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Situation and Outlook

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Feed Outlook

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U.S. Corn Food, Seed, and Industrial Use Raised on Improved Ethanol Prospects

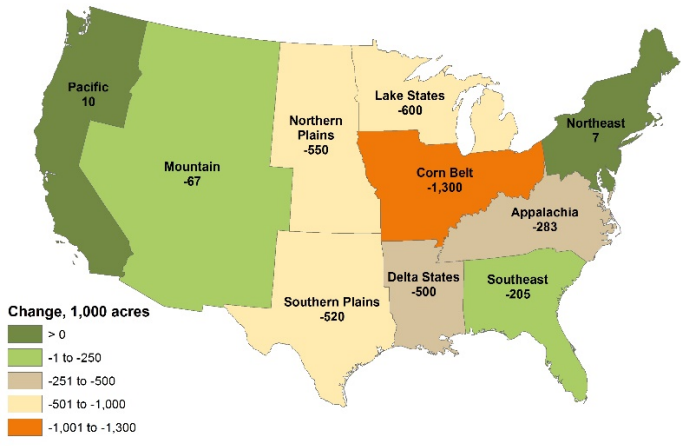
The next release is May 12, 2017.

Approved by the World Agricultural Outlook Board.

Projected U.S. 2016/17 corn food, seed, and industrial use (FSI) is raised 50 million bushels as this month's corn for ethanol is projected 50 million bushels higher at 5,450 million. Total FSI use is projected at 6,895 million this month. This increase is offset by a 50-million bushel decrease in projected feed and residual, now at 5,500 million. For 2017/18, farmers indicated intentions to plant 4 percent fewer corn acres than last year, for a planted acreage forecast of 90 million acres.

Global coarse grain production in 2016/17 is forecast up, led by Brazil, Argentina, and Mexico. Both foreign domestic use and coarse grains stocks are projected higher. Coarse grain trade is unchanged, with major revisions fully offsetting.

Change in corn planted area from 2016 to 2017 (1,000 acres)
USDA farm production regions



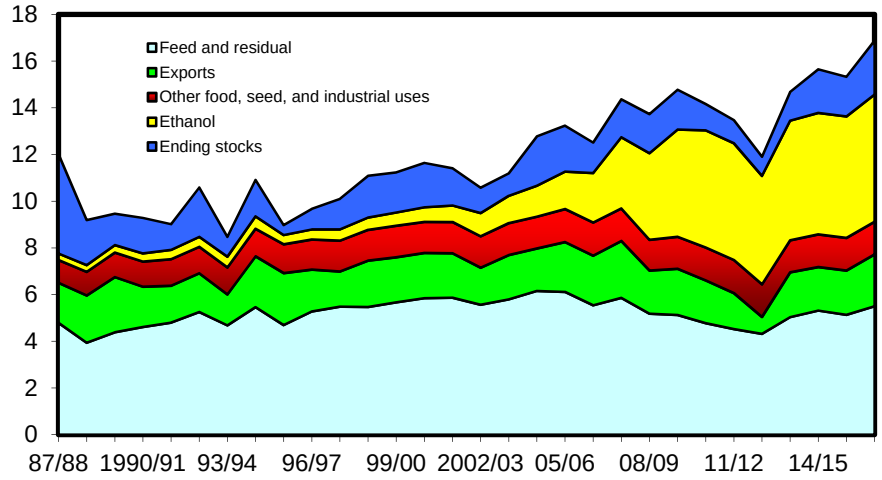
Source: USDA NASS Prospective Plantings report, March 31, 2017.

Domestic Outlook

Feed and Residual Use Lowered

Projected U.S. 2016/17 feed and residual use for the four feed grains (corn, sorghum, barley, and oats) and wheat is lowered 2.4 million metric tons this month to 153.0 million, on a September-August marketing year basis. Corn feed and residual slipped 1.3 million tons from last month's forecast as food, seed, and industrial (FSI) use is raised. As with last month's forecast, higher corn for ethanol contributed to the reduction in feed and residual use. Sorghum and wheat feed and residual projections declined. Lower projected March 1 stocks were reflected in the feed and residual forecast for sorghum. Wheat feed and residual was reduced this month in response to USDA's National Agricultural Statistics Service (NASS) *Grain Stocks* report. This month's projection is 14.4 million tons higher than feed and residual of 138.6 million tons in 2015/16.

Figure 1
U.S. corn utilization
Billion bu



Note: Marketing years 2015/16 and 2016/17 are projected.
Source: USDA, World Agricultural Outlook Board, *WASDE*.

Grain Consuming Animal Units Projected Higher

Slight changes in poultry inventories raise grain consuming animal units (GCAU) this month, resulting in 2016/17 projected GCAUs of 95.95 million units, compared with 95.84 million last month and up 1.83 million units from the 2015/16 estimate of 94.1 million. Feed and residual use is projected at 1.59 tons per GCAU this month, down from last month and 0.12 tons per GCAU higher than 2015/16.

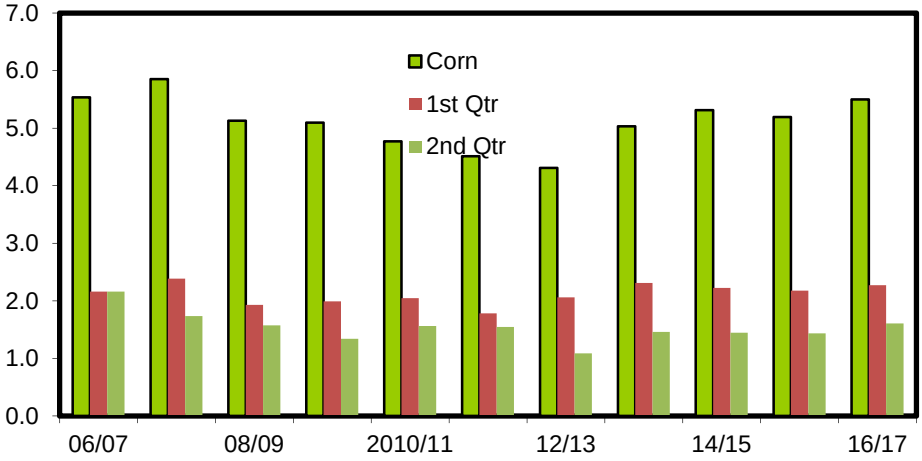
Corn for Ethanol Boosts Food, Seed, and Industrial Use, Again

Corn projected to produce fuel ethanol is raised 50 million bushels, for the second consecutive month, to 5,450 million on record second-quarter use reflected in NASS's *Grain Crushings and Co-Products Production* report, continuing strong weekly production data from the U.S. Energy Information Administration (EIA), and the highest monthly exports since 2011 in February, the latest month for which data are available. Weekly production has reached record levels, and shipments to Brazil continue at record levels. Total FSI is now forecast at 6,895 million bushels.

Figure 2

U.S. corn feed and residual use

Billion bu



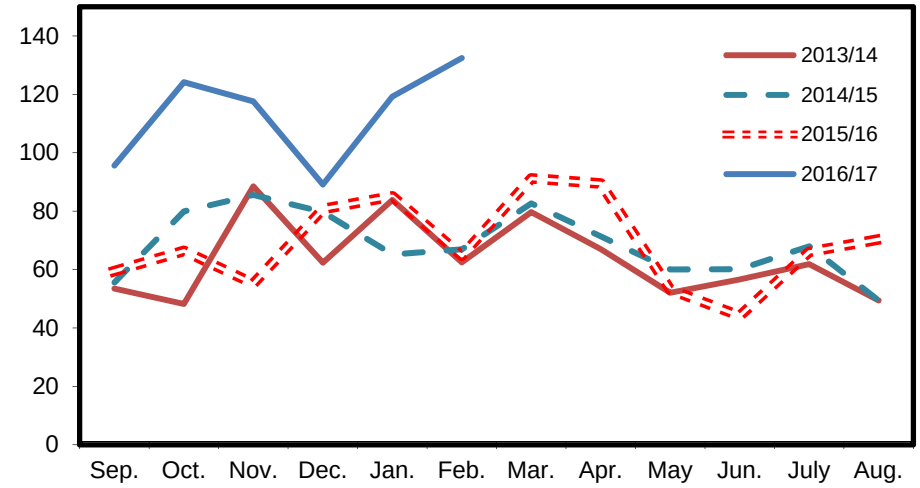
Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, World Agricultural Outlook Board, *WASDE.*

Feed and residual use is lowered 50 million bushels to 5,500 million as a result of disappearance during the first half of the marketing year as indicated in NASS's *Grain Stocks* report. In addition, larger projected supplies of competitively priced distillers' dried grains via increased corn used for ethanol is expected to dampen feeding during the second half of the marketing year. With the export projection unchanged, total disappearance is projected unchanged from 14,620 million bushels last month.

