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Feed Outlook

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Projected Corn Exports Surge, Ethanol Gains

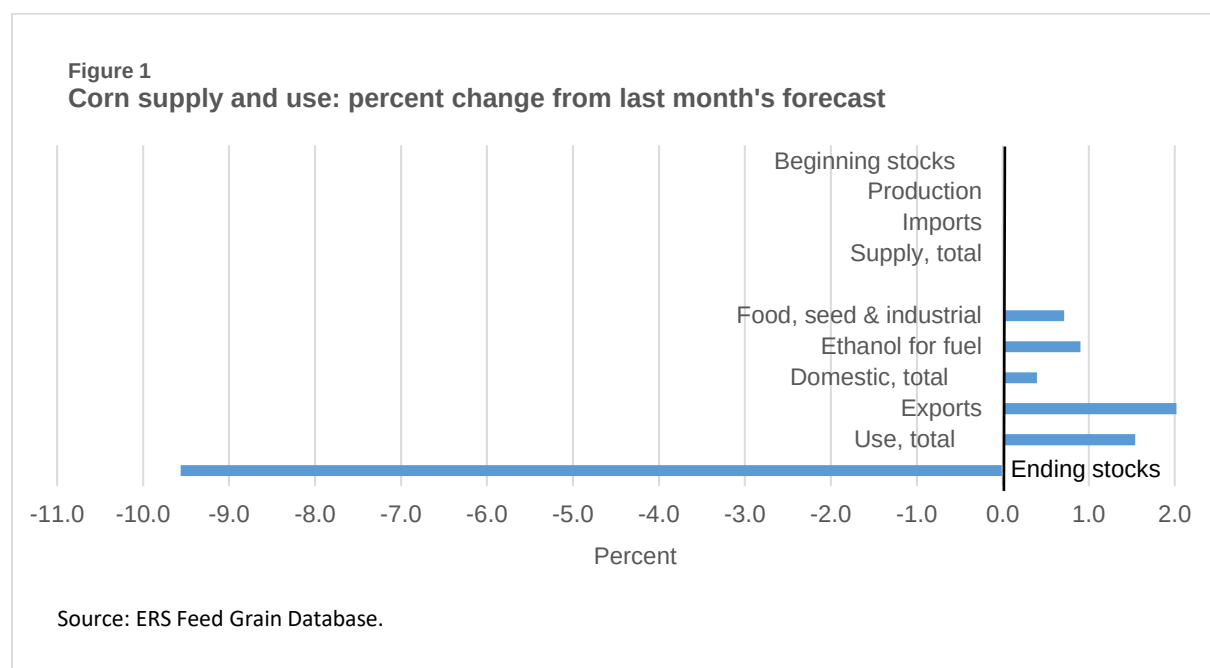
Projected corn exports for 2017/18 are raised 175 million bushels this month to 2,225 million, as reduced export prospects for Argentina provide opportunities for the United States in global markets. On the domestic side, corn for ethanol is raised 50 million bushels to 5,575 million. With these changes, corn use is raised 225 million bushels. A corresponding reduction in projected carryout lowers the stocks-to-use ratio and results in a \$0.05 increase in the average price received by producers to \$3.35 per bushel.

The U.S corn export forecast for 2017/18 is bumped up this month by 4.5 million tons to 56.0 million. Since December 2017, U.S. corn export prices have been the lowest among major corn exporters, boosting sales and driving up the recent pace of shipments. Outstanding corn sales reached a record-high at the start of March. A sharp reduction in projected corn supplies in Argentina this month and the slow pace of Brazilian shipments are expected to further support U.S. export competitiveness during the latter part of 2017/18.

Domestic Outlook

Total Corn Disappearance Projected Higher

Projected corn supply is unchanged this month. Most action was in trade and food seed, and industrial use. Exports are projected 175 million bushels higher to 2,225 million this month on improved U.S. prospects, as continued heat and dryness in Argentina reduces yield prospects, and by extension, exportable supplies in that country. At the same time, U.S. price competitiveness and strong international demand are expected to support a robust U.S. corn export program in the second half of the marketing year.



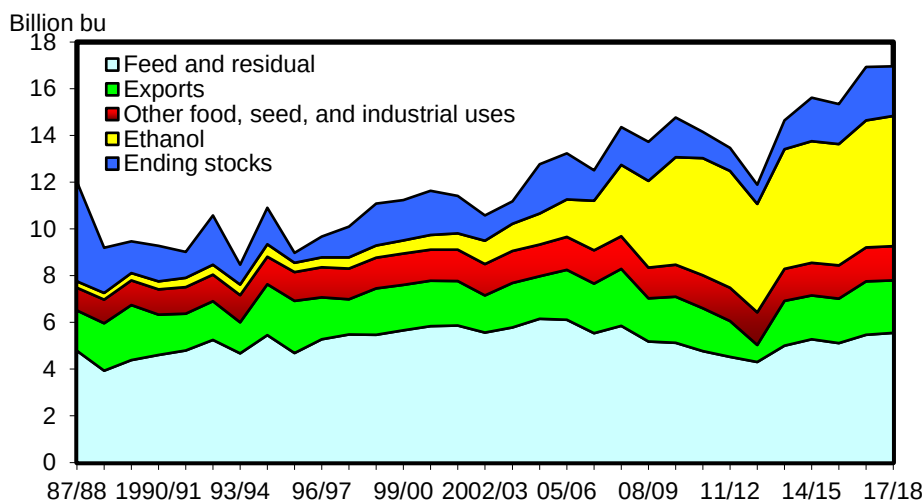
Small Revisions to 2016/17 Crushings

USDA's National Agricultural Statistics Service (NASS) March 1 Grain Crushings and Co-Products Production report included revisions in calendar 2016 data that changed corn and sorghum used for ethanol in the 2016/17 crop year quarterly and annual data. Corn for ethanol is lowered 6.6 million bushels to 5,432 million. Corn food, seed, and industrial (FSI) use is estimated at 6,882 million bushels. Likewise, sorghum for ethanol was lowered 0.4 million bushels to an estimated 113.3 million. Sorghum FSI is now estimated at 114.6 million bushels. For both corn and sorghum, with stocks known, the reduction in FSI was offset by an increase in feed and residual use.

Feed and Residual

Feed and residual use for the four feed grains (corn, sorghum, barley, and oats) and wheat is projected at 148.9 million metric tons, 0.1 million bushels below last month on a September-August marketing year basis. Wheat is projected 0.4 million tons lower at 3.4 million but is nearly offset by higher sorghum at 2.0 million tons.

Figure 2
U.S. corn utilization

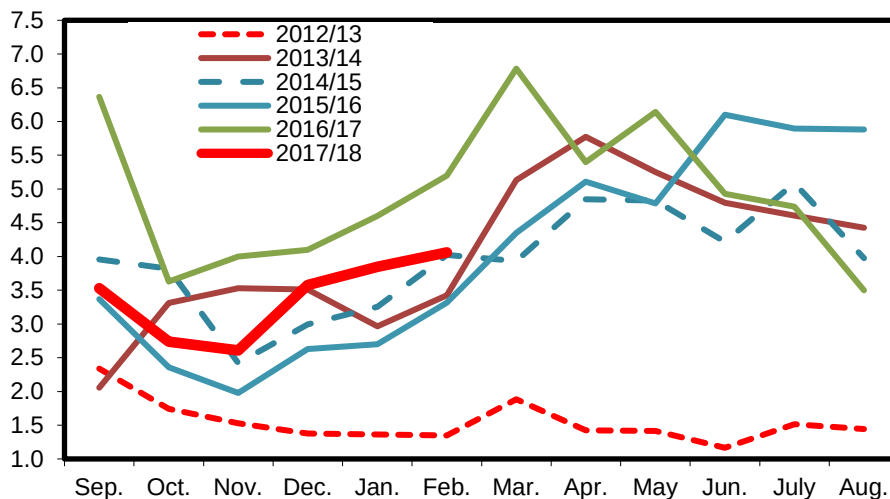


Note: Marketing year 2017/18 is projected.

Source: USDA, World Agricultural Outlook Board, WASDE.

