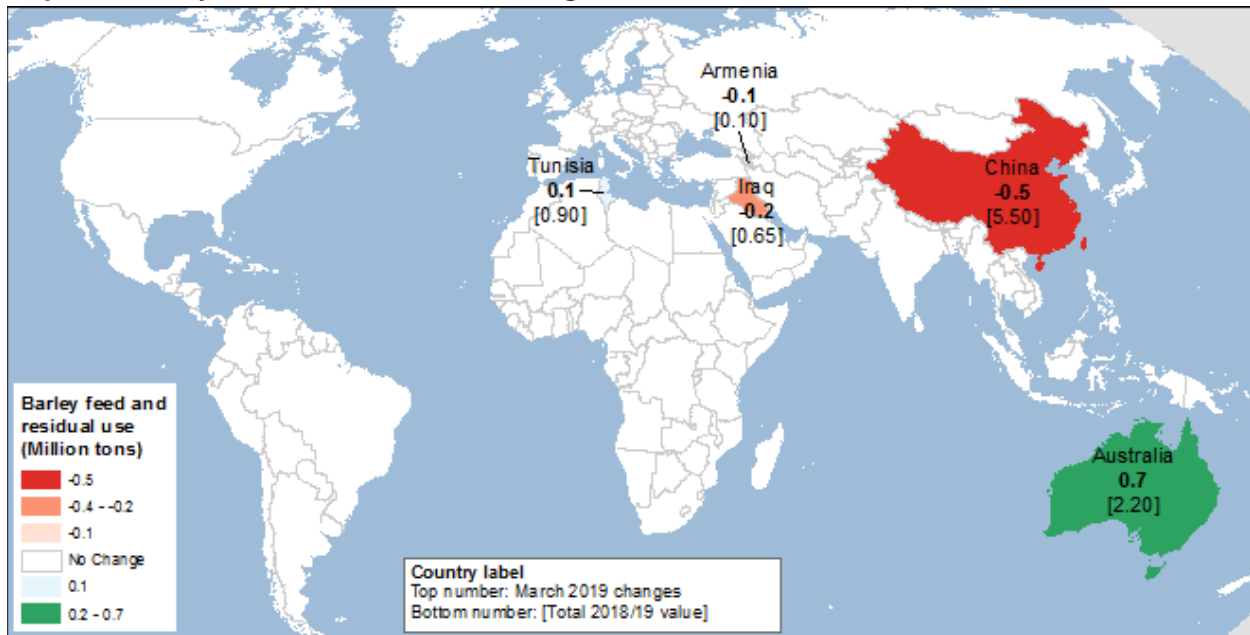
For a visual display of this month's changes in corn and barley feed and residual use, see maps B1 and B2 below.