Figure 3

U.S. fuel ethanol exports

1,000 gal.



Source: USDC, U.S. Census Bureau.

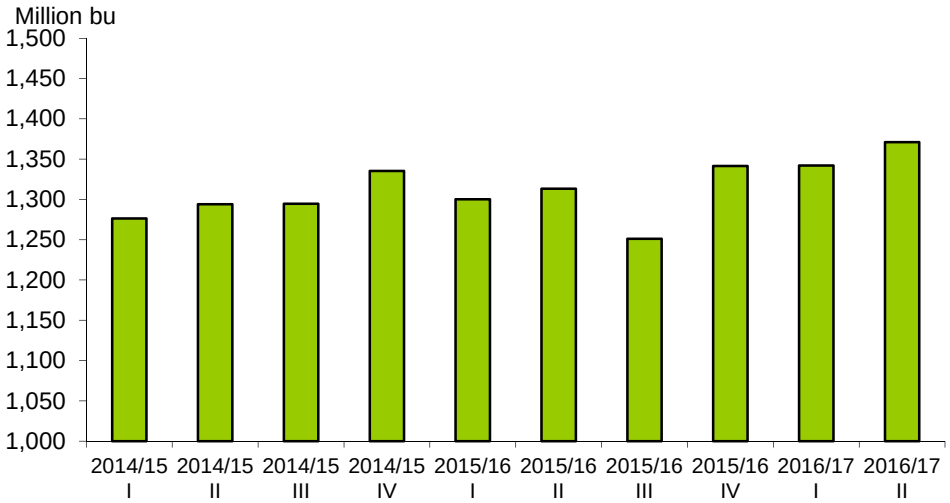
Year to Date Feed and Residual Use Up 5 Percent

March 1 stocks indicate feed and residual for the first half of the 2016/17 crop year is 5.1 percent higher than in 2015/16. At 3,798 million bushels, feed and residual for the first 6 months is 185 million bushels higher. Larger animal inventories and the influence of the larger crop on the residual component are behind the gain. Compared

to the marketing year forecast, first half feed and residual is 69 percent of total feed and residual use, compared to 71 percent in 2015/16.

Figure 4

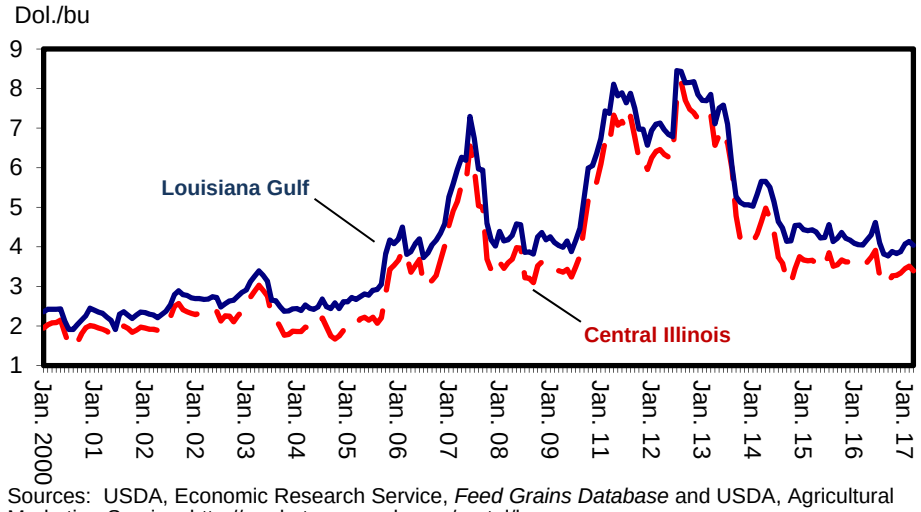
U.S. corn for ethanol use by quarter



Source: USDA, National Agricultural Statistics Service, *Grain Crushings and Co-Products Production.*

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/lg.

Planting Intentions for 2017/18 Down 4 Percent From Current Year Acreage

NASS's March 31 *Prospective Plantings* report indicates a 4-percent cut in projected U.S. corn acreage for the 2017/18 crop. Producers reported intentions to plant 90.0 million acres of corn, down from a final planted area of 94.0 million in 2016/17. If realized, this would still be the fourth largest corn area planted since 1944. Among the major corn-producing States, only Kansas reported a gain of 100,000 acres. Intended acres were unchanged from a year ago in Indiana and Ohio, but all other major corn-producing States reported declines in intentions, the largest being Iowa down 600,000 acres, Texas and Minnesota down 450,000 each, and Missouri down 400,000.

Nebraska and Illinois intentions were down 300,000 acres each. Last year, no major producing States reported declines in intentions.

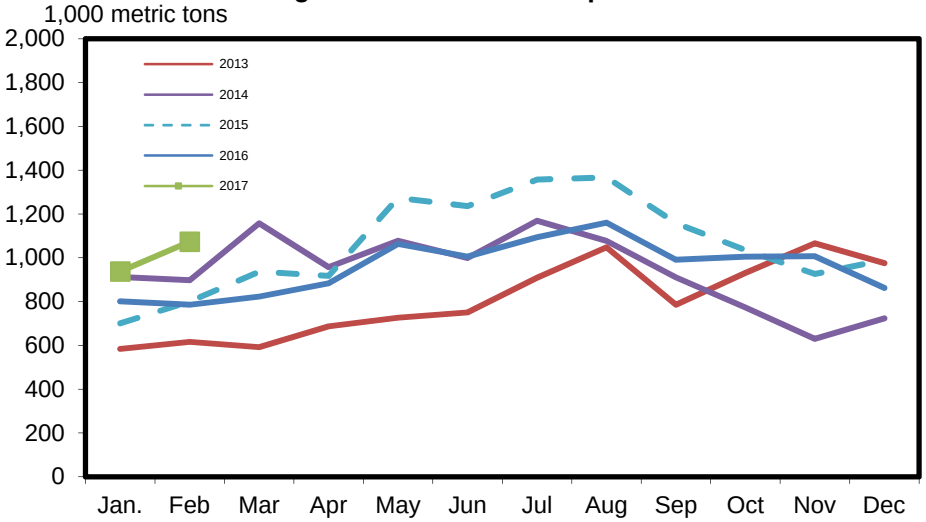
March 1 Corn Stocks

NASS's March 31 *Grain Stocks* report set second quarter corn ending stocks at 8,616 million bushels, 10.2 percent higher than the March 1, 2016, estimate. On March 1, a total of 4,908 million and 3,708 million bushels were held on farms and off farms, respectively. The share of stocks being held onfarm is higher, at 57 percent, than this time last season as producers have held onto crops in anticipation of higher prices. Average onfarm holdings for the previous 5 years were 54 percent of total stocks.

Figure 6

U.S. dried distillers' grains with solubles exports

1,000 metric tons

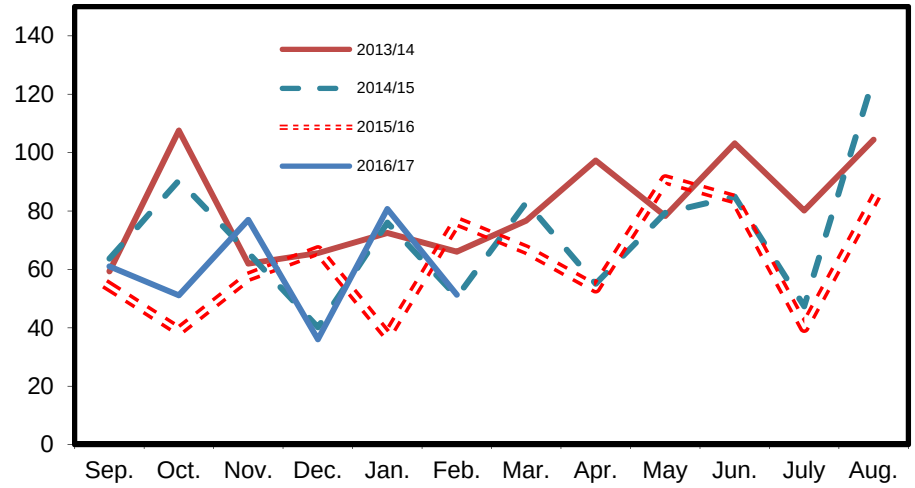


Source: USDC, U.S. Census Bureau.

