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Feed Outlook

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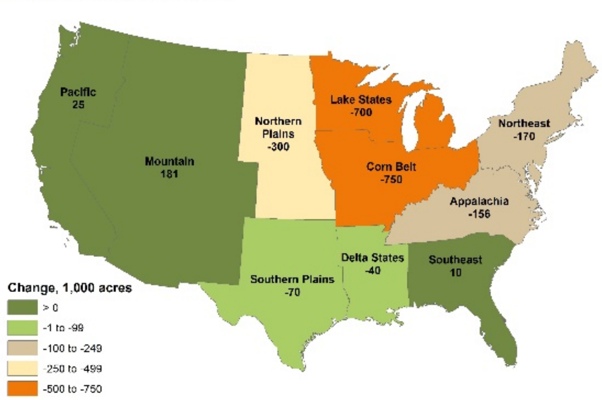
Corn Disappearance Down as Quarterly Stocks Come in High

Corn use is forecast at 55 million bushels on lower feed and residual and food, seed, and industrial use. March 1 stocks were higher than expected, implying lower second quarter feed and residual disappearance. The midpoint price for corn received by producers is projected unchanged at $3.35 per bushel.

The main driver of this month’s global corn balance changes is reduced corn production in the South American countries of Argentina, Brazil, and Paraguay. Reduced corn output in South America boosts U.S relative price competitiveness and is expected to support a stronger pace of corn export sales and shipments in the second half of 2017/18.

Change in corn planted area from 2017 to 2018 (1,000 acres)
USDA farm production regions



Source: USDA NASS *Prospective Plantings* report, March 29, 2018

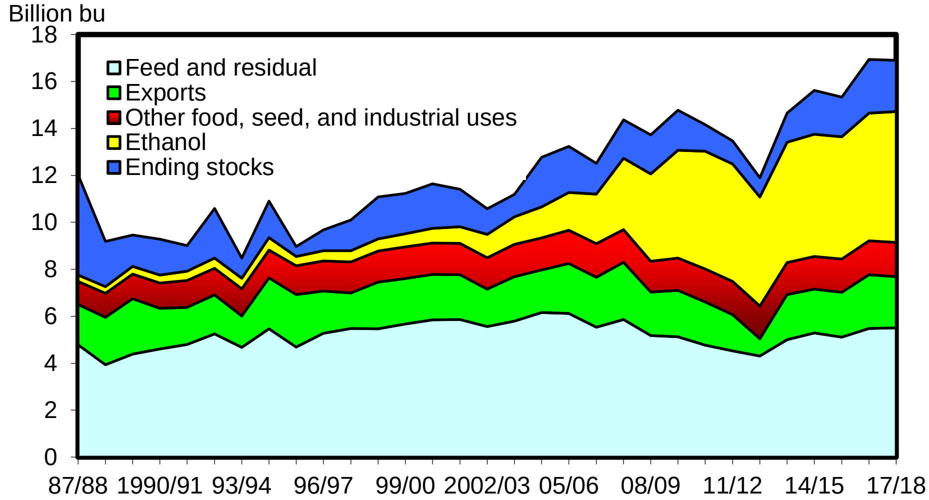
Approved by USDA’s World Agricultural Outlook Board

Domestic Outlook

Feed and Residual Use Down Slightly

Feed and residual use for 2017/18 for the four feed grains (corn, sorghum, barley, and oats) and wheat, on a September-August marketing year basis, is lowered this month to 146.8 million metric tons, 2 tons below last month's projection. Declines were seen for all but sorghum, with corn the largest at 1.3 million tons. This month's projection is 0.9 million tons higher than the 2016/17 estimate of 145.9 million tons. Feed and residual use for the second quarter of 2017/18 is projected at 38.2 million tons, compared with 38.9 million last year.

Figure 2
U.S. corn utilization



Note: Marketing year 2017/18 is projected.
Source: USDA, World Agricultural Outlook Board, *WASDE.*

Grain Consuming Animal Units

Grain consuming animal units (GCAU) for 2017/18 are projected at 98.64 million units, 0.08 million below last month's projection. GCAUs for 2016/17 are unchanged at 95.7 million units. Feed and residual use per GCAU is projected at 1.49 tons, down from 1.52 in 2016/17.