**Map B1 – Corn feed and residual use changes for 2018/19, March 2019**



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

**Map B2 – Barley feed and residual use changes for 2018/19, March 2019**



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

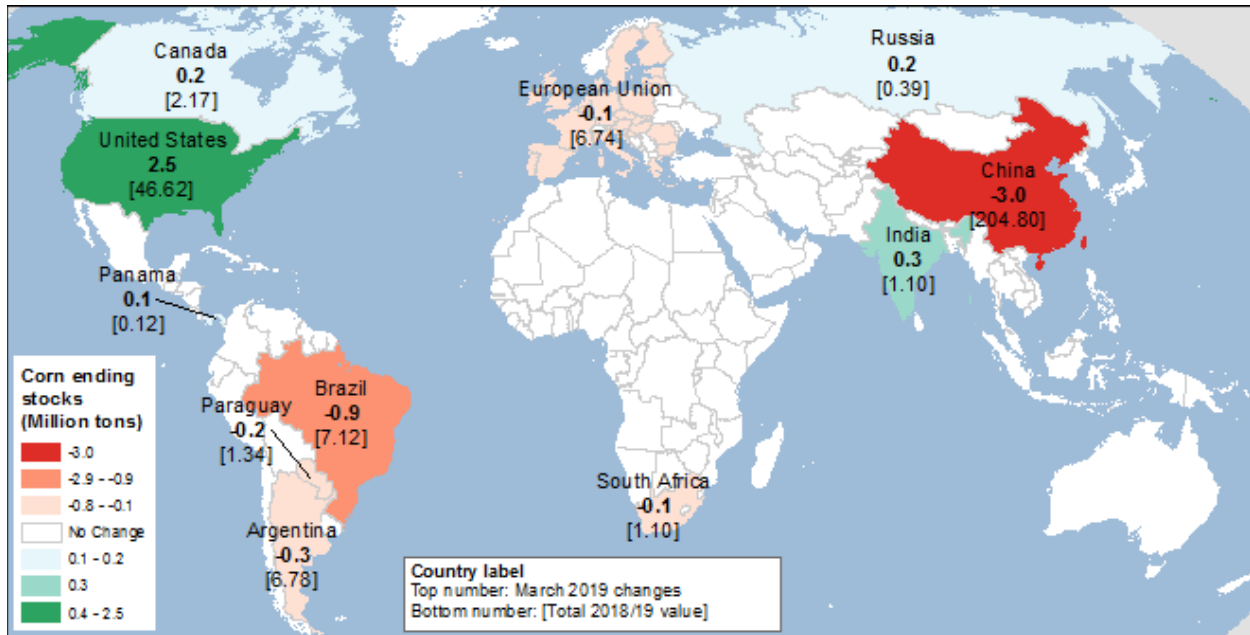
## Coarse Grain Stocks Inch Lower

A decline in global coarse grain use is slightly bigger than a reduction in supplies this month. World 2018/19 coarse grain ending stocks are forecast 0.8 million tons lower than the February

projection, to reach 336.2 million. Foreign coarse grain stocks are reduced more, down 3.3 million tons, as U.S. stocks are projected higher (see the discussion in the domestic section). The largest changes in foreign stocks are a projected in corn stocks for China, Brazil and Australia. In **China**, corn stocks are projected down 3.0 million tons (higher corn feeding). A reduction in corn stocks for **Brazil** projects it down 0.9 million tons due to increased corn exports. **Australia** has higher projected barley stocks (higher output and a reduction in exports are only partly offset by increased feeding). All other country changes are smaller.

Map C below provides a visual display of this month's country changes in corn ending stocks.

**Map C – Corn ending stocks changes for 2018/19, March 2019**



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

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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 3/12/2019