Figure 7

U.S. corn gluten meal exports

1,000 metric tons



Source: USDC, U.S. Census Bureau.

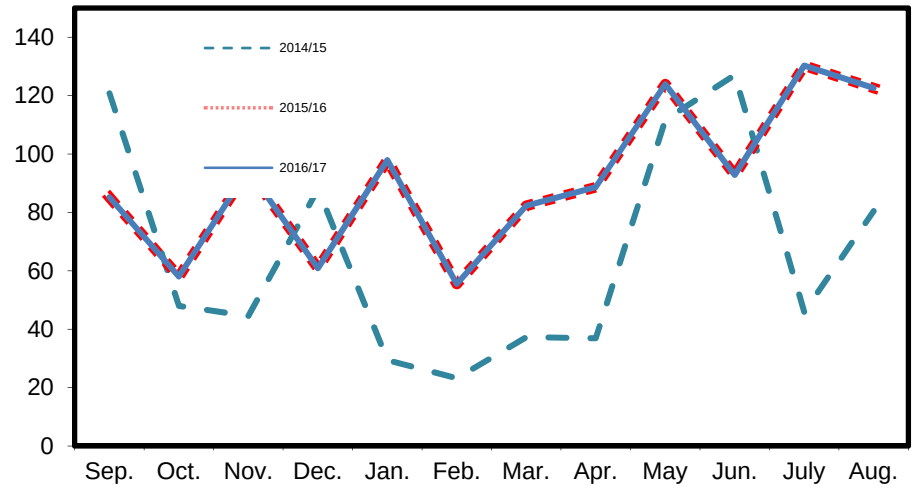
Projected Corn Price Unchanged

The projected range for the season-average corn price received by farmers is narrowed by 5 cents on each end for a forecast range of $3.25 to $3.55 per bushel, leaving the midpoint unchanged at $3.40

Figure 8

U.S. corn gluten feed exports

1,000 metric tons

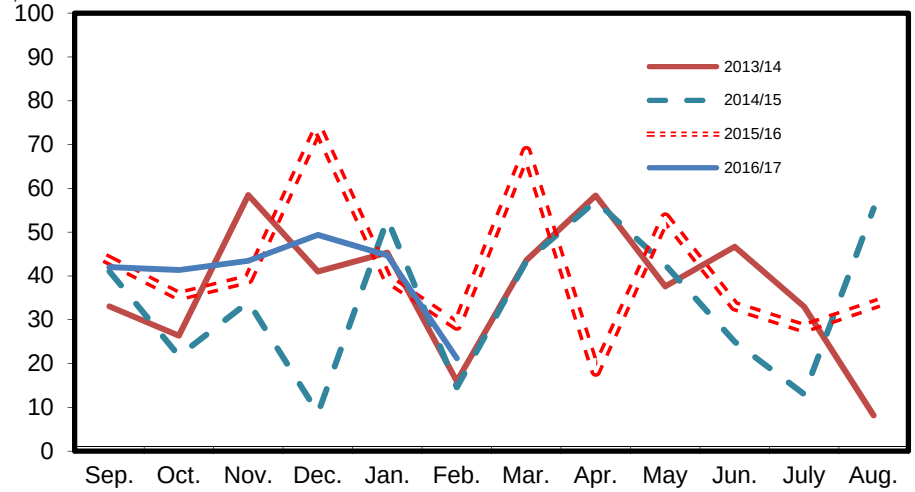


Source: USDC, U.S. Census Bureau.

Figure 9

U.S. corn oil exports

1,000 metric tons



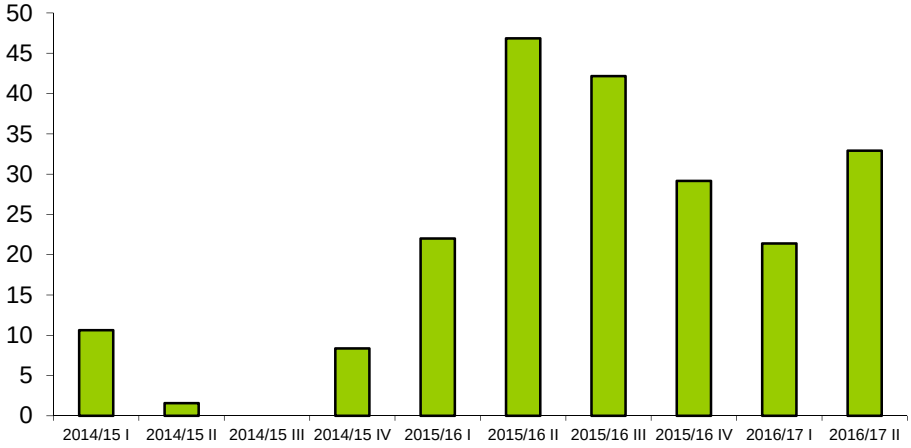
Source: USDC, U.S. Census Bureau.

Sorghum for Feed and Residual Lowered

Projected sorghum feed and residual is lowered 10 million bushels to 130 million this month on higher-than-expected reported March 1 stocks of 180.3 million. First half feed and residual is 145 million bushels, 5.3 percent lower than last year. Relatively abundant corn supplies appear to be limiting domestic feeding of sorghum, despite the sorghum/corn price ratio of 0.82 in February being below the historical average.

The 10-million bushel reduction in sorghum feed and residual is reflected in a 10-million bushel gain in projected ending stocks, now set at 47.9 million bushels.

Figure 10
U.S. sorghum for ethanol use by quarter
Million bu

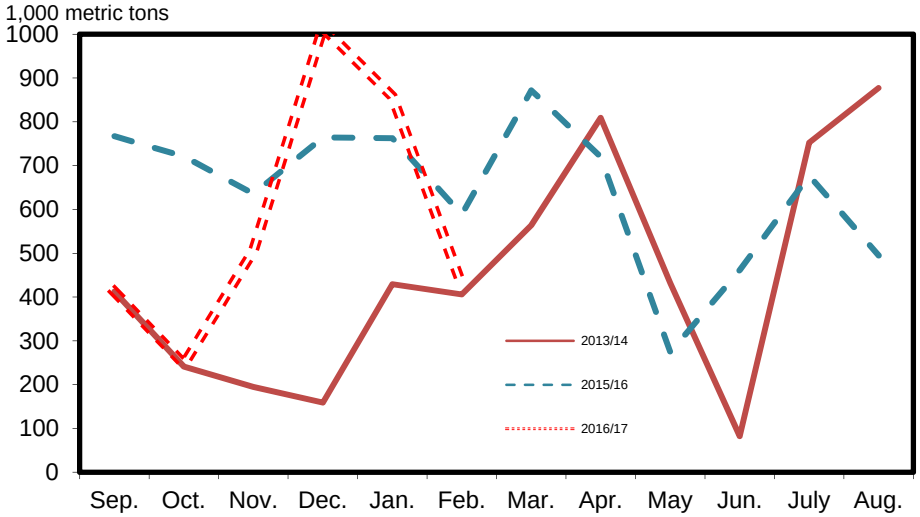


Note: 2014/15 II and III contain months for which were withheld to avoid disclosing data for individual operations.
Source: USDA, National Agricultural Statistics Service, *Grains Crushings and Co-Products.*

Sharp Reduction in Sorghum Acreage Intentions

NASS's March 31 *Prospective Plantings* report indicates a 14-percent cut in projected U.S. sorghum acreage for the 2017/18 crop. Producers reported intentions to plant 5.8 million acres of sorghum, down from a final planted area of 6.7 million in 2016/17. If realized, this would be the lowest sorghum area planted since 2011. Among the major producing States, Kansas reported a loss of 600,000 to 2.5 million acres, and Texas was down 100,000 to 1.8 million acres.