Figure 3
Monthly U.S. corn exports

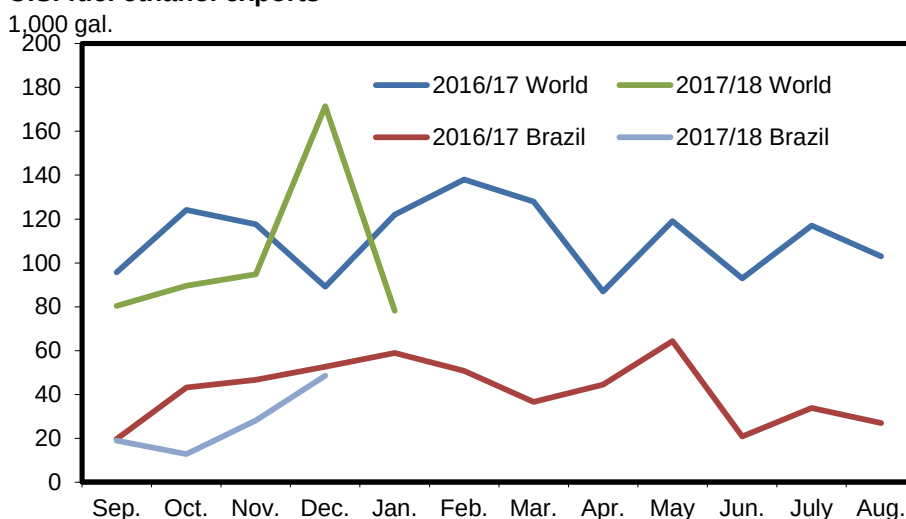
Million metric tons



Source: USDC, U.S. Census, February 2018 *Grain Inspections*.

Grain consuming animal units (GCAU) are projected at 98.72 million, 0.03 below last month's projection. GCAUs for 2016/17 are revised up slightly to 95.7 million units. For 2017/18, feed and residual per GCAU is 1.51 million tons, unchanged from last month. For 2016/17, feed and residual per GCAU is increased by 0.02 million tons to 1.53 million.

Figure 4
U.S. fuel ethanol exports

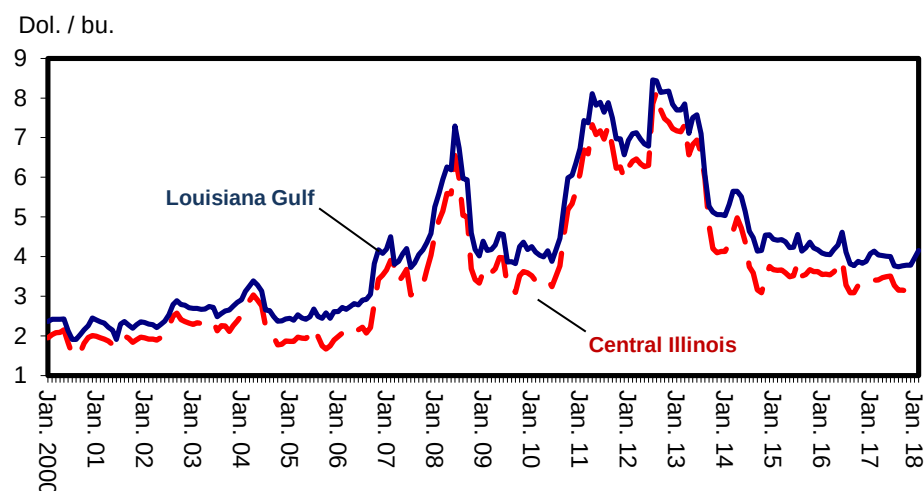


Source: USDC, U.S. Census Bureau.

Food, Seed, and Industrial Raised on Higher Ethanol Production

FSI use of corn is raised 50 million bushels this month to 7,045 million. A 50-million-bushel increase in corn for fuel ethanol is behind the increase. Corn for fuel ethanol is projected at 5,575 million bushels, 143 million higher than 2016/17. Energy Information Administration shows strong gains in weekly ethanol use, and prospects for exports are favorable. Brazil, in particular, has imported significant volumes of ethanol from the United States despite a 20-percent tariff on shipments over 160 million gallons because of the price competitiveness of U.S. ethanol. Currently, ethanol is priced at \$1.50 per gallon at the Gulf Ports, compared with \$2.32 per gallon in Brazil. Demand for ethanol in Brazil is robust because of widespread use of flex-fuel vehicles and an ethanol inclusion mandate of 27 percent minimum for ethanol in gasoline.

Figure 5
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/lfg>.

Projected Corn Exports Raised 175 million bushels

Projected corn exports for 2017/18 are raised 175 million bushels this month to 2,225 million. Through January, Census data indicate September-January exports of 641.6 million bushels, compared with 886.0 million this time last season. Lower exportable supplies in Argentina and competitive U.S. prices are the main factors in increased prospects for U.S. trade. Corn shipments in January were 151.5 million bushels, with Japan, Mexico, Colombia, and Taiwan the major destinations. In January 2017, shipments were 182.5 million bushels, and Japan, Mexico, South Korea, and Colombia were the major destinations.

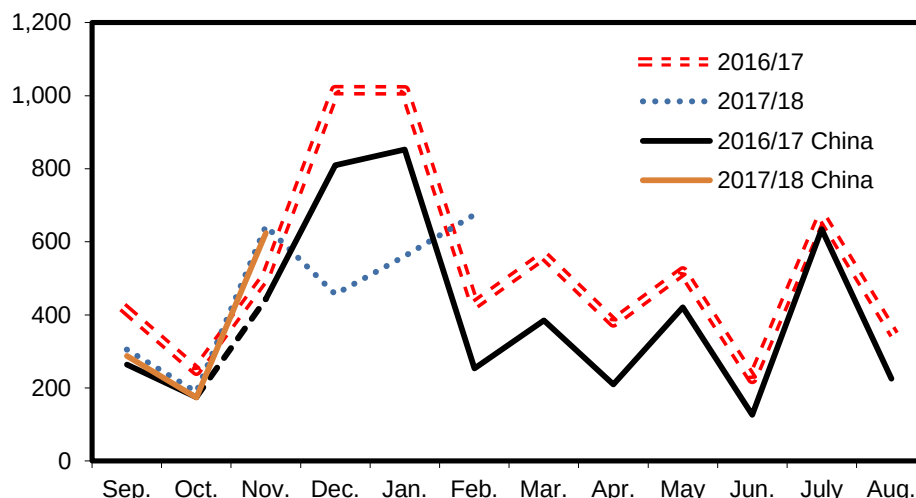
Stocks Dip With Increased Use

Higher corn for ethanol and exports boost total corn use 225 million bushels to 14,820 million, the highest ever. Total use in 2016/17 is estimated at 14,649 million bushels, and the previous 5-year average was 13,319 million. Resulting ending stocks are projected at 2,127 million bushels, 225 million below last month's forecast and 166 million below 2016/17. The stocks-to-use ratio for corn is 14.4, reflecting the tighter stocks but still historically the second highest since 2005/06. Last month's stocks-to-use ratio was 16.1.

The shrinking stocks combined with marketings to date result in an increase of \$0.10 per bushel at the low end of the season-average price received by farmers range and no change at the

high end for a range of \$3.15 to \$3.55 per bushel. The midpoint price of \$3.35 per bushel is a penny short of last year's price.

Figure 6
U.S. sorghum exports
1,000 metric tons

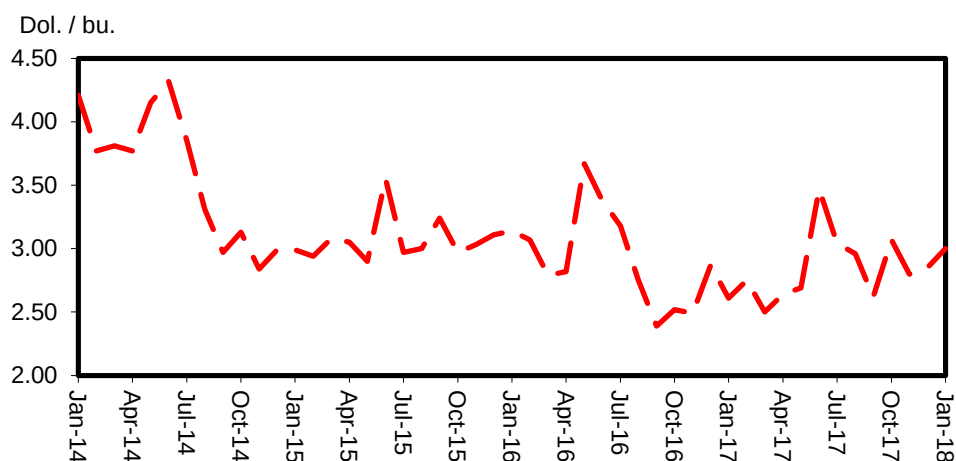


Source: USDC, U.S. Census Bureau, February 2018 *Grain Inspections*.