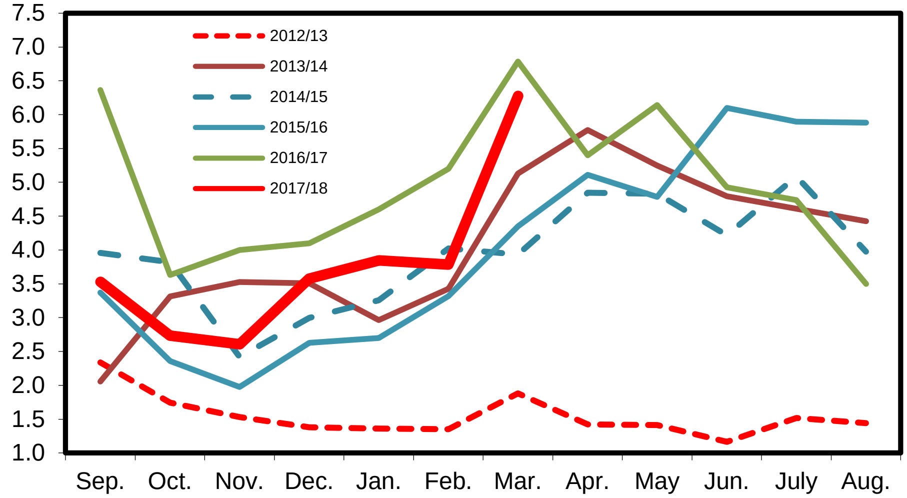
Intended Corn Acreage for 2018/19 Down

USDA's National Agricultural Statistics Service (NASS) *Prospective Plantings* report indicates a 2.1-million decline in corn planted acreage in 2018/19 to 88.0 million acres based on the March Agricultural Survey conducted February 27 to March 19. Relative prices have encouraged producers to switch to crops such as spring wheat and cotton. Among the individual States, the largest declines were seen in Minnesota, Indiana, Illinois, and North Dakota (some of these States planted more wheat but did not increase soybean acreage).

Figure 3

Monthly U.S. corn exports

Million metric tons



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

Corn Stocks Projected Higher on Lower Use

Higher-than-expected corn stocks as of March 1 resulted in this month's projection for 2017/18 marketing year feed and residual to be reduced 50 million bushels.

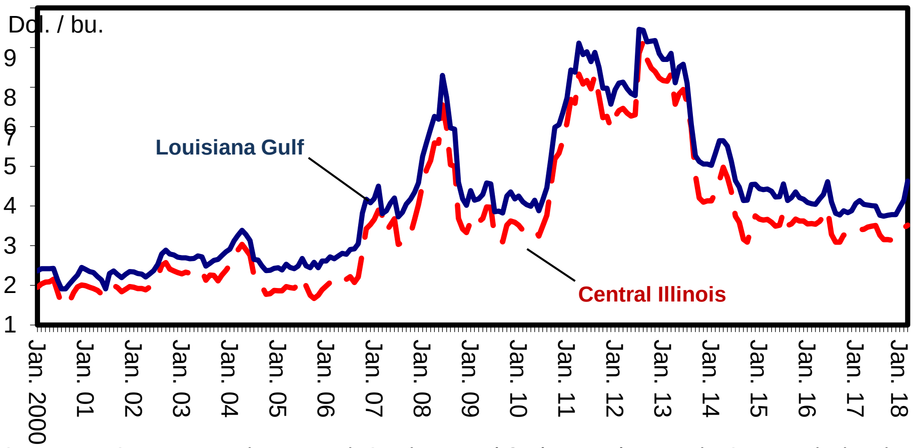
During the first half of 2017/18, estimated corn feed and residual use was 3,755 million bushels, down from 3,803 million for the first 6 months in 2016/17. For 2011/12 through 2015/16, feed and residual use for the first half of the year averaged about 72 percent of the total. For the marketing year, feed and residual is projected 50 million bushels lower this month at 5,500 million.

Food, seed, and industrial (FSI) use is projected 5 million bushels lower at 7,040 million. Corn for ethanol is unchanged, but glucose and dextrose is lowered 10 million bushels and starch is raised 5 million, both based on year-to-date pace.

Projected exports are unchanged this month at 2,225 million bushels. Resulting total disappearance is 14,765 million bushels, 55 million lower than last month's forecast and 116 million below 2016/17. With supply unchanged and use forecast lower, projected carryout is up 55 million bushels to 2,182 million bushels, which if fulfilled, would be down 111 million bushels from 2016/17. The corn stocks-to-use ratio is projected at 14.8, compared with 14.4 last month and 15.7 in 2016/17. U.S. ethanol exports set a record at 219 million gallons in February, with Brazil nearly half.

The projected range for the price of corn received by farmers is narrowed $0.05 on each end of the range to $3.20 to $3.50 per bushel, with a midpoint of $3.35 per bushel, unchanged from last month's projection.