Figure 11
U.S. sorghum exports
1,000 metric tons



Source: USDC, U.S. Census Bureau, February 2017 *Grain Inspections.*

Barley Feed and Residual Raised

Barley feed and residual is projected 5 million bushels higher in response to the March 1 stocks reported in the NASS *Grain Stocks* report. The higher feed and residual use is reflected in a 5-percent reduction in projected ending stocks, now forecast at 98.4 million bushels.

NASS's March 31 *Prospective Plantings* report indicates a 17-percent cut in projected U.S. barley acreage for the 2017/18 crop. Producers reported intentions to plant 2.5 million acres of barley, down from a final planted area of 3.1 million in 2016/17. If realized, this would be the lowest area planted on record. Among the major producing States, Montana reported a reduction of 300,000 to 690,000 acres.

Oats Balance Sheet Unchanged, Planting Intentions Down

The oats balance sheet is unchanged this month. NASS's March 31 *Prospective Plantings* report indicates a 5-percent cut in projected U.S. oats acreage for the 2017/18 crop. Producers reported intentions to plant 2.7 million acres, down from a final planted area of 2.8 million in 2016/17. If realized, this would be the second lowest area on record. Among the major producing States, California and Iowa increased oats acreage while Minnesota, Nebraska, North Dakota, and South Dakota reported lower intentions.

Hay Harvested Acres Prospects Lowered for 2017

For 2017, U.S. hay producers report intentions to harvest 52,811 million acres, a 650,000-acre decline from the 2016/17 estimate of 53,461 million. If realized, this will be the lowest hay harvested area since 1908. Small changes are reported for a number of States. Gains in Iowa, Minnesota, Washington, and Pennsylvania are offset by reductions in several States, including California, Georgia, and Texas. Last year's NASS *Prospective Plantings* report indicated that farmers intended to harvest 54,305 million acres of all hay types in 2016; ultimately, fewer acres, 53,461 million, were harvested. In due course, harvested hay acres for 2017 will be determined by weather conditions and relative economics, which influence planting decisions and the number of cuttings.

International Outlook

Coarse Grains (Corn) Output Is Up This Month

Global coarse grain production in 2016/17 is forecast up 4.4 million tons this month, pushing a record further to 1,346.1 million. The major contributors to the increase are Brazil, Argentina, Mexico, and Indonesia – all for corn. Brazil's corn production forecast is raised by another 2.0 million tons to 93.5 million this month, as projections for second-crop corn area continue to increase. According to the local statistical agencies, expansion of second-crop corn area in Mato Grosso and in the northeastern states of Brazil has been larger than expected. With the second-crop corn planted early this year, the risk of corn suffering from the premature abrupt ending of the rainy season is waning, though is not completely eliminated. (See the March issue of Feed Outlook: http://usda.mannlib.cornell.edu/usda/ers/FDS//2010s/2017/FDS-03-13-2017.pdf).

Additional information on this month's changes in coarse grain production are provided in tables A1, A2 and map A. 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 are given in table A2.

Table A1 - World and U.S. coarse grain production at a glance (2016/17), April 2017

	Region or country	Production	Change[1]	Comments
		Million tons		
Coarse grain production (total)				
↑	**World**	**1346.1**	**+4.4**	
↑	**Foreign**	**943.5**	**+4.4**	
	United States	**402.6**	**No change**	
World production of coarse grains by type of grain				
CORN				
↑	**World**	**1053.8**	**+4.5**	
↑	**Foreign**	**668.9**	**+4.5**	Higher corn production is projected for Brazil, Argentina, Mexico, Indonesia, and South Africa. See table A2.
	United States	**384.8**	**No change**	
SORGHUM				
↓	**World**	**62.5**	**-0.3**	
↓	**Foreign**	**50.3**	**-0.3**	Reductions are projected for Mexico and Colombia. See table A2.
	United States	**12.2**	**No change**	
OATS				
↑	**World**	**23.4**	**+0.1**	
↑	**Foreign**	**22.5**	**+0.1**	Higher oats output is projected for Norway.
	United States	**0.9**	**No change**	

[1]Change from previous month. Fractional changes are made for barley and rye.

For changes and notes by country, see table A2.

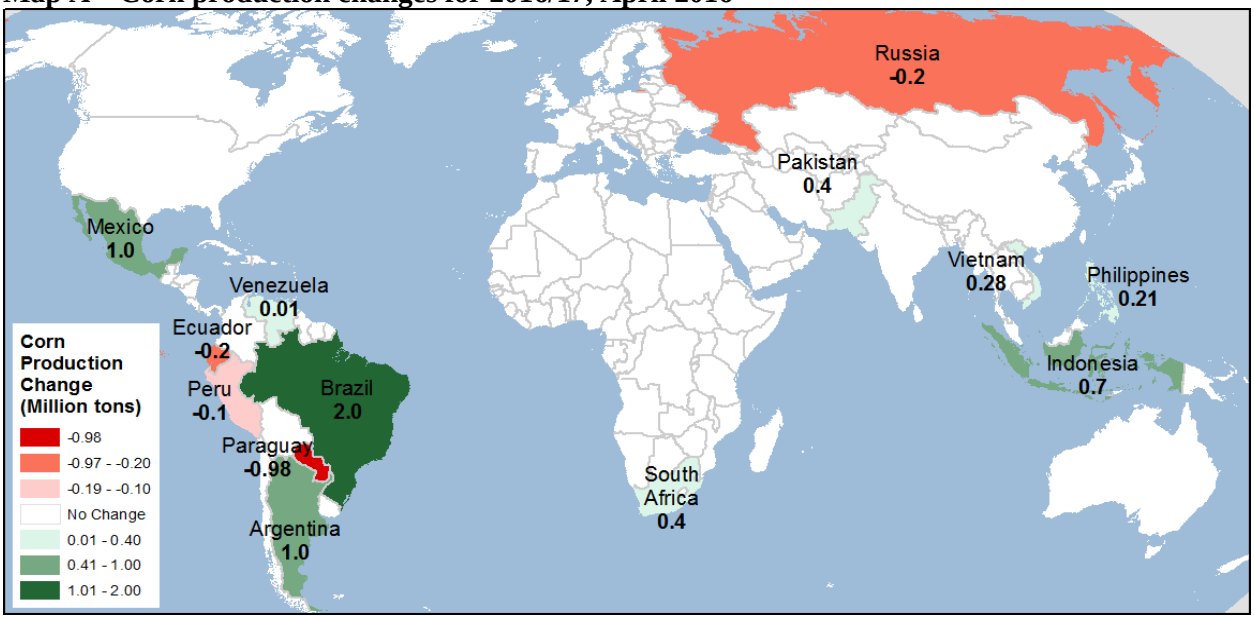
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.

Table A2 - Coarse grain production by country at a glance, April 2017					
	Type of crop	Crop year	Production	Change[1]	Comments
			Million tons		
Coarse grain production by country and by type of grain (2016/17)					
BRAZIL					
↑	**Corn**	*Apr-Mar*	**93.5**	**+2.0**	The increase moves production to a new record high and is attributed mainly to area expansion of the second (summer) crop corn. Early planting in all major second-crop corn areas (safrinha corn, about 70 percent of total) diminished risk of crop failure. Area is boosted in Mato Grosso and in the northeastern states. First-crop corn yields are projected higher based on CONAB report.
ARGENTINA					
↑	**Corn**	*Mar-Feb*	**38.5**	**+1.0**	Corn yields are revised higher based on harvest reports, with about a fifth of the crop already harvested.
MEXICO					
↑	**Corn**	*Oct-Sep*	**27.0**	**+1.0**	Abundant rainfall for summer corn boosted yields. Summer corn constitutes 75 percent of the total crop and was harvested in January with yields reported by SIAP, the Government statistical agency. The winter corn is mainly irrigated, and the reservoir level has been high this season boosting yield potential.
↓	**Sorghum**	*Oct-Sep*	**5.4**	**-0.1**	Based on official Government reporting of lower crop area (switching to corn). The crop was harvested several months ago.
INDONESIA					
↑	**Corn**	*Oct-Sep*	**10.9**	**+0.7**	The Government aims at self-sufficiency in corn production and supports corn growers by allowing them to plant food crops on public land and distributing free higher yielding hybrid corn seed to farmers. Weather conditions have been favorable during this growing season, supporting higher yields.
SOUTH AFRICA					
↑	**Corn**	*May-Apr*	**15.0**	**+0.4**	The increase moves production to a record high. This year has been very beneficial for the western part of the country's corn belt with excellent planting and growing conditions. South African Crop Estimates Committee of the Department of Agriculture, Forestry & Fisheries (CEC) issued a new forecast in line with the increase.
PAKISTAN					
↑	**Corn**	*Jul-Jun*	**5.6**	**+0.4**	Based on official Government information. Area under corn is projected higher, up 0.2 million hectares with somewhat lower yields; the crop was harvested 8 months ago.
PARAGUAY					
↓	**Corn**	*Jan-Dec*	**2.3**	**-1.0**	Corn is planted back-to-back after soybeans are harvested. Reported delays in the soybeans harvest and the willingness (and permission by the government despite fears of possible soybean rust) of farmers to plant soybeans as a second crop after soy slashed corn area by 30 percent.