Sorghum Exports Projected Lower on Reduced Imports by China

There are no supply changes for sorghum this month. Projected 2017/18 sorghum exports are lowered 15 million bushels based on expectations of reduced shipments to China. Exports are now projected at 245 million bushels, slightly higher than 2016/17. China has initiated a Countervailing Duty Investigation alleging U.S. sorghum is being sold at below cost to China. In recent weeks, total U.S. sorghum export commitments (outstanding sales + shipments) have declined slightly with sales cancellations. The 15-million-bushel reduction in use is offset by higher feed and residual use, leaving total use and carryout unchanged from last month's projection. The range for the average price received by farmers is narrowed \$0.05 on each end of the range for a midpoint \$3.15 per bushel, unchanged from last month.

Figure 7
Monthly average barley prices received by farmers



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

Minor Changes Barley Balance Sheet

This month, there is little change in the projected barley balance sheet. A 1-million-bushel increase in exports to 6 million bushels raises total use to 203 million bushels, a few bushels below 2016/17. Ending stocks are projected lower at 60.3 million bushels, reflecting the shift in exports. Barley stocks are the tightest since 2011/12.

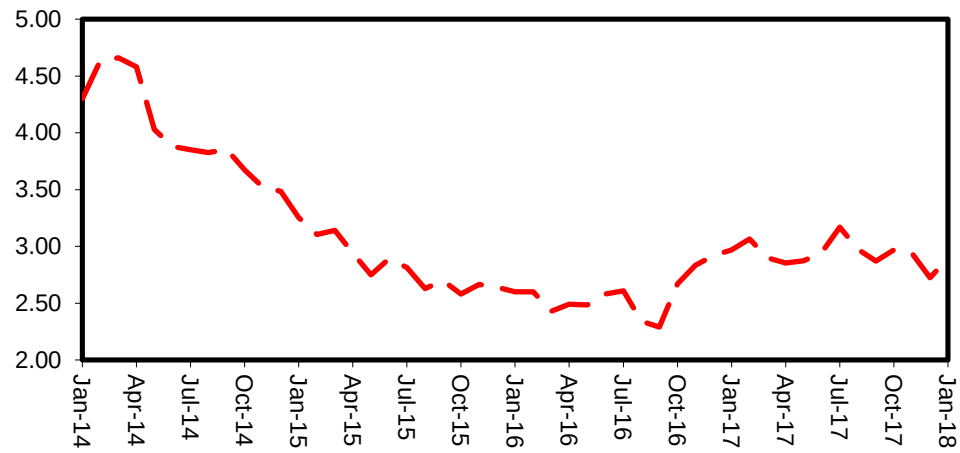
Oats Imports Reduced, Price Rises

Projected oats imports are lowered 10 million bushels to 90 million. Imports are the major source of supplies, accounting for nearly half of the total. Imports are forecast lower based on year-to-date pace, with slower than expected imports from Canada. Supply is projected at 189.7 million bushels, compared with a 5-year average of 210.0 million.

With no change in use, the supply change is carried through to carryout, which is projected at 19.7 million bushels. This is 30.6 million below last year's estimate and 24.7 million below the previous 5 year's average.

The projected range of average prices received by farmers is narrowed by \$0.05 on each end for a range of \$2.55 to \$2.75 per bushel. The midpoint projection is \$2.65 per bushel, \$0.59 higher than 2016/17.

Figure 8
Monthly average oat price: No. 2 white heavy, Minneapolis, MN
 Dol. / bu.



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

International Outlook

Argentine Corn Prospects Reduced Further

Although global coarse grain production for 2017/18 is forecast virtually unchanged at 1,322.0 million tons, substantial shifts across and within coarse grain crops are projected this month, with sizeable implications for individual country balances and U.S. trade.

Coarse grain production for Argentina, Australia, Brazil, Russia, and China is projected lower, with offsetting increases for India, the European Union (EU), Kazakhstan, and South Africa.

The largest production change this month is a 3-million-ton drop in Argentina's corn prospects to 36.0 million, with projected yield down almost 8 percent to 6.9 tons per hectare. An ongoing drought and high temperatures have been concentrated in high-yielding areas of central Argentina (provinces of Santa Fe, western Entre Rios, and southeast Cordoba), where the corn crop continued to deteriorate. Intermittent rains brought some relief, but coverage and rain intensity were not enough to end the drought in many areas, and subsurface soil moisture has become critically low. The heat and drought were most intense in January-February with record-low precipitation during corn pollination in some areas, severely reducing yield potential. The first harvest reports confirm greater-than-expected yield losses.

Among other reductions are a weather-driven area and yield cut for Australian sorghum, a small downward revision for Brazilian corn, and lower projected corn output in Russia (see table A2).

Higher projected corn yields in South Africa are boosted by favorable planting moisture, seasonable temperatures, and timely rains during the reproductive period of the crop. The crop was stressed during the dry spell in December-mid-January that reduced projected area but since then has recovered nicely.

The Indian Ministry of Agriculture issued a second advanced estimate for crops, suggesting a record-high corn crop. It is suspected that hybrid corn seed imported from Argentina and Brazil was essential in achieving high (by Indian standards) yields of 2.8 tons per hectare. Production of all other coarse grains in India is also projected higher.

China's National Bureau of Statistics released 2016/17 final production estimates for small grains. Forecasts for 2017/18 were updated based on this historical data. Expectations are for lower sorghum and barley area and output but higher millet and oats production. It is worth mentioning that oats production almost doubled month-to-month, supported by higher yields. EU

2017/18 coarse grain production is raised 0.8 million tons this month to 151.6 million due to additional reports from the agricultural statistics agencies of France and Germany. EU corn production is up 1.0 million tons to 61.1 million, and adjustments are made for other EU grains.

For more information, details, and specific causes of the revisions and details of this month's changes in coarse grain production, see tables A1, A2, and maps A1 and A2 below. The changes in global, foreign, and U.S coarse grain production by type of grain are shown in table A1, while changes in coarse grain production by country and type of grain are given in table A2.

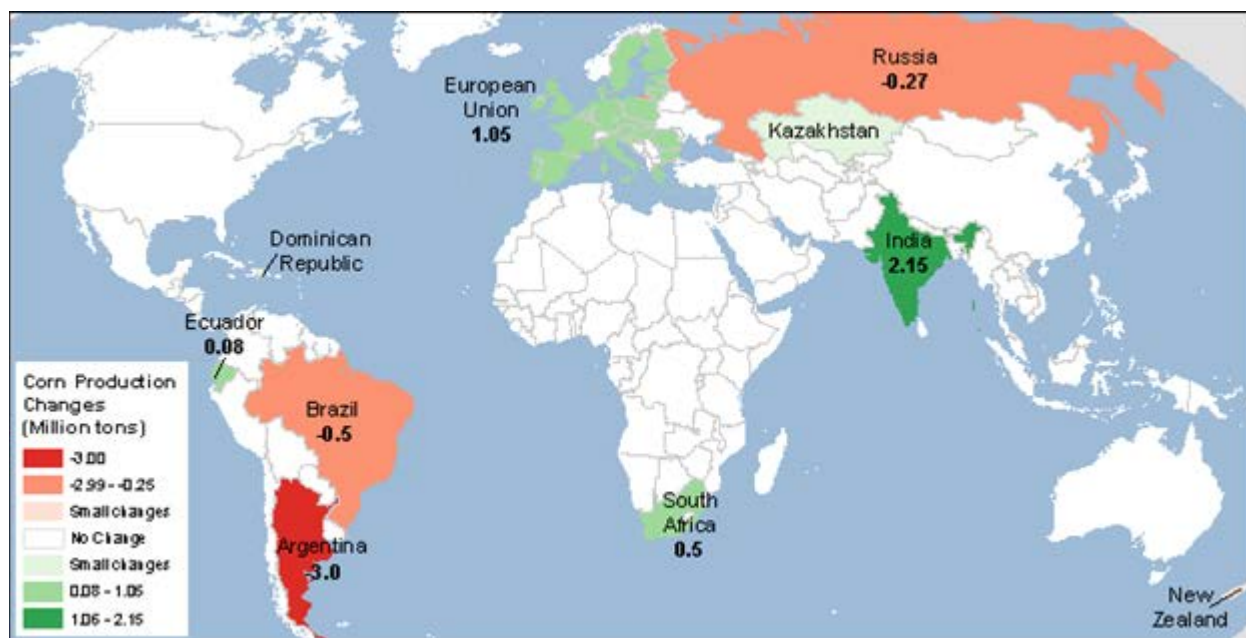
Table A1 - World and U.S. coarse grain production at a glance (2017/18), March 2018