Commodity, market year, and quarter 1/		Beginning stocks	Production	Imports	Total supply	Food, seed, and industrial use	Feed and residual use	Exports	Total disappear- ance	Ending stocks	Farm price 2/ (dollars per bushel)		
Corn	2015/16	Sep-Nov	1,731	13,602	13	15,346	1,631	2,178	301	4,111	11,235	3.65	
		Dec-Feb	11,235		18	11,253	1,652	1,438	341	3,431	7,822	3.64	
		Mar-May	7,822		21	7,843	1,655	914	563	3,132	4,711	3.60	
		Jun-Aug	4,711		16	4,727	1,709	587	694	2,990	1,737	3.55	
		Mkt yr	1,731	13,602	68	15,401	6,647	5,118	1,899	13,664	1,737	3.61	
	2016/17	Sep-Nov	1,737	15,148	14	16,899	1,689	2,279	548	4,516	12,383	3.26	
		Dec-Feb	12,383		12	12,395	1,711	1,523	539	3,773	8,622	3.39	
		Mar-May	8,622		17	8,639	1,741	982	687	3,410	5,229	3.46	
		Jun-Aug	5,229		14	5,243	1,743	686	520	2,949	2,293	3.40	
		Mkt yr	1,737	15,148	57	16,942	6,885	5,470	2,294	14,649	2,293	3.36	
	2017/18	Sep-Nov	2,293	14,609	11	16,914	1,743	2,255	349	4,347	12,567	3.21	
		Dec-Feb	12,567		9	12,575	1,738	1,503	441	3,683	8,892	3.30	
		Mar-May	8,892		8	8,900	1,782	943	871	3,595	5,305	3.58	
		Jun-Aug	5,305		9	5,314	1,793	603	777	3,174	2,140	3.46	
		Mkt yr	2,293	14,609	36	16,939	7,056	5,304	2,438	14,799	2,140	3.36	
	2018/19	Sep-Nov	2,140	14,420	6	16,567	1,706	2,275	633	4,614	11,952	3.41	
		Mkt yr	2,140	14,420	40	16,600	7,015	5,375	2,375	14,765	1,835	3.35-3.75	
	Sorghum	2015/16	Sep-Nov	18.41	596.75	3.60	618.76	22.14	159.65	114.44	296.23	322.54	3.54
			Dec-Feb	322.54		0.98	323.51	41.77	-6.14	86.30	121.93	201.58	3.17
			Mar-May	201.58		0.01	201.59	43.31	-5.53	73.46	111.24	90.35	3.10
Jun-Aug			90.35		0.01	90.36	29.73	-43.65	67.65	53.73	36.63	3.33	
Mkt yr			18.41	596.75	4.59	619.75	136.95	104.32	341.85	583.12	36.63	3.31	
2016/17		Sep-Nov	36.63	480.26	0.00	516.90	21.65	144.36	41.81	207.82	309.08	2.62	
		Dec-Feb	309.08		0.00	309.08	33.06	5.97	89.32	128.34	180.75	2.69	
		Mar-May	180.75		0.00	180.75	34.62	2.41	59.02	96.04	84.71	2.79	
		Jun-Aug	84.71		1.73	86.44	25.30	-19.99	47.67	52.98	33.46	3.53	
		Mkt yr	36.63	480.26	1.74	518.63	114.61	132.74	237.82	485.18	33.46	2.79	
2017/18		Sep-Nov	33.46	361.87	1.91	397.24	13.92	110.13	45.71	169.75	227.49	3.05	
		Dec-Feb	227.49		0.05	227.55	10.24	5.72	71.33	87.29	140.26	3.18	
		Mar-May	140.26		0.01	140.27	15.46	-14.11	73.58	74.93	65.33	3.40	
		Jun-Aug	65.33		0.04	65.38	20.44	-4.45	14.53	30.52	34.85	3.78	
		Mkt yr	33.46	361.87	2.02	397.35	60.06	97.29	205.15	362.49	34.85	3.22	
2018/19		Sep-Nov	34.85	364.99		399.84	25.56	111.58	16.37	153.51	246.33	3.18	
		Mkt yr	34.85	364.99		399.84	105.00	145.00	85.00	335.00	64.84	3.10-3.50	