[1]Change from previous month. Smaller changes for coarse grain output are made for several countries, see map A for changes in ***corn production***.

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

Map A – Corn production changes for 2016/17, April 2016

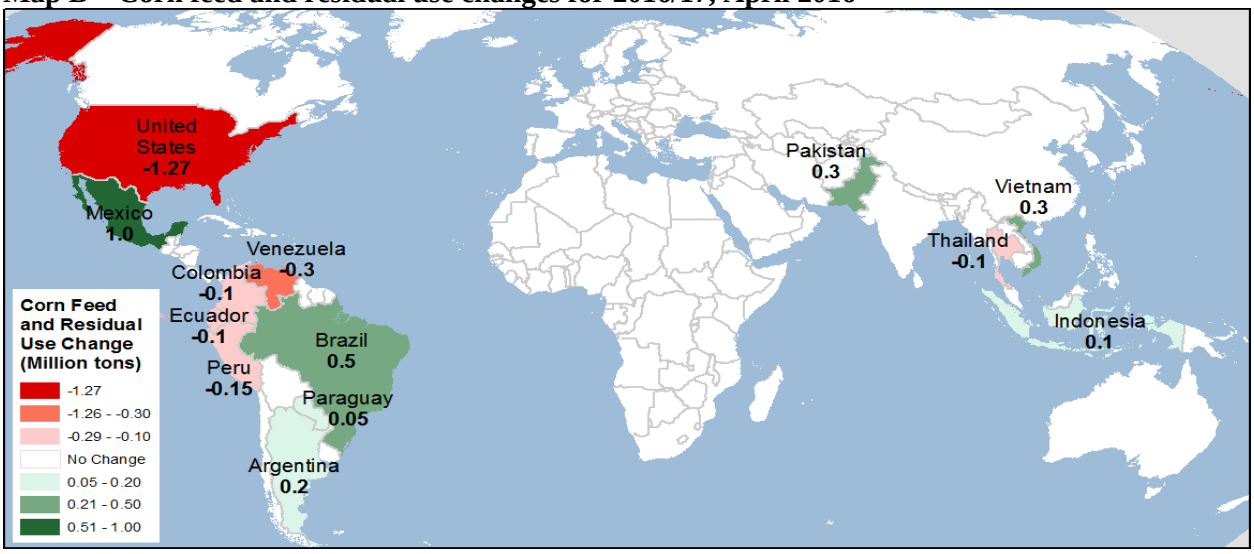


Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

Global Coarse Grain Use Projected Higher

Foreign coarse grain domestic consumption in 2016/17 is projected up 2.8 million tons this month to a record high 1,006.4 million, with several changes reflecting production revisions, shifts in feeding among grains, the economic situation, and multiple changes across corn-importing and exporting countries. Foreign domestic use of corn is raised 3.2 million tons, oats use is up 0.2 million tons, while barley and sorghum use are each down 0.3 million tons. The largest increase in corn use is projected for Mexico, up 1.2 million tons this month, reflecting a larger crop and a growing demand from expanding livestock (beef, pork, and poultry) numbers as well as expected greater food use of domestically produced white corn. For more information and a visual display of this month's changes in coarse grain domestic consumption, see map B and table B.

Map B – Corn feed and residual use changes for 2016/17, April 2016



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

Table B - Coarse grain domestic consumption at a glance (2016/17), April 2017

	Country or region	Domestic consumption	Change[1]	Comments
		Million tons		
↑	**World**	**1335.4**	**+2.6**	
↑	**Foreign**	**1006.4**	**+2.8**	Foreign domestic use of corn is raised 3.2 million tons, oats use is up 0.2 million tons, while barley and sorghum use are each down 0.3 million tons.
↑	**United States**	**329.0**	**-0.1**	Feed and residual consumption of corn is reduced by 1.3 million tons while an increase in the FSI use is fully offsetting; sorghum feeding is down 0.3 million tons; barley feeding is up 0.1 million tons. See section on U.S. domestic coarse grains. (The results do not add up due to rounding.)
↑	**Mexico**	**47.0**	**+1.1**	Based on revised production and trade estimates: (a) corn feed consumption is up 1.0 million tons, while corn FSI consumption (white corn) is up 0.2 million tons; (b) sorghum feed consumption is down 0.1 million tons. See also table A2.
↑	**European Union**	**160.3**	**+0.7**	Higher feed use of barley (up 0.5 million tons) and oats (up 0.2 million tons) are expected to partly offset a reduction in wheat feeding. Lower projected exports suggest higher availability of barley for feeding.
↑	**Brazil**	**63.0**	**+0.5**	A further increase in corn production prospects calls for growth in the country's feed and residual use, up 0.5 million tons this month. Brazilian livestock (pork and poultry) continues to expand. Also, Brazil had no incidents of avian influenza, making it an HPAI-free poultry export country and further boosting domestic demand and feed use.
↓	**Venezuela**	**2.9**	**-0.5**	The country's economy is in free fall, with raging inflation and extreme currency (bolivar) depreciation. Imports are slashed for several commodities, and corn feeding is reduced accordingly.

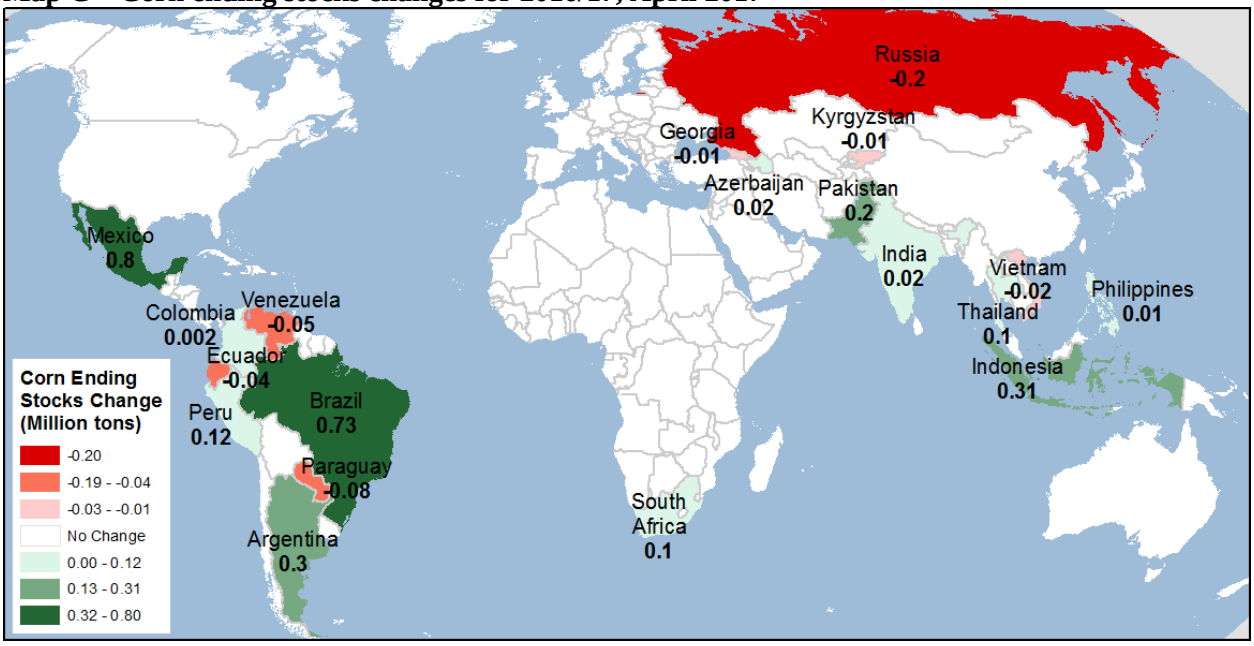
[1]Change from previous month. Smaller changes are made for a number of countries; see map B for changes in ***corn*** domestic consumption.