	Region or country	Production	Change from previous month ¹	YoY Change ²	Comments
<i>Million tons</i>					
Coarse grain production (total)					
	World	1,322.0	No change	-42.8	
	Foreign	937.7	No change	-24.4	Fully offsetting changes are made for a number of countries and commodities. See table A2.
	United States	384.3	No change	-18.4	See section on U.S. domestic output.
World production of coarse grains by type of grain					
CORN					
	World	1,041.7	No change	-33.5	
	Foreign	670.8	No change	-19.7	Reduced prospects for Argentina, Brazil, and Russia are fully offset by increases for India, European Union (EU), and South Africa. Adjustments are made for several other countries. See table A2 and map A1.
	United States	371.0	No change	-13.8	See section on U.S. domestic output.
BARLEY					
↑	World	142.4	+0.3	-3.6	
↑	Foreign	139.3	+0.3	-2.3	Higher output projection for Kazakhstan is partly offset by a reduction in China. A number of small adjustments are made for a number of countries. See table A2.
	United States	3.1	No change	-1.3	See section on U.S. domestic output.
SORGHUM					
↓	World	58.4	-1.1	-4.1	
↓	Foreign	49.1	-1.1	-1.1	Production of sorghum is reduced in Australia and China. An increase for India is partly offsetting. See table A2 and map A2.
	United States	9.2	No change	-3.0	See section on U.S. domestic output.
MILLET					
↑	World/Foreign	27.4	+0.9	-1.8	Higher projected output in India and China. See table A2.
MIXED GRAIN					
↓	World/Foreign	16.0	-0.2	+0.5	Reduced production in European Union (Germany).
¹ Change from previous month. ² YoY: year over year changes. Fractional changes are also made for oats and rye.					
For changes and notes by country, see table A2.					
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.					

Table A2 - Coarse grain foreign production by country at a glance, March 2018

	Type of crop	Crop year	Production	Change in forecast ¹	YoY ² change	Comments
			Million tons			
Coarse grain production by country and by type of grain (2017/18)						
ARGENTINA						
↓	Com	Mar-Feb	36.0	-3.0	-5.0	Corn crop has been affected by an ongoing drought and high temperatures in southeast Cordoba, western Entre Rios, and Santa Fe. Corn yields are projected 8 percent lower at 6.9 tons per hectare (see also report text).
AUSTRALIA						
↓	Sorghum	Mar-Feb	1.3	-0.6	+0.3	A reduction of sorghum area is projected, as insufficient soil moisture interfered with planting intentions. Because heat and dryness persisted into mid-February, stressing crop during its flowering and filling stages, sorghum yields are projected lower.
BRAZIL						
↓	Com	Mar-Feb	94.5	-0.5	-4.0	A slight reduction (down 0.1 million hectares) in projected second crop corn, in line with a projection by Brazilian statistical agency CONAB.
RUSSIA						
↓	Com	Oct-Sep	13.2	-0.3	-2.1	A reduction based on final harvest results of the Russian statistical agency ROSSTAT.
SOUTH AFRICA						
↑	Com	May-Apr	13.0	+0.5	-4.5	Though much lower than last year's record, corn yields and output are expected to be above trend this year, with decent amount of rain since mid-January during reproductive period of the crop. South African Crop Estimates Committee of the Department of Agriculture, Forestry & Fisheries (CEC) issued a forecast in line with the increase.
KAZAKHSTAN						
↑	Barley	Jul-Jun	3.3	+0.6	+0.1	Final harvest results published by the Kazakh statistical agency.
INDIA						
↑	Com	Nov-Oct	27.2	+2.2	+1.3	A change in line with the second advanced estimate of the Indian Ministry of Agriculture. Both corn area and yield are projected higher. Importing hybrid corn seeds from Argentina and Brazil helped to propel corn yields to record-high level.
↑	Millet	Nov-Oct	11.6	+0.6	+0.1	A change in line with the second advanced estimate of the Indian Ministry of Agriculture. India produces 30 percent of world millet. There is no recorded millet trade.
↑	Sorghum	Nov-Oct	4.7	+0.2	+0.1	A change in line with the second advanced estimate of the Indian Ministry of Agriculture. While yields are projected 8 percent higher, projected area is at a record-low as farmers in India are shifting away from sorghum.
CHINA						
↓	Sorghum	Oct-Sep	3.2	-0.7	+0.2	Area under sorghum and yield are both projected lower. National Bureau of Statistics (NBS) issued its final 2016/17 production estimates for small grains. Forecasts for 2017/18 were updated based on this historical data.
↓	Barley	Oct-Sep	1.8	-0.3	-0.3	National Bureau of Statistics (NBS) issued its final 2016/17 production estimates for small grains. Forecasts for 2017/18 were updated based on this historical data.
↑	Millet	Oct-Sep	2.2	+0.3	-0.1	Same as above.
↑	Oats	Oct-Sep	0.3	+0.1	No change	Same as above.
EUROPEAN UNION						
↑	Com	Oct-Sep	61.1	+1.0	-0.3	The latest reports indicate higher corn yields in France and Germany.
↓	Mixed grain	Jul-Jun	15.6	-0.2	+0.5	The latest report indicates lower mixed grain yields in Germany.
¹ Change from previous month. Smaller changes for coarse grain output are made for several countries, for com and sorghum see maps A1 and A2. Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.						

Map A1 – Corn production changes for 2017/18, March 2018



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

Map A2 – Sorghum production changes for 2017/18, March 2018



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

Global Coarse Grain Use Projected Higher

Global coarse grain domestic consumption in 2017/18 is projected up 5.8 million tons this month to a record high 1,360.3 million, with multiple changes reflecting production and trade revisions mainly for corn and sorghum. U.S. coarse grain consumption is down 1.6 million tons (see

domestic section for details). Global feed and residual use of coarse grain is raised 2.7 million tons, with increased corn and oats use and reduced sorghum feed consumption. Changes for other coarse grains are smaller.