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 3/12/2019

Commodity, market year, and quarter 1/		Beginning stocks	Production	Imports	Total supply	Food, seed, and industrial use	Feed and residual use	Exports	Total disappear- ance	Ending stocks	Farm price 2/ (dollars per bushel)		
Barley	2015/16	Jun-Aug	79	218	4	301	41	38	3	82	219	5.39	
		Sep-Nov	219		4	223	37	1	4	43	180	5.52	
		Dec-Feb	180		7	187	36	11	3	50	138	5.66	
		Mar-May	138		4	141	44	-5	1	39	102	5.43	
		Mkt yr	79	218	19	315	158	44	11	213	102	5.52	
	2016/17	Jun-Aug	102	200	2	304	41	32	1	74	230	4.99	
		Sep-Nov	230		2	232	39	-0	1	40	193	4.78	
		Dec-Feb	193		2	195	37	12	1	50	145	5.04	
		Mar-May	145		3	148	45	-6	2	41	106	4.96	
		Mkt yr	102	200	10	312	162	39	4	205	106	4.96	
	2017/18	Jun-Aug	106	143	2	252	41	30	2	72	180		
		Sep-Nov	180		2	182	38	-17	2	23	159		
		Dec-Feb	159		2	161	35	-6	1	31	130		
		Mar-May	130		3	133	43	-5	1	38	94		
		Mkt yr	106	143	9	259	157	2	5	164	94	4.47	
	2018/19	Jun-Aug	94	153	1	249	40	33	1	74	175		
		Sep-Nov	175		1	176	39	-17	1	23	153		
		Mkt yr	94	153	8	256	155	5	5	165	91	4.35-4.85	
	Oats	2015/16	Jun-Aug	54	89	18	161	18	49	0	67	94	2.15
			Sep-Nov	94		26	120	18	19	1	37	83	2.08
Dec-Feb			83		25	108	17	15	0	33	75	2.09	
Mar-May			75		16	91	23	10	1	34	57	2.11	
Mkt yr			54	89	86	229	77	93	2	172	57	2.12	
2016/17		Jun-Aug	57	65	21	142	19	44	1	63	79	1.87	
		Sep-Nov	79		28	106	18	12	1	31	75	2.03	
		Dec-Feb	75		24	100	17	18	1	37	63	2.35	
		Mar-May	63		18	81	22	8	1	31	50	2.42	
		Mkt yr	57	65	90	212	76	82	3	161	50	2.06	
2017/18		Jun-Aug	50	50	19	119	19	27	1	47	72	2.35	
		Sep-Nov	72		30	102	18	17	1	36	66	2.58	
		Dec-Feb	66		20	86	18	13	1	31	55	3.03	
		Mar-May	55		20	75	23	11	1	34	41	2.94	
		Mkt yr	50	50	89	189	78	68	2	148	41	2.59	
2018/19		Jun-Aug	41	56	19	116	19	22	0	41	75	2.55	
		Sep-Nov	75		28	103	19	17	0	36	67	2.65	
		Mkt yr	41	56	90	187	79	70	2	151	36	2.55-2.75	

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.

Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Table 2--Feed and residual use of wheat and coarse grains, 3/12/2019

Market year and quarter 1/	Corn (million metric tons)	Sorghum (million metric tons)	Barley (million metric tons)	Oats (million metric tons)	Feed grains (million metric tons)	Wheat (million metric tons)	Energy feeds (million metric tons)	Grain consuming animal units (millions)	Energy feeds per grain consuming animal unit (tons)
2016/17 Q1 Sep-Nov	57.9	3.7	-0.0	0.2	61.8	-0.8	61.0		
Q2 Dec-Feb	38.7	0.2	0.3	0.3	39.4	-0.4	39.1		
Q3 Mar-May	24.9	0.1	-0.1	0.2	25.0	-1.7	23.3		
Q4 Jun-Aug	17.4	-0.5	0.7	0.4	18.0	4.5	22.5		
MY Sep-Aug	138.9	3.4	0.8	1.2	144.3	1.6	145.9	95.7	1.5
2017/18 Q1 Sep-Nov	57.3	2.8	-0.4	0.3	60.0	-1.5	58.5		
Q2 Dec-Feb	38.2	0.1	-0.1	0.2	38.5	-0.4	38.1		
Q3 Mar-May	23.9	-0.4	-0.1	0.2	23.7	-1.2	22.5		
Q4 Jun-Aug	15.3	-0.1	0.7	0.4	16.3	5.2	21.5		
MY Sep-Aug	134.7	2.5	0.1	1.2	138.5	2.1	140.6	99.0	1.4
2018/19 Q1 Sep-Nov	57.8	2.8	-0.4	0.3	60.6	-1.9	58.7		
MY Sep-Aug	136.5	3.7	0.3	1.3	141.8	3.0	144.8	100.6	1.4

1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year.

Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Table 3--Cash feed grain prices, 3/12/2019

Mkt year and month 1/	Corn, No. 2 yellow, Central IL (dollars per bushel)			Corn, No. 2 yellow, Gulf ports, LA (dollars per bushel)			Sorghum, No. 2 yellow, Gulf ports, LA (dollars per cwt)
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17
Sep	3.09	3.15	3.12	3.78	3.74	3.93	
Oct	3.27	3.15	3.28	3.88	3.77	4.07	
Nov	3.28	3.14	3.36	3.83	3.78	4.09	
Dec	3.34	3.21	3.53	3.88	3.79	4.25	
Jan	3.45	3.29	3.53	4.07	3.96	4.24	
Feb	3.51	3.45	3.50	4.14	4.15	4.31	
Mar	3.40	3.52		4.04	4.36		
Apr	3.41	3.54		3.98	4.46		
May	3.47	3.73		4.03	4.55		
Jun	3.49	3.38		4.01	4.19		7.56
Jul	3.51	3.22		4.00	3.98		
Aug	3.27	3.24		3.77	4.13		
Mkt year	3.37	3.34		3.95	4.07		7.56

	Barley, No. 2 feed, Minneapolis, MN (dollars per bushel)			Barley, No. 3 malting, Minneapolis, MN (dollars per bushel)		Oats, No. 2 white heavy, Minneapolis, MN (dollars per bushel)		
	2016/17	2017/18	2018/19	2016/17	2017/18	2016/17	2017/18	2018/19
Jun	2.36	2.05	2.85		4.70	2.58	2.95	2.88
Jul	2.33	2.05	2.85		4.67	2.61	3.17	2.84
Aug	2.08	2.10	2.78		4.70	2.34	2.98	2.91
Sep	1.95	2.10	2.60		4.70	2.29	2.87	2.91
Oct	2.00	2.10	2.60		4.70	2.67	2.97	3.18
Nov	2.00	2.36	2.60			2.84	2.94	3.22
Dec	2.00	2.61	2.60		4.85	2.92	2.73	330.50
Jan	2.00	2.65	2.60		4.85	2.97	2.90	3.28
Feb	2.00	2.81	2.60		4.85	3.07	2.96	3.23
Mar	2.02	2.85		4.70	4.50	2.90	2.79	
Apr	2.05	2.85				2.86	2.72	
May	2.05	2.85				2.88	2.89	
Mkt year	2.07	2.45		4.70	4.72	2.74	2.90	

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.

Source: USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lg>.

Data run: 3/8/2019



Table 4--Selected feed and feed byproduct prices (dollars per ton), 3/12/2019

Mkt year and month 1/	Soybean meal, high protein, Central Illinois, IL			Cottonseed meal, 41% solvent, Memphis, TN			Corn gluten feed, 21% protein, Midwest		Corn gluten meal, 60% protein, Midwest	
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2016/17	2017/18
Oct	323.26	319.24	319.15	241.88	229.00	249.00	77.00	80.70	466.13	469.30
Nov	322.42	313.52	310.62	221.00	228.75	240.00	83.50	93.00	477.50	487.24
Dec	321.03	327.17	311.70	217.50	232.50	243.50	92.83	96.25	501.67	482.88
Jan	332.34	322.60	314.93	223.50	259.00	247.50	97.50	98.80	502.50	477.60
Feb	334.32	362.85	290.12	221.88	303.13	235.00	88.13	106.25	516.50	483.13
Mar	320.34	379.85		210.63	323.13		87.13	105.50	505.63	524.75
Apr	305.67	385.85		195.00	263.13		75.00		501.13	
May	293.68	393.55		179.50	262.50		71.00		485.30	
Jun	258.75	355.71		179.38	257.50		68.38		475.75	
Jul	326.04	341.08		200.84	253.13		71.35		467.88	
Aug	301.05	332.50		198.50	260.00		73.10		475.50	
Sep	307.70	318.33		213.75	258.75		75.00		469.25	
Mkt yr	312.22	346.02		208.61	260.88		79.99	96.75	487.06	487.48