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

Coarse Grain Stocks Are Up

Foreign coarse grain ending stocks for 2016/17 are projected up 2.8 million tons this month to 195.0 million. The largest change is a projected increase in coarse grain stocks for Mexico, up 0.8 million tons to 7.1 million, due to higher corn production and imports that are partly offset by larger domestic use. Another notable change is for Brazil, where stocks are projected up 0.7 million tons to 8.9 million, with larger corn output partly offset by increased exports and feeding. All other country changes are much smaller. For a visual display of the changes in corn ending stocks, see map C.

Map C – Corn ending stocks changes for 2016/17, April 2017

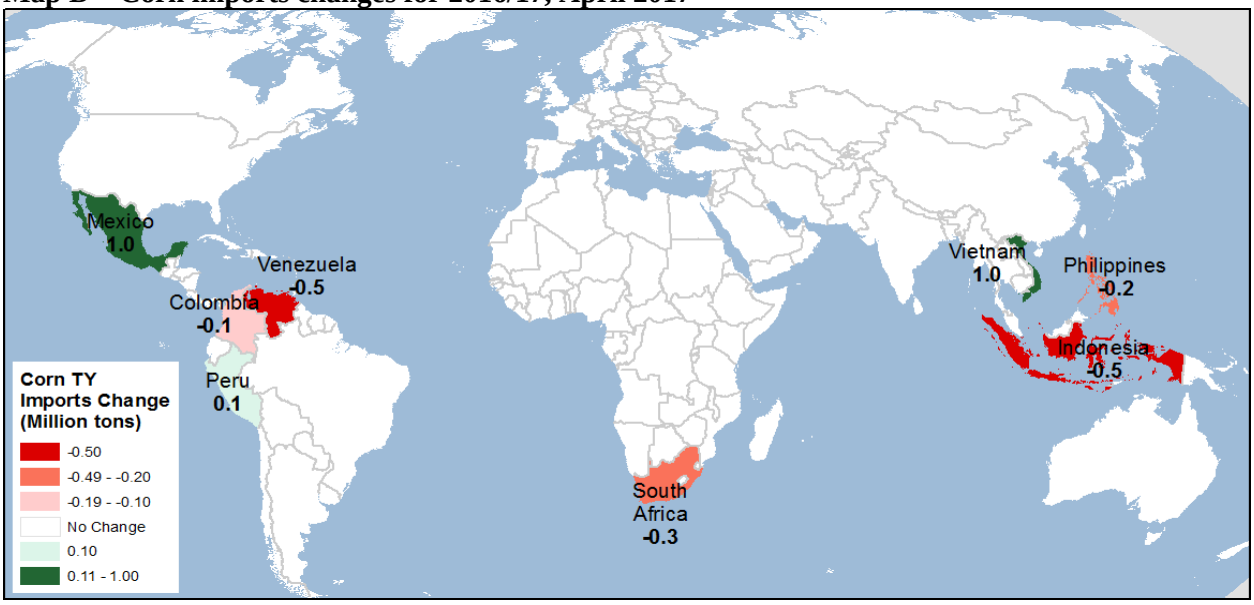


Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

World Corn Trade Expanded Further

Projected 2016/17 world coarse grain trade for the international trade year (October-September) is virtually unchanged at 182.3 million this month. Export prospects for Argentine corn are revised up to reflect changes in supplies, pace of sales, and relative competitiveness. Ukrainian exports of barley are expected to be higher, while EU and Russian barley exports are reduced (see table D). Brazil is expected to export an additional 1.0 million tons of corn in its local 2016/17 March-February marketing year (which begins in March 2017), for a total of 32.0 million. However, the country will begin its corn exports mainly after the second-crop corn is harvested starting July-August 2017. Until then, Brazil does not have much additional supplies after the poor 2015/16 corn harvest. Consequently, Brazilian exports for the 2016/17 international trade year (October 2016-September 2017) are unchanged at 22.5 million tons, with the largest impact likely to be seen during the 2017/18 trade year (USDA will release its first 2017/18 projections in May). International trade year corn imports are boosted for Mexico and Vietnam and reduced for Venezuela and Indonesia. For information on this month's changes in 2016/17 coarse grain trade with the country-specific details, see map D and table D.

Map D – Corn imports changes for 2016/17, April 2017



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

The U.S corn grains export forecast for 2016/17 is unchanged this month at 56.5 million tons (and has not been altered since October 2016). Despite high commitments, a sharp increase in corn supplies in both Brazil and Argentina is expected to intensify competition facing U.S. exports during the latter part of 2016/17, when Southern Hemisphere countries start exporting a new crop.

Table D - Coarse grain trade at a glance (2016/17), April 2017				
	Country or region	Trade	Change[1]	Comments
		Million tons		*October-September international trade year*
	World	**182.4**	**No change**	Changes are offsetting.
	Foreign	**119.9**	**No change**	Changes are offsetting.
Coarse grain exports (2016/17)				
↑	**Argentina**	**28.4**	**+0.5**	Higher projected **corn** output, competitive prices.
↑	**Ukraine**	**24.1**	**+0.2**	High pace of **barley** exports supported by reduced feed use.
	Brazil	**22.5**	**No change**	An increase in projected **corn** output boosts exports for the local March-February year 1.0 million tons to 32.0 million. Trade year exports are unchanged. See the report text.
↓	**European Union**	**7.7**	**-0.5**	Australia has become highly competitive with its large exportable supplies, shifting barley trade away from the European Union (EU). Projected EU **barley** exports are reduced based on slow pace of sales to Saudi Arabia (buying from Australia), as well as to Morocco and Tunisia (both countries have a good outlook for production next year).
↓	**Russia**	**8.7**	**-0.2**	Projected **barley** exports are reduced based on slow pace of sales.
Coarse grain imports (2016/17)				
↑	**Mexico**	**15.8**	**+1.0**	The country's pace of **corn** imports is very high, and commitments are more than 1.0 million tons ahead on the year. With high domestic supplies of white corn, Mexico is importing yellow corn mainly from the Unoted States. Additional corn is expected to be used for beef, pork, and poultry feeding.
↑	**Vietnam**	**9.5**	**+1.0**	The country's recent pace of **corn** imports continues to be high. As the country's local marketing year ends in April, the increase is assigned to the international year (Oct-Sep) imports only. It should be noted that the feed and residual use category by definition includes unaccounted-for-corn sent to neighboring countries.
↓	**Venezuela**	**1.7**	**-0.5**	The country's economy is in free fall, with raging inflation and extreme currency (bolivar) depreciation. Imports are reduced for both corn and wheat.
↓	**Indonesia**	**0.5**	**-0.5**	Higher domestic supplies (see table A2).

[1]Change from previous month. Smaller changes are made for several countries. See map D for changes in corn imports.

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

Contacts and Links

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Feed Monthly Tables, (http://www.ers.usda.gov/publications/fds-feed-outlook/)
Feed Chart Gallery, (http://www.ers.usda.gov/data-products/chart-gallery.aspx)

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)
(http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1194)
Grain Circular
(http://www.fas.usda.gov/grain/Current/default.asp)
World Agricultural Production
(http://www.fas.usda.gov/wap_arc.asp)
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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 4/13/2017