Figure 4
Monthly corn (yellow #2) prices for Central Illinois and Louisiana Gulf

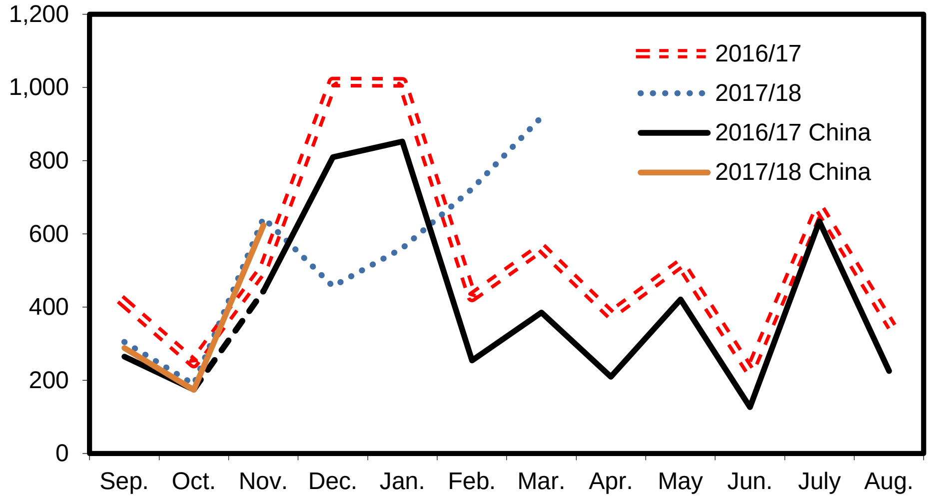


Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, Agricultural Marketing Service, http://marketnews.usda.gov/portal/lg.

Intentions Indicate Higher Sorghum Area

NASS's *Prospective Plantings* report indicated producers intend to increase sorghum planted area for 2018/19 by 5 percent, or 306,000 acres, to 5.932 million acres, from the prior year. A majority of the increase is due to acreage gains in Texas, Missouri, Nebraska, Oklahoma, and South Dakota. Although an overall increase in acreage for the United States is presented in the report, Texas, the major sorghum-producing State, is projected at its second lowest acreage on record, just above the 1.550 million acres planted in 2011. NASS's *Crop Progress-State Stories* report from March 27 highlighted Texas as it continues to struggle with warm and dry weather in March, likely influencing prospective plantings of sorghum.

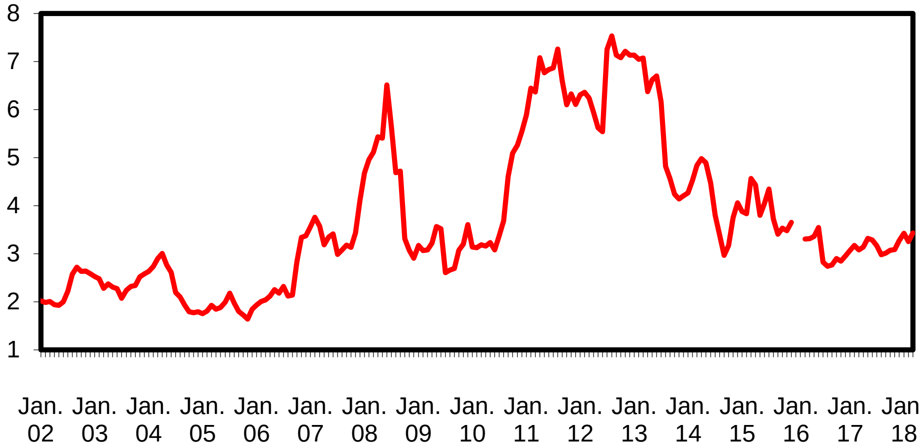
Figure 5
U.S. sorghum exports
1,000 metric tons



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

The April 10 *World Agricultural Supply and Demand Estimates* (WASDE) release projects total 2017/18 sorghum use down 5.0 million bushels in this month's projection due to lower domestic consumption, with FSI use decreasing by 5.0 million bushels on expectations of reduced sorghum going to ethanol production. NASS's April 1 *Grain Crushings and Co-Products Production* report indicates 3.241 million bushels of sorghum used for fuel alcohol production in February, a decrease from 11.518 million bushels in February 2017. Marketing year-to-date sorghum used for ethanol production is estimated at 21.0 million bushels, compared with 54.3 million over the same period during 2016/17, excluding January 2018 which was not released due to confidentiality reasons. Exports are unchanged from last month at 245.0 million bushels for the 2017/18 marketing year, based on the pace of sales and shipments through the end of March. Prices are projected upward by $0.10 on the low end of the range to $3.05, while the maximum projected price is unchanged at $3.35. The average projected price is increased by $0.05 to $3.20 per bushel.