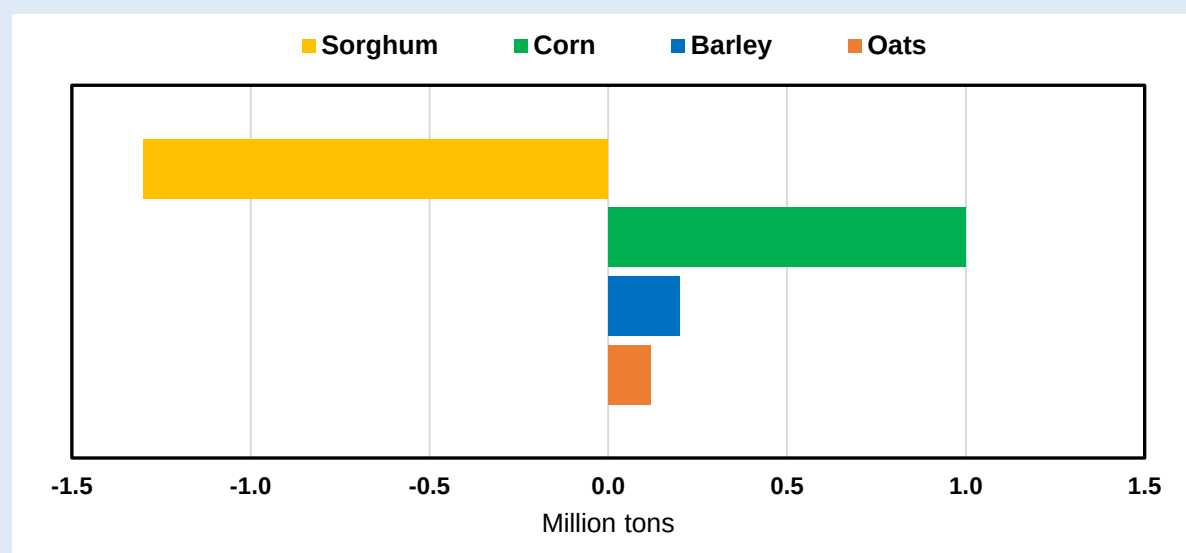
COUNTRY FOCUS: China's Feed Use and Imports Unchanged, but the Shares Shift

The most important changes in coarse grain use this month are coming from China. Although the country's total coarse grain feeding is unchanged, a reduction in sorghum feeding is fully offset by an increase in corn, barley, and oats use.

The projected changes in feed use fully mirror the changes in China's imports this month.

Figure A:

Chinese feed grain use (and imports) changes for 2017/18



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

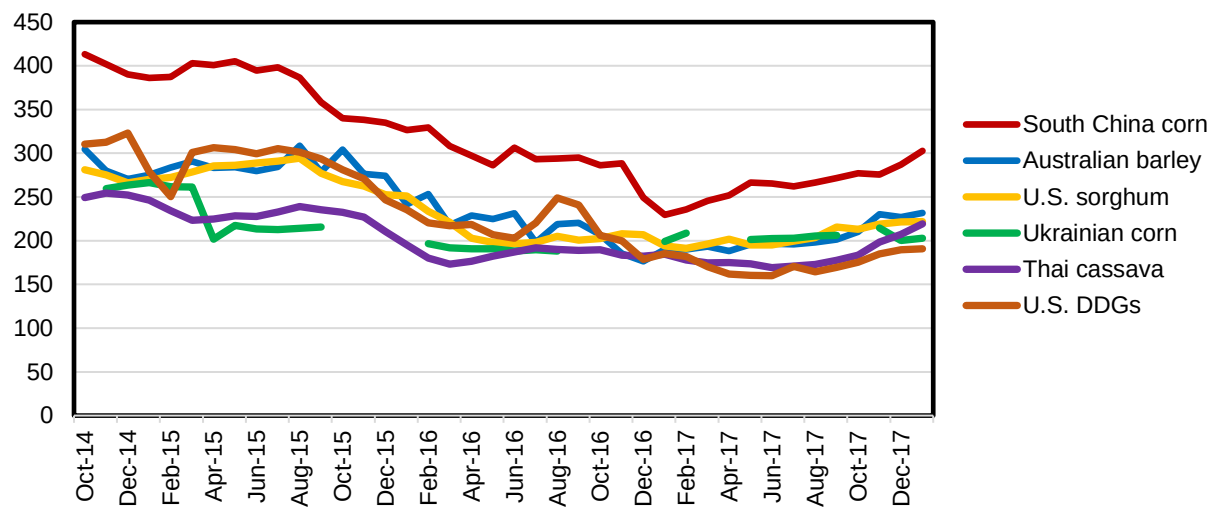
These changes in projected feed use stem from an investigation of alleged dumping and subsidization of sorghum by the United States initiated by the Chinese [Ministry of Commerce](#) in February. China alleges that sorghum imports originating in the United States at low prices put downward pressure on prices for sorghum producers in China.

China has allowed its corn prices to fall since 2015, but they have strengthened since last year and are considerably higher than world prices. The price structure for feed grains in China, particularly in the feed-deficit South, creates a strong incentive for feed mills to use imported feeds (see figure B). Highly competitive prices for imported sorghum triggered a rapid rise in imports, which went from less than 100,000 tons in 2011/12 to 10.1 million in 2014/15 and are projected at 5.6 million for 2017/18.

Figure B

Prices for feeds in China

\$US per ton



DDGs = distillers' dried grains.

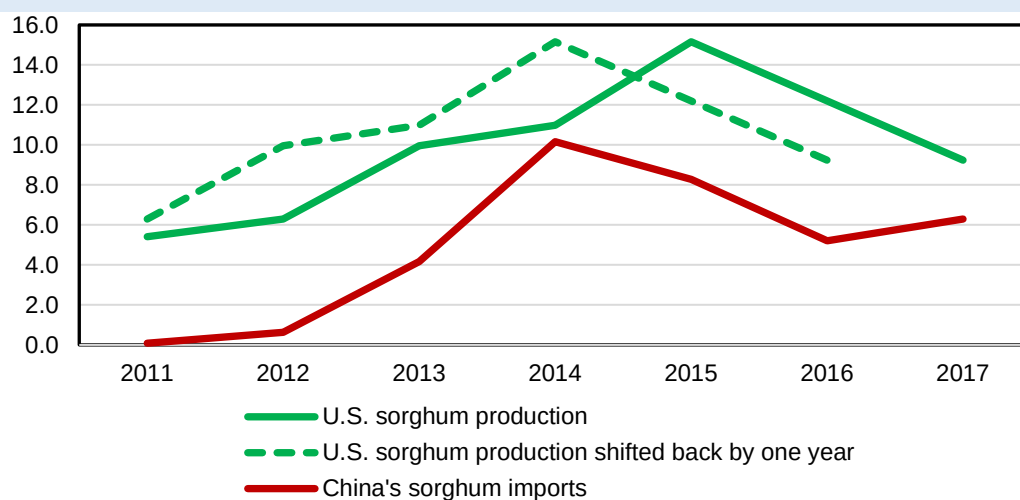
Source: Global Trade Atlas, ERS compilation of various data sources.

Chinese demand for sorghum motivated major expansion of U.S. sorghum production that increased from 5.4 million tons in 2011/12 to 15.2 million in 2015/16. Figure C shows a strong correlation between U.S. sorghum production and Chinese sorghum demand, with the U.S. output response lagging by about 1 year, reflecting the timing U.S. producers respond to price signals.

Figure C

U.S. sorghum production and Chinese imports move together, though with a lag.

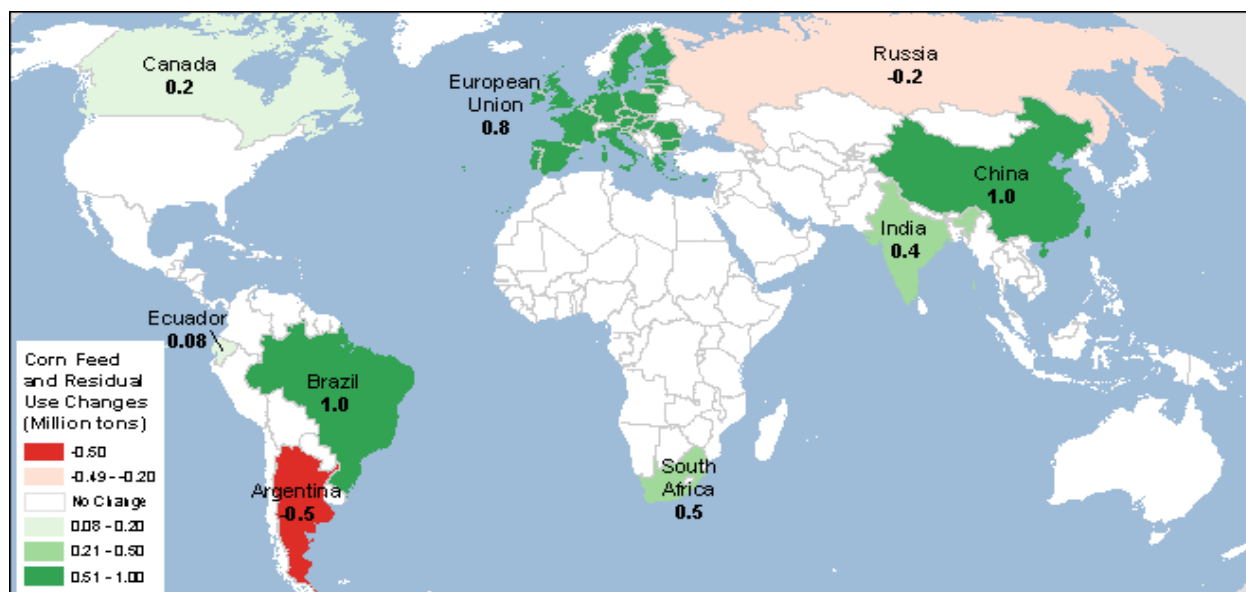
Million tons



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

An increase in corn use for feeding is projected for Brazil, up 1.0 million tons this month, reflecting larger corn stocks and expected healthy growth in livestock numbers. With higher projected corn output, feed and residual use in the EU is up 0.8 million tons this month. For a visual display of the changes in corn and sorghum use, see maps B1 and B2 below.