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	2013/14	Sep-Nov	821	13,829	15	14,665	1,550	2,312	350	4,212	10,453	4.66
		Dec-Feb	10,453		7	10,459	1,602	1,459	390	3,451	7,008	4.40
		Mar-May	7,008		9	7,017	1,684	845	636	3,165	3,852	4.63
		Jun-Aug	3,852		6	3,858	1,696	385	544	2,626	1,232	4.06
		Mkt yr	821	13,829	36	14,686	6,532	5,001	1,921	13,454	1,232	4.46
	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	1,675	1,092	540	3,307	4,453	3.75
		Jun-Aug	4,453		11	4,464	1,690	517	526	2,733	1,731	3.69
		Mkt yr	1,232	14,216	32	15,479	6,601	5,280	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	1,655	1,435	340	3,431	7,822	3.64
		Mar-May	7,822		20	7,842	1,656	914	561	3,131	4,711	3.60
		Jun-Aug	4,711		17	4,728	1,703	592	695	2,991	1,737	3.55
		Mkt yr	1,731	13,602	67	15,401	6,646	5,120	1,898	13,664	1,737	3.61
	2016/17	Sep-Nov	1,737	15,148	14	16,899	1,690	2,272	551	4,514	12,386	3.25
		Dec-Feb	12,386		12	12,398	1,711	1,526	544	3,781	8,616	3.39
		Mkt yr	1,737	15,148	55	16,940	6,895	5,500	2,225	14,620	2,320	3.25-3.55
Sorghum	2013/14	Sep-Nov	15.15	392.33	0.01	407.49	45.00	97.71	33.39	176.10	231.39	4.28
		Dec-Feb	231.39		0.01	231.40	10.00	6.52	39.15	55.67	175.73	4.22
		Mar-May	175.73		0.01	175.74	12.01	0.25	71.05	83.32	92.42	4.68
		Jun-Aug	92.42		0.07	92.49	2.88	-11.81	67.39	58.46	34.03	4.11
		Mkt yr	15.15	392.33	0.09	407.57	69.89	92.67	210.98	373.54	34.03	4.28
	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	-6.17	86.33	121.93	201.58	3.17
		Mar-May	201.58		0.01	201.59	43.36	-5.60	73.47	111.24	90.35	3.10
		Jun-Aug	90.35		0.01	90.36	29.75	-40.36	64.35	53.73	36.63	3.33
		Mkt yr	18.41	596.75	4.59	619.75	137.02	107.51	338.59	583.12	36.63	3.31
	2016/17	Sep-Nov	36.63	480.26	0.00	516.90	21.65	141.24	45.86	208.75	308.15	2.62
		Dec-Feb	308.15		0.00	308.15	33.06	4.14	90.62	127.81	180.34	2.69
		Mkt yr	36.63	480.26	1.00	517.89	115.00	130.00	225.00	470.00	47.89	2.50-2.90

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 4/13/2017

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	2013/14	Jun-Aug	80	217	2	299	40	61	3	103	196	6.22
		Sep-Nov	196		5	201	39	-11	3	31	169	5.98
		Dec-Feb	169		4	173	37	10	4	52	122	6.03
		Mar-May	122		8	129	37	6	4	47	82	5.93
		Mkt yr	80	217	19	316	153	66	14	234	82	6.06
	2014/15	Jun-Aug	82	182	7	271	39	48	4	91	180	5.69
		Sep-Nov	180		5	184	38	-14	4	28	156	5.25
		Dec-Feb	156		6	163	37	5	3	44	118	5.07
		Mar-May	118		6	124	37	4	4	45	79	4.86
		Mkt yr	82	182	24	287	151	43	14	209	79	5.30
	2015/16	Jun-Aug	79	218	4	301	40	38	3	82	219	5.39
		Sep-Nov	219		4	223	38	0	4	43	180	5.52
		Dec-Feb	180		7	187	37	10	3	50	138	5.66
		Mar-May	138		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	33	1	73	230	4.99
		Sep-Nov	230		2	232	38	1	1	40	193	4.73
		Dec-Feb	193		2	195	37	10	1	48	147	5.04
		Mkt yr	102	199	15	316	153	60	5	218	98	4.70-5.20
Oats	2013/14	Jun-Aug	36	65	17	118	17	37	0	55	63	3.72
		Sep-Nov	63		28	91	18	25	1	43	48	3.56
		Dec-Feb	48		20	68	16	16	0	33	35	3.71
		Mar-May	35		32	67	22	20	0	43	25	4.03
		Mkt yr	36	65	97	198	73	98	2	173	25	3.75
	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	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		28	106	18	12	1	31	75	2.03
		Dec-Feb	75		24	100	18	18	1	37	63	2.35
		Mkt yr	57	65	95	217	78	90	3	171	46	1.95-2.15

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: 4/11/2017

Table 2--Feed and residual use of wheat and coarse grains, 4/13/2017

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)
2014/15	Q1 Sep-Nov	56.5	3.8	-0.3	0.3	60.3	-2.5	57.8		
	Q2 Dec-Feb	36.7	0.1	0.1	0.4	37.3	0.2	37.5		
	Q3 Mar-May	27.7	-0.4	0.1	0.2	27.6	-1.6	26.0		
	Q4 Jun-Aug	13.1	-1.4	0.8	0.8	13.3	8.1	21.4		
	MY Sep-Aug	134.1	2.1	0.7	1.6	138.5	4.2	142.7	92.4	1.5
2015/16	Q1 Sep-Nov	55.3	4.1	0.0	0.3	59.7	-2.9	56.8		
	Q2 Dec-Feb	36.5	-0.2	0.2	0.3	36.8	-0.0	36.8		
	Q3 Mar-May	23.2	-0.1	0.0	0.2	23.3	-1.0	22.3		
	Q4 Jun-Aug	15.0	-1.0	0.7	0.7	15.4	7.3	22.7		
	MY Sep-Aug	130.1	2.7	1.0	1.5	135.3	3.3	138.6	94.1	1.5
2016/17	Q1 Sep-Nov	57.7	3.6	0.0	0.2	61.6	-0.9	60.7		
	Q2 Dec-Feb	38.8	0.1	0.2	0.3	39.4	-0.5	38.9		
	MY Sep-Aug	139.7	3.3	1.6	1.5	146.1	6.9	153.0	96.0	1.6

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, 4/13/2017

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)	
	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16
Sep	3.16	3.55	3.09	4.14	4.22	3.78	7.91	8.08
Oct	3.09	3.67	3.27	4.15	4.36	3.88	8.52	8.23
Nov	3.45	3.62	3.28	4.54	4.22	3.83	9.04	7.89
Dec	3.75	3.62	3.34	4.55	4.17	3.88	9.85	
Jan	3.67	3.55	3.45	4.44	4.09	4.07	10.41	
Feb	3.65	3.56	3.51	4.41	4.06	4.14	10.70	
Mar	3.66	3.54	3.40	4.43	4.05	4.04		
Apr	3.59	3.61		4.38	4.17		9.97	
May	3.49	3.74		4.23	4.30		7.44	
Jun	3.52	3.91		4.24	4.62			
Jul	3.85	3.28		4.56	4.11			
Aug	3.51	3.09		4.14	3.82		8.09	
Mkt year	3.53	3.56		4.35	4.18		9.10	8.07

	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)		
	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17
Jun	3.49	2.59	2.36	5.71			3.88	2.89	2.58
Jul	3.01	2.70	2.33	5.62			3.85	2.82	2.61
Aug	2.58	2.41	2.08	5.79			3.83	2.63	2.34
Sep	2.30	2.39	1.95	5.98	4.95		3.86	2.70	2.29
Oct	2.44	2.57	2.00	7.28	4.95		3.68	2.58	2.67
Nov	2.48	2.60	2.00	7.35			3.53	2.67	2.84
Dec	2.68	2.60	2.00	7.35			3.49	2.64	2.92
Jan	2.79	2.58	2.00	7.10			3.26	2.60	2.97
Feb	2.73	2.50	2.00	6.75			3.11	2.60	3.07
Mar	2.75	2.46	2.02			4.70	3.14	2.43	2.90
Apr	2.81	2.45		6.35			2.94	2.49	
May	2.76	2.44		6.23			2.75	2.49	
Mkt year	2.74	2.52		6.50	4.95		3.44	2.63	

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: 4/11/2017

Table 4--Selected feed and feed byproduct prices (dollars per ton), 4/13/2017

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		
	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17
Oct	381.50	327.97	323.26	346.88	292.50	241.88	90.13	96.00	77.00	549.38	509.38	466.13
Nov	441.40	308.60	322.42	313.13	291.88	221.00	105.13	109.63	83.50	581.88	477.50	477.50
Dec	431.74	289.78	321.03	334.38	265.00	217.50	143.30	113.13	92.83	613.50	482.25	501.67
Jan	380.03	279.57	332.34	313.75	248.75	223.50	135.25	109.63	97.50	632.50	452.50	502.50
Feb	370.39	273.61	334.32	302.50	238.13	221.88	117.25	102.38	88.13	631.25	457.50	516.50
Mar	357.83	276.23	320.34	310.50	216.50	210.63	107.20	87.00	87.13	613.00	445.50	505.63
Apr	336.61	303.81		288.13	207.50		83.13	73.25		575.63	434.00	
May	320.23	376.36		274.38	242.50		72.25	87.00		549.38	464.10	
Jun	335.03	408.58		281.00	284.00		74.40	107.13		571.60	568.13	
Jul	375.48	371.49		299.38	280.00		91.25	95.01		560.00	573.13	
Aug	357.85	340.80		295.63	280.00		88.75	90.30		550.63	507.20	
Sep	333.63	337.95		293.50	285.00		95.50	85.38		525.00	469.38	
Mkt yr	368.48	324.56		304.43	260.98		100.29	96.32		579.48	486.71	