Mkt year and month 1/	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO			Alfalfa hay, weighted-average farm price 2/	
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2017/18	2018/19
Oct	237.50	228.00	267.50	116.25	117.30	137.50	79.43	70.36	80.00	153.00	178.00
Nov	229.00	219.38	257.50	111.70	123.13	137.50	85.53	86.85	105.00	150.00	175.00
Dec	211.67	221.67	257.50	104.84	143.75	147.00	101.62	107.88	148.00	149.00	180.00
Jan	255.60	220.00	259.50	96.30	155.50	154.80	98.25	123.68	108.10	153.00	181.00
Feb	285.00	225.84	260.00	98.88	158.88	158.13	84.66	114.61	98.88	155.00	
Mar	284.38	275.00		98.25	164.13		80.76	99.69		165.00	
Apr	266.25	316.25		99.25	174.38		58.03	100.22		183.00	
May	245.50	293.00		100.50	174.90		48.41	98.90		189.00	
Jun	248.13	288.75		105.25	158.50		60.39	89.50		181.00	
Jul	276.25	283.75		110.63	139.30		67.10	64.50		179.00	
Aug	318.50	265.63		110.00	144.00		63.15	83.50		177.00	
Sep	301.88	266.25		111.63	142.50		67.48	84.00		180.00	
Mkt yr	263.31	258.63		105.29	149.69		74.57	93.64		154.00	

1/ October 1-September 30 except for hay. Simple average of monthly prices for the marketing year except for hay.

2/ May 1-April 30 marketing year. U.S. season-average price based on monthly price received by farmers weighted by monthly marketings.

Source: USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lg>, and USDA, National Agricultural Statistics Service, [http://www.nass.usda.gov/Data\\_and\\_Statistics/Quick\\_Stats/index.asp](http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp).

Table 5--Corn: Food, seed, and industrial use (million bushels), 3/12/2019

Mkt year and qtr 1/		High-fructose corn syrup (HFCS)	Glucose and dextrose	Starch	Alcohol for beverages and manufacturing			Cereals and other products	Seed	Total food, seed, and industrial use
					Alcohol for fuel	Alcohol for beverages and manufacturing	Alcohol for fuel			
2016/17	Q1 Sep-Nov	113.13	88.81	58.20	1,343.08	35.78	49.92	0.00	1,688.92	
	Q2 Dec-Feb	106.71	88.53	56.36	1,371.21	36.35	52.33	0.00	1,711.49	
	Q3 Mar-May	120.23	96.89	59.70	1,346.10	36.72	54.45	27.25	1,741.34	
	Q4 Jun-Aug	126.90	97.13	61.09	1,371.56	37.15	47.60	2.05	1,743.49	
	MY Sep-Aug	466.98	371.35	235.35	5,431.95	146.00	204.30	29.30	6,885.23	
2017/18	Q1 Sep-Nov	111.69	93.51	59.42	1,391.29	36.46	50.38	0.00	1,742.74	
	Q2 Dec-Feb	105.21	87.91	56.87	1,397.46	38.23	52.82	0.00	1,738.50	
	Q3 Mar-May	117.97	94.42	58.56	1,388.64	38.50	55.27	28.15	1,781.52	
	Q4 Jun-Aug	124.13	95.51	60.88	1,427.43	35.83	48.23	1.48	1,793.48	
	MY Sep-Aug	459.00	371.35	235.73	5,604.83	149.00	206.70	29.64	7,056.24	
2018/19	Q1 Sep-Nov	108.19	89.39	59.36	1,360.25	37.00	52.00	0.00	1,706.18	
	MY Sep-Aug	455.00	380.00	240.00	5,550.00	150.00	209.10	30.90	7,015.00	

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

Source: Calculated by USDA, Economic Research Service.