Map B1 – Corn feed and residual use changes for 2017/18, March 2018



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

Map B2 – Sorghum feed and residual use changes for 2017/18, March 2018



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

U.S. Corn Export Prospects Up Sharply, Export Share Shift Is Projected

U.S. 2017/18 trade year corn exports are increased 4.5 million tons this month to 56.0 million (up 175 million bushels to 2,225 million for the September-August marketing year). The increase of almost 9 percent is supported by reduced foreign corn exporter supplies, a lull in competitors' shipments, and strong recent U.S. sales. The pace of U.S. corn shipments during the first months of 2017/18 has been robust, though not particularly strong compared with last year. Census export data indicate October-January corn exports reached 12.7 million tons, 20 percent lower than in the previous year. However, as of March 1, 2018, outstanding U.S. export sales of corn reached a record-high in recent decades of 22.3 million tons, 25 percent above that of last year. A sharp reduction in projected corn supplies in Argentina this month and a slow pace of Brazilian shipments are expected to further support U.S. exports competitiveness during the latter part of 2017/18, when Southern Hemisphere countries start exporting new crop.

Global corn trade is virtually unchanged this month as reduced corn exports from Argentina and Brazil fully offset higher projected U.S. exports. With sharply lower projected corn output, exports are reduced 2.5 million tons for Argentina to 25.0 million for its 2017/18 local marketing year (March 2018-February 2019). For the 2017/18 international year (October-September), the corn export projection is reduced by a smaller amount of 1.5 million tons, supported by the sound pace of exports since October 2017.

Despite ample supplies, the Brazilian pace of corn exports has been lagging behind the forecast. For the 2016/17 local marketing year (March 2017-February 2018) that just ended in February, corn exports are reduced 2.3 million tons to 31.7 million tons. The local marketing year 2017/18 corn exports are left unchanged at a record of 35.0 million tons. For the 2017/18 October-September international trade year that includes most of the second half of the 2016/17 local year, Brazilian exports are reduced 3.0 million tons to 31.0 million, assuming several more months of lower pace. While down sharply, the projected exports maintain Brazil as the world's second-largest corn exporter.

Corn imports are projected higher for China, up 1.0 million tons to 4.0 million (see the section on Chinese changes in imports and feeding above). For a visual display of this month's changes in corn and sorghum feed and residual use, see maps C1 and C2.

Map C1– Corn trade year (TY) exports changes for 2017/18, March 2018



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

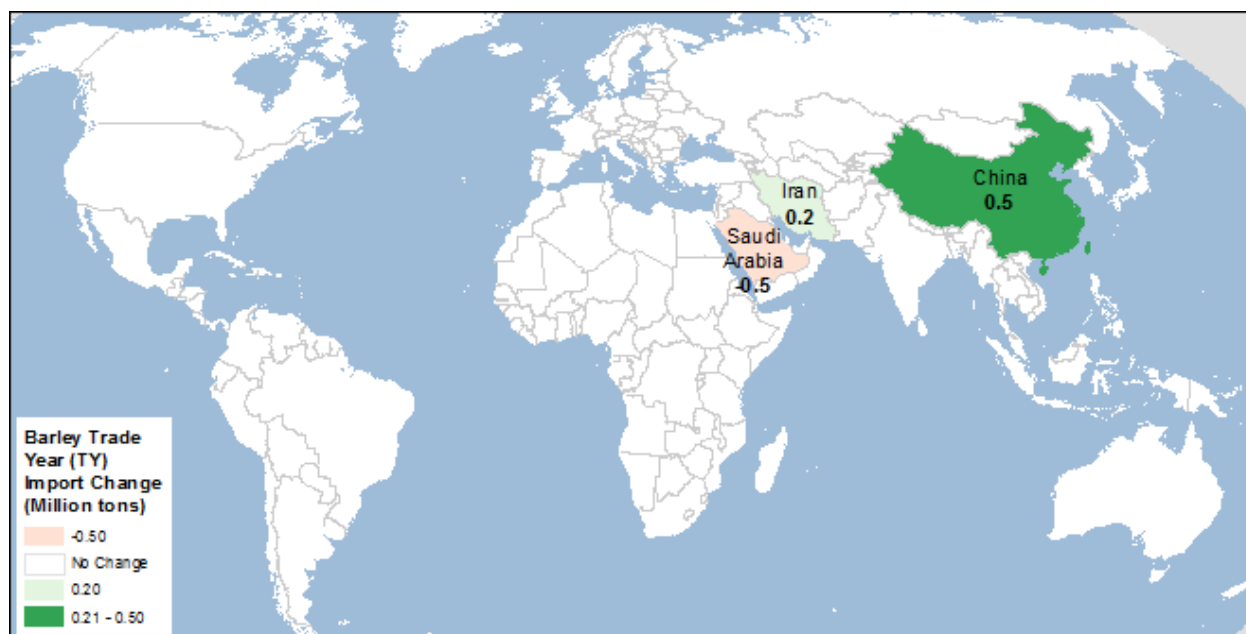
Sorghum Trade Reduced, U.S. Exports Down

Global sorghum trade is projected down 0.7 million tons to 7.7 million, with a reduction in Chinese sorghum imports that are projected now at 5.6 million tons. U.S. 2017/18 sorghum exports are down 0.4 million tons to 6.4 million (down 15 million bushels to 245 million for the September-August marketing year). U.S. export commitments (sales + shipments) have declined marginally with sales cancellations over the past 3 weeks. Reduced demand from China is expected, stemming from the country's recent investigation into U.S. sorghum exports (see the discussion above on China feed and import changes). With the reduction in projected Australian sorghum output, exports by Australia (that go exclusively to China) for the October–September trade year are halved, down 0.3 million tons to 0.3 million.

A Shift in Barley Imports This Month

Global barley trade for the October-September international trade year is projected slightly higher, up 0.2 million tons, with increased supplies and exports from Kazakhstan that go to Iran, a major Kazakh destination. Barley imports for China are up 0.5 million tons, while Saudi Arabia is expected to import 0.5 million tons less. See feature “Barley Prices Fail to Curb China’s Demand” in the March issue of [Grain: World Markets and Trade](#), p. 1.