	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO			Alfalfa hay, weighted-average farm price 2/	
	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2015/16	2016/17
Oct	385.00	291.88	237.50	96.00	123.13	116.25	111.48	105.93	79.43	155.00	135.00
Nov	383.79	266.25	229.00	113.13	132.63	111.70	106.87	106.53	85.53	147.00	130.00
Dec	424.22	221.67	211.67	159.30	133.13	104.84	135.83	99.55	101.62	149.00	129.00
Jan	382.49	200.13	255.60	186.50	132.50	96.30	140.93	104.16	98.25	141.00	128.00
Feb	370.63	193.75	285.00	187.13	136.63	98.88	124.85	97.89	84.66	137.00	129.00
Mar	376.00	261.00	284.38	189.50	134.50	98.25	1,118.55	68.64	80.76	139.00	
Apr	390.63	316.25		191.00	122.38		81.93	65.12		154.00	
May	368.75	310.10		178.50	141.10		64.25	60.72		147.00	
Jun	313.50	345.00		157.50	170.50		60.27	57.94		142.00	
Jul	333.75	381.67		153.50	149.38		77.96	61.48		140.00	
Aug	388.75	347.00		115.13	130.90		92.72	60.61		138.00	
Sep	344.00	285.63		139.30	127.75		112.67	64.43		137.00	
Mkt yr	371.79	285.03		155.54	136.21		185.69	79.42		158.00	138.00

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), 4/13/2017

Mkt year	and qtr 1/	High-fructose corn syrup (HFCS)	Glucose and dextrose	Starch	Alcohol for fuel	Alcohol for beverages and manufacturing	Cereals and other products	Seed	Total food, seed, and industrial use
2014/15	Q1 Sep-Nov	116.78	74.64	62.41	1,276.24	34.52	50.11	0.00	1,614.69
	Q2 Dec-Feb	110.32	71.95	59.76	1,293.93	36.18	49.95	0.00	1,622.10
	Q3 Mar-May	123.73	77.43	63.20	1,294.53	37.85	50.47	27.72	1,674.93
	Q4 Jun-Aug	128.24	78.13	62.11	1,335.39	33.64	50.68	1.54	1,689.73
	MY Sep-Aug	479.08	302.14	247.48	5,200.09	142.19	201.21	29.26	6,601.44
2015/16	Q1 Sep-Nov	110.81	72.34	62.30	1,300.20	34.89	50.62	0.00	1,631.16
	Q2 Dec-Feb	115.20	76.77	59.91	1,316.28	36.58	50.43	0.00	1,655.16
	Q3 Mar-May	124.68	89.94	59.70	1,264.80	38.27	50.92	27.93	1,656.23
	Q4 Jun-Aug	127.31	85.13	61.67	1,342.34	33.27	51.13	2.63	1,703.48
	MY Sep-Aug	478.01	324.18	243.57	5,223.61	143.00	203.10	30.56	6,646.02
2016/17	Q1 Sep-Nov	112.55	88.84	59.90	1,343.08	35.78	49.92	0.00	1,690.06
	Q2 Dec-Feb	111.01	79.82	60.53	1,371.14	36.35	52.33	0.00	1,711.18
	MY Sep-Aug	480.00	335.00	250.00	5,450.00	146.00	204.60	29.40	6,895.00

1/ September-August. Latest data may be preliminary or projected.
Source: Calculated by USDA, Economic Research Service.

Date run: 4/11/2017

Table 6--Wholesale corn milling product and byproduct prices, 4/13/2017

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)	
	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
Sep	17.80	16.71	19.47	18.38	14.20	13.21	37.00	39.00	23.25	26.75
Oct	17.96	17.06	19.63	18.73	14.29	13.39	37.00	39.00	23.25	26.75
Nov	17.53	16.89	19.20	18.56	14.95	13.87	37.00	39.00	23.25	26.75
Dec	17.50	16.84	19.17	18.51	14.80	14.23	37.00	39.00	23.25	26.75
Jan	17.42	17.07	19.09	18.74	14.62	14.05	39.00	39.00	26.75	28.25
Feb	17.44	17.13	19.11	18.80	14.35	14.20	39.00	39.00	26.75	28.25
Mar	17.13		18.92		14.71	14.41	39.00		26.75	
Apr	17.70		19.37		14.71		39.00		26.75	
May	18.21		19.88		15.10		39.00		26.75	
Jun	18.27		19.94		15.40		39.00		26.75	
Jul	17.03		18.70		15.43		39.00		26.75	
Aug	16.64		18.31		13.63		39.00		26.75	
Mkt year 2/	17.55		19.23		14.68		38.33		25.58	

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: 4/11/2017

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 4/13/2017

Import and country/region		---------- 2014/15 ---------- Mkt year	Jun-Feb	---------- 2015/16 ---------- Mkt year	Jun-Feb	2016/17 Jun-Feb
Oats	Canada	1,731	1,304	1,379	1,110	1,227
	Sweden	72	72	62	62	5
	Finland	62	62	34	27	21
	All other countries	12	9	0	0	0
	Total 2/	1,876	1,446	1,475	1,200	1,253
Malting barley	Canada	334	254	283	236	67
	All other countries	28	28	0	0	17
	Total 2/	362	282	284	236	83
Other barley 3/	Canada	147	109	116	87	58
	All other countries	4	2	4	3	1
	Total 2/	152	112	119	89	59

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: 4/11/2017

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 4/13/2017

Export and country/region		2014/15 Mkt year	2014/15 Sep-Feb	2015/16 Mkt year	2015/16 Sep-Feb	2016/17 Sep-Feb
Corn	Japan	12,003	5,099	10,392	3,198	5,963
	Mexico	11,333	4,921	13,337	5,804	6,350
	Colombia	4,371	2,231	4,548	2,331	2,131
	South Korea	3,934	816	2,964	543	2,933
	Peru	2,555	1,596	2,383	971	1,318
	China (Taiwan)	1,839	507	2,049	335	1,467
	Canada	1,490	781	1,006	525	409
	Egypt	1,235	587	852	189	266
	Saudi Arabia	1,185	359	1,389	298	1,111
	Guatemala	852	398	883	398	454
	Costa Rica	774	393	552	144	395
	China (Mainland)	747	141	321	67	22
	Venezuela	710	485	1,155	226	158
	Dominican Republic	607	248	253	6	382
	El Salvador	538	265	654	269	259
	Panama	450	229	392	133	265
	Honduras	428	192	550	212	233
	European Union-27	361	150	417	7	203
	Morocco	298	172	450	32	562
	Jamaica	282	132	283	132	130
	Algeria	239	180	663		61
	Nicaragua	191	73	258	65	146
	Iran	138	0.037	0.095	0.037	0.020
	New Zealand, No Islands	106	52	55	28	12
	Trinidad And Tobago	89	33	92	36	41
	All other countries	666	315	2,305	348	2,559
	Total 2/	47,421	20,354	48,202	16,297	27,827
Sorghum	China (Mainland)	8,328	4,247	7,008	4,468	2,785
	Sub-Saharan Africa	486	316	593	270	293
	Japan	83	46	79	29	60
	Mexico	21	12	625	275	309
	All other countries	17	11	296	58	19
	Total 2/	8,935	4,632	8,600	5,100	3,467

		2014/15 Mkt year	2014/15 Jun-Feb	2015/16 Mkt year	2015/16 Jun-Feb	2016/17 Jun-Feb
Barley	Mexico	99	68	142	137	1
	Japan	90	73	5	4	14
	Canada	52	29	52	46	39
	China (Taiwan)	32	20	7	6	2
	All other countries	38	36	30	27	2
	Total 2/	311	226	235	220	58

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: 4/11/2017