Date run: 3/8/2019

Table 6--Wholesale corn milling product and byproduct prices, 3/12/2019

Mkt year and month 1/	Corn meal, yellow, Chicago, IL (dollars per cwt)		Corn meal, yellow, New York, NY (dollars per cwt)		Corn starch, Midwest 3/ (dollars per cwt)		Dextrose, Midwest (cents per pound)		fructose corn syrup (42%), Midwest (cents per pound)
	2017/18	2018/19	2017/18	2018/19	2017/18	2018/19	2017/18	2018/19	2017/18
Sep	16.01	14.97	17.68	16.64	14.41	14.35	39.00	39.25	28.25
Oct	15.94	15.24	17.61	16.91	13.87	13.69	39.00	39.25	28.25
Nov	15.78	15.09	17.45	16.76	13.90	14.14	39.00	39.25	28.25
Dec	15.69	15.17	17.35	16.90	13.75	14.38	39.00	39.25	28.25
Jan	15.75	15.14	17.42	16.81	13.81	14.59	39.25	40.00	28.25
Feb	16.09	17.49	17.76	16.66	14.08	14.74	39.25	40.00	
Mar	16.13		17.80		14.53		39.25		
Apr	16.23		17.90		14.65		39.25		
May	16.41		18.08		14.44		39.25		
Jun	15.64		17.31		14.77		39.25		
Jul	15.28		16.95		14.20		39.25		
Aug	15.35		17.02		13.78		39.25		
Mkt year 2/	15.86		17.53		14.18		39.17		

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: 3/11/2019

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 3/12/2019

Import and country/region	----- 2016/17 -----		----- 2017/18 -----		2018/19	
	Mkt year	Jun-Dec	Mkt year	Jun-Dec	Mkt year	Jun-Dec
Oats	Canada	1,507	957	1,483	918	
	Sweden	27		41	41	
	Finland	21	10	16	10	
	All other countries	0	0	0	0	
	Total 2/	1,556	968	1,540	970	
Malting barley	Canada	102	48	87	51	
	All other countries	17	17	1	0	
	Total 2/	119	64	88	52	
Other barley 3/	Canada	89	41	109	61	
	All other countries	2	1	1	0	
	Total 2/	90	42	110	61	

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.

Source: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Statistics

Date run: 3/11/2019

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 3/12/2019

Export and country/region		----- 2016/17 -----		----- 2017/18 -----		2018/19
		Mkt year	Sep-Dec	Mkt year	Sep-Dec	Sep-Dec
Corn	Mexico	13,932	4,283	15,724	5,082	6,099
	Japan	13,557	3,422	13,183	2,243	4,315
	South Korea	5,601	1,947	5,736	347	1,880
	Colombia	4,733	1,438	5,083	1,484	1,911
	Peru	2,989	895	3,238	1,122	958
	China (Taiwan)	2,962	873	2,464	202	1,015
	Saudi Arabia	2,163	708	1,495	145	374
	Guatemala	993	314	867	180	466
	Morocco	871	323	748	27	102
	European Union-27	843	202	1,904	48	32
	Costa Rica	819	240	853	256	270
	Dominican Republic	807	263	639	18	326
	China (Mainland)	807	18	306	22	6
	Canada	704	306	1,663	471	817
	Sub-Saharan Africa	605	192	137	0.319	18
	El Salvador	593	208	457	71	216
	Chile	543	338	15	0.279	7
	Honduras	506	174	621	158	158
	Panama	504	191	502	182	188
	Venezuela	419	158	435	75	150
	Indonesia	351	225	147	0.867	5
	Cuba	337	106	117		
	Nicaragua	329	108	280	37	95
Malaysia	327	33	68	8	20	
Egypt	323	180	1,332	0.311	530	
All other countries	1,652	695	3,921	257	492	
Total 2/	58,270	17,841	61,935	12,440	20,452	
Sorghum	China (Mainland)	4,740	1,626	4,210	1,494	
	Mexico	585	195	93	43	169
	Sub-Saharan Africa	467	68	363	35	140
	Japan	224	28	357	38	54
	All other countries	25	9	188	5	206
	Total 2/	6,041	1,926	5,211	1,615	570
		----- 2016/17 -----		----- 2017/18 -----		2018/19
		Mkt year	Jun-Dec	Mkt year	Jun-Dec	Jun-Dec
Barley	Canada	63	22	69	51	26
	Japan	23	11	31	24	27
	China (Taiwan)	4	2	5	3	4
	Mexico	2	1	0.542	0.427	0.244
	All other countries	3	2	6	4	5
	Total 2/	95	38	111	81	62

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.

Source: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Statistics.

Date run: 3/8/2019