Map C2 – Barley trade year (TY) imports changes for 2017/18, March 2018



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

Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 3/12/2018

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	2014/15	Sep-Nov	1,232	14,216	5	15,452	1,615	2,225	401	4,241	11,211	3.57
		Dec-Feb	11,211		6	11,217	1,622	1,445	400	3,468	7,750	3.80
		Mar-May	7,750		10	7,760	1,673	1,094	540	3,307	4,453	3.75
		Jun-Aug	4,453		11	4,464	1,687	520	526	2,733	1,731	3.69
		Mkt yr	1,232	14,216	32	15,479	6,597	5,284	1,867	13,748	1,731	3.70
	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	1,710	584	696	2,990	1,737	3.55
		Mkt yr	1,731	13,602	68	15,401	6,648	5,114	1,901	13,664	1,737	3.61
	2016/17	Sep-Nov	1,737	15,148	14	16,899	1,689	2,277	548	4,514	12,386	3.26
		Dec-Feb	12,386		12	12,398	1,711	1,528	537	3,776	8,622	3.39
		Mar-May	8,622		17	8,639	1,740	981	689	3,410	5,229	3.46
		Jun-Aug	5,229		14	5,243	1,743	688	518	2,949	2,293	3.40
		Mkt yr	1,737	15,148	57	16,942	6,882	5,473	2,293	14,649	2,293	3.36
	2017/18	Sep-Nov	2,293	14,604	11	16,908	1,745	2,298	349	4,392	12,516	3.22
		Mkt yr	2,293	14,604	50	16,947	7,045	5,550	2,225	14,820	2,127	3.15-3.55
Sorghum	2014/15	Sep-Nov	34.03	432.58	0.21	466.82	10.60	149.98	83.64	244.23	222.59	3.63
		Dec-Feb	222.59		0.12	222.71	1.80	2.37	98.69	102.86	119.86	4.17
		Mar-May	119.86		0.00	119.86	1.43	-14.99	99.13	85.57	34.29	4.41
		Jun-Aug	34.29		0.04	34.33	1.18	-55.54	70.28	15.92	18.41	
		Mkt yr	34.03	432.58	0.38	466.98	15.01	81.82	351.75	448.57	18.41	4.03
	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	-41.39	65.38	53.73	36.63	3.33
		Mkt yr	18.41	596.75	4.59	619.75	136.95	106.58	339.58	583.12	36.63	3.31
	2016/17	Sep-Nov	36.63	480.26	0.00	516.90	21.65	142.68	44.43	208.75	308.15	2.62
		Dec-Feb	308.15		0.00	308.15	33.06	3.56	90.79	127.41	180.75	2.69
		Mar-May	180.75		0.00	180.75	34.62	3.95	57.48	96.04	84.71	2.79
		Jun-Aug	84.71		1.73	86.44	25.30	-20.19	47.87	52.98	33.46	3.53
		Mkt yr	36.63	480.26	1.74	518.63	114.61	129.99	240.57	485.18	33.46	2.79
	2017/18	Sep-Nov	33.46	363.83	1.91	399.20	13.92	113.66	45.60	173.19	226.02	3.10
		Mkt yr	33.46	363.83	2.00	399.29	50.00	80.00	245.00	375.00	24.29	2.95-3.35

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 3/12/2018

Table 1 Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 9/12/2018													
Commodity, market year, and quarter 1/			Beginning stocks	Production	Imports	Total supply	Food, seed, and industrial use	Feed and residual use	Exports	Total disappearance	Ending stocks	Farm price 2/ (dollars per bushel)	
Barley	2014/15	Jun-Aug	82	182	7	271	40	47	4	91	180	5.69	
		Sep-Nov	180		5	184	39	-15	4	28	156	5.25	
		Dec-Feb	156		6	163	37	5	3	44	118	5.07	
		Mar-May	118		6	124	44	-3	4	45	79	4.86	
		Mkt yr	82	182	24	287	160	34	14	209	79	5.30	
	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	142	2	251	42	27	2	71	180	4.52	
		Sep-Nov	180		2	182	40	-15	2	27	155	4.43	
		Mkt yr	106	142	15	263	162	35	6	203	60	4.20-4.70	
	Oats	2014/15	Jun-Aug	25	70	27	122	18	30	1	48	74	3.34
			Sep-Nov	74		25	99	18	14	0	32	67	3.16
Dec-Feb			67		32	99	17	22	0	40	59	3.08	
Mar-May			59		25	84	24	6	1	31	54	2.89	
Mkt yr			25	70	109	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		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	90	86	229	77	94	2	172	57	2.12	
2016/17		Jun-Aug	57	65	21	142	19	44	1	64	79	1.87	
		Sep-Nov	79		28	106	18	12	1	31	75	2.03	
		Dec-Feb	75		24	100	17	18	1	36	63	2.35	
		Mar-May	63		18	81	22	8	1	31	50	2.42	
		Mkt yr	57	65	90	212	76	82	3	162	50	2.06	
2017/18		Jun-Aug	50	49	19	119	18	28	1	47	72	2.35	
		Sep-Nov	72		30	102	19	16	1	35	67	2.58	
		Mkt yr	50	49	90	190	78	90	2	170	20	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.

Data run: 3/9/2018

Table 2--Feed and residual use of wheat and coarse grains, 3/12/2018

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)
2015/16	Q1 Sep-Nov	55.3	4.1	0.0	0.3	59.8	-2.9	56.8		
	Q2 Dec-Feb	36.5	-0.2	0.2	0.3	36.9	0.1	36.9		
	Q3 Mar-May	23.2	-0.1	-0.1	0.2	23.2	-1.2	22.0		
	Q4 Jun-Aug	14.8	-1.1	0.7	0.7	15.2	7.2	22.4		
	MY Sep-Aug	129.9	2.7	0.8	1.5	135.0	3.2	138.2	94.2	1.5
2016/17	Q1 Sep-Nov	57.8	3.6	-0.0	0.2	61.7	-0.8	60.9		
	Q2 Dec-Feb	38.8	0.1	0.3	0.3	39.5	-0.6	38.9		
	Q3 Mar-May	24.9	0.1	-0.1	0.2	25.1	-1.6	23.5		
	Q4 Jun-Aug	17.5	-0.5	0.6	0.5	18.0	4.6	22.6		
	MY Sep-Aug	139.0	3.3	0.7	1.2	144.3	1.6	145.9	95.7	1.5
2017/18	Q1 Sep-Nov	58.4	2.9	-0.3	0.3	61.2	-1.4	59.8		
	MY Sep-Aug	141.0	2.0	1.1	1.7	145.9	3.0	148.9	98.7	1.5

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, 3/12/2018

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)	
	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17
Sep	3.55	3.09	3.15	4.22	3.78	3.74	8.08	
Oct	3.67	3.27	3.15	4.36	3.88	3.77	8.23	
Nov	3.62	3.28	3.14	4.22	3.83	3.78	7.89	
Dec	3.62	3.34	3.21	4.17	3.88	3.79		
Jan	3.55	3.45	3.29	4.09	4.07	3.96		
Feb	3.56	3.51	3.45	4.06	4.14	4.15		
Mar	3.54	3.40		4.05	4.04			
Apr	3.61	3.41		4.17	3.98			
May	3.74	3.47		4.30	4.03			
Jun	3.91	3.49		4.62	4.01		7.56	
Jul	3.28	3.51		4.11	4.00			
Aug	3.09	3.27		3.82	3.77			
Mkt year	3.56	3.37		4.18	3.95		8.07	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)	
	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17
Jun	2.59	2.36	2.05			4.70	2.89	2.58
Jul	2.70	2.33	2.05			4.67	2.82	2.61
Aug	2.41	2.08	2.10			4.70	2.63	2.34
Sep	2.39	1.95	2.10	4.95		4.70	2.70	2.29
Oct	2.57	2.00	2.10	4.95		4.70	2.58	2.67
Nov	2.60	2.00	2.36				2.67	2.84
Dec	2.60	2.00	2.61			4.85	2.64	2.92
Jan	2.58	2.00	2.65			4.85	2.60	2.97
Feb	2.50	2.00	2.81			4.85	2.60	3.07
Mar	2.46	2.02			4.70		2.43	2.90
Apr	2.45	2.05					2.49	2.86
May	2.44	2.05					2.49	2.88
Mkt year	2.52	2.07		4.95	4.70		2.63	2.74

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/lq>.

Data run: 3/9/2018

Table 4--Selected feed and feed byproduct prices (dollars per ton), 3/12/2018

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		
	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18
Oct	327.97	323.26	319.24	292.50	241.88	229.00	96.00	77.00	80.70	509.38	466.13	469.30
Nov	308.60	322.42	313.52	291.88	221.00	228.75	109.63	83.50	93.00	477.50	477.50	487.24
Dec	289.78	321.03	327.17	265.00	217.50	232.50	113.13	92.83	96.25	482.25	501.67	482.88
Jan	279.57	332.34	322.60	248.75	223.50	259.00	109.63	97.50	98.80	452.50	502.50	477.60
Feb	273.61	334.32	362.85	238.13	221.88	303.13	102.38	88.13	106.25	457.50	516.50	483.13
Mar	276.23	320.34		216.50	210.63		87.00	87.13		445.50	505.63	
Apr	303.81	305.67		207.50	195.00		73.25	75.00		434.00	501.13	
May	376.36	293.68		242.50	179.50		87.00	71.00		464.10	485.30	
Jun	408.58	258.75		284.00	179.38		107.13	68.38		568.13	475.75	
Jul	371.49	326.04		280.00	200.84		95.01	71.35		573.13	467.88	
Aug	340.80	301.05		280.00	198.50		90.30	73.10		507.20	475.50	
Sep	337.95	307.70		285.00	213.75		85.38	75.00		469.38	469.25	
Mkt yr	324.56	312.22		260.98	208.61		96.32	79.99		486.71	487.06	
	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO			Alfalfa hay, weighted-average farm price 2/		
	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2015/16	2016/17	2017/18	2016/17	2017/18	
Oct	291.88	237.50	228.00	123.13	116.25	117.30	105.93	79.43	70.36	135.00	152.00	
Nov	266.25	229.00	219.38	132.63	111.70	123.13	106.53	85.53	86.85	130.00	148.00	
Dec	221.67	211.67	221.67	133.13	104.84	143.75	99.55	101.62	107.88	127.00	148.00	
Jan	200.13	255.60	220.00	132.50	96.30	155.50	104.16	98.25	123.68	126.00	152.00	
Feb	193.75	285.00	225.84	136.63	98.88	158.75	97.89	84.66	114.59	127.00		
Mar	261.00	284.38		134.50	98.25		68.64	80.76		134.00		
Apr	316.25	266.25		122.38	99.25		65.12	58.03		150.00		
May	310.10	245.50		141.10	100.50		60.72	48.41		157.00		
Jun	345.00	248.13		170.50	105.25		57.94	60.39		154.00		
Jul	381.67	276.25		149.38	110.63		61.48	67.10		152.00		
Aug	347.00	318.50		130.90	110.00		60.61	63.15		147.00		
Sep	285.63	301.88		127.75	111.63		64.43	67.48		149.00		
Mkt yr	285.03	263.31		136.21	105.29		79.42	74.57		136.00		

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.

Table 5--Corn: Food, seed, and industrial use (million bushels), 3/12/2018

Mkt year and qtr 1/		High-fructose corn syrup (HFCS)	Glucose and dextrose	Starch	Alcohol for beverages and fuel	Alcohol for manufacturing	Cereals and other products	Seed	Total food, seed, and industrial use
2015/16	Q1 Sep-Nov	110.81	72.33	62.30	1,300.20	34.89	50.62	0.00	1,631.15
	Q2 Dec-Feb	108.82	81.39	58.34	1,316.28	36.58	50.43	0.00	1,651.83
	Q3 Mar-May	125.18	89.99	57.84	1,264.80	38.27	50.92	27.93	1,654.93
	Q4 Jun-Aug	127.30	93.74	60.03	1,342.34	33.27	51.13	2.63	1,710.44
	MY Sep-Aug	472.11	337.44	238.52	5,223.61	143.00	203.10	30.56	6,648.34
2016/17	Q1 Sep-Nov	113.14	88.81	58.20	1,343.08	35.78	49.92	0.00	1,688.93
	Q2 Dec-Feb	106.39	88.16	56.08	1,371.21	36.35	52.33	0.00	1,710.52
	Q3 Mar-May	119.64	96.14	59.72	1,346.10	36.72	54.45	27.25	1,740.02
	Q4 Jun-Aug	126.35	97.09	61.18	1,371.56	37.15	47.60	2.05	1,742.99
	MY Sep-Aug	465.52	370.20	235.17	5,431.95	146.00	204.30	29.30	6,882.45
2017/18	Q1 Sep-Nov	112.55	93.62	59.71	1,391.29	36.30	51.40	0.00	1,744.87
	MY Sep-Aug	460.00	390.00	235.00	5,575.00	149.00	206.40	29.60	7,045.00

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

Source: Calculated by USDA, Economic Research Service.

Date run: 3/9/2018

Table 6--Wholesale corn milling product and byproduct prices, 3/12/2018

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)		High-fructose corn syrup (42%), Midwest (cents per pound)	
	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18	2016/17	2017/18
Sep	16.71	16.01	18.38	17.68	13.21	14.41	39.00	39.00	26.75	28.25
Oct	17.06	15.94	18.73	17.61	13.39	13.87	39.00	39.00	26.75	28.25
Nov	16.89	15.78	18.56	17.45	13.87	13.90	39.00	39.00	26.75	28.25
Dec	16.84	15.69	18.51	17.35	14.23	13.75	39.00	39.00	26.75	28.25
Jan	17.07	15.75	18.74	17.42	14.05	13.81	39.00	39.25	28.25	28.25
Feb	17.13	16.00	18.80	17.67	14.20	14.08	39.00	39.25	28.25	
Mar	17.06		18.40		14.41		39.00		28.25	
Apr	16.99		18.58		14.29		39.00		28.25	
May	16.91		18.58		14.38		39.00		28.25	
Jun	16.89		18.56		14.74		39.00		28.25	
Jul	16.89		18.56		15.04		39.00		28.25	
Aug	16.25		17.92		14.98		39.00		28.25	
Mkt year 2/	16.89		18.53		14.23		39.00		27.75	

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: 3/9/2018

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 3/12/2018

		----- 2015/16 -----		----- 2016/17 -----		2017/18
Import and country/region		Mkt year	Jun-Jan	Mkt year	Jun-Jan	Jun-Jan
Oats	Canada	1,378	1,022	1,508	1,108	1,038
	Sweden	62	62	27		41
	Finland	34	27	21	21	16
	All other countries	0	0	0	0	0
	Total 2/	1,475	1,111	1,556	1,129	1,094
Malting barley	Canada	285	201	103	57	55
	All other countries	0	0	17	17	0
	Total 2/	285	202	119	73	55
Other barley 3/	Canada	116	74	89	50	71
	All other countries	4	3	2	1	0
	Total 2/	119	77	90	51	71

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: 3/9/2018

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 3/12/2018

		----- 2015/16 -----		----- 2016/17 -----		2017/18
Export and country/region		Mkt year	Sep-Jan	Mkt year	Sep-Jan	Sep-Jan
Corn	Mexico	13,337	4,703	13,916	5,192	5,963
	Japan	10,439	2,509	13,527	4,465	3,408
	Colombia	4,548	1,801	4,730	1,886	2,104
	South Korea	2,964	206	5,601	2,422	624
	Peru	2,383	816	2,986	1,075	1,353
	China (Taiwan)	2,038	272	2,966	1,155	244
	Saudi Arabia	1,389	298	2,138	977	145
	Venezuela	1,155	196	419	158	165
	Canada	1,014	463	704	362	571
	Guatemala	906	281	993	398	243
	Egypt	852	189	323	211	55
	Algeria	663		91	16	0.119
	El Salvador	631	183	593	227	102
	Costa Rica	552	137	819	339	310
	Honduras	550	170	505	187	185
	Morocco	450	0.888	871	399	88
	European Union-27	413	3	843	203	72
	Vietnam	413	70	200	199	0.028
	Panama	392	93	504	239	235
	Israel	388	0.027	83	0.039	0.024
	Chile	353	0.338	543	418	0.574
	China (Mainland)	321	67	807	21	26
	Jamaica	283	118	275	101	127
	Nicaragua	258	48	329	123	59
	Dominican Republic	253	0.213	807	364	51
	All other countries	1,342	365	2,670	1,368	165
	Total 2/	48,288	12,991	58,242	22,505	16,297
Sorghum	China (Mainland)	7,034	3,933	4,801	2,545	2,099
	Mexico	625	236	585	269	49
	Sub-Saharan Africa	593	270	475	138	41
	Pakistan	205	0.486	0.466	0.385	
	All other countries	170	70	250	55	61
	Total 2/	8,626	4,510	6,111	3,007	2,250
		----- 2015/16 -----		----- 2016/17 -----		2017/18
		Mkt year	Jun-Jan	Mkt year	Jun-Jan	Jun-Jan
Barley	Mexico	142	122	2	1	0.427
	Canada	52	44	63	27	55
	Morocco	14	14			
	China (Taiwan)	7	5	4	2	3
	All other countries	21	16	26	14	29
	Total 2/	235	201	95	45	87

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: 3/9/2018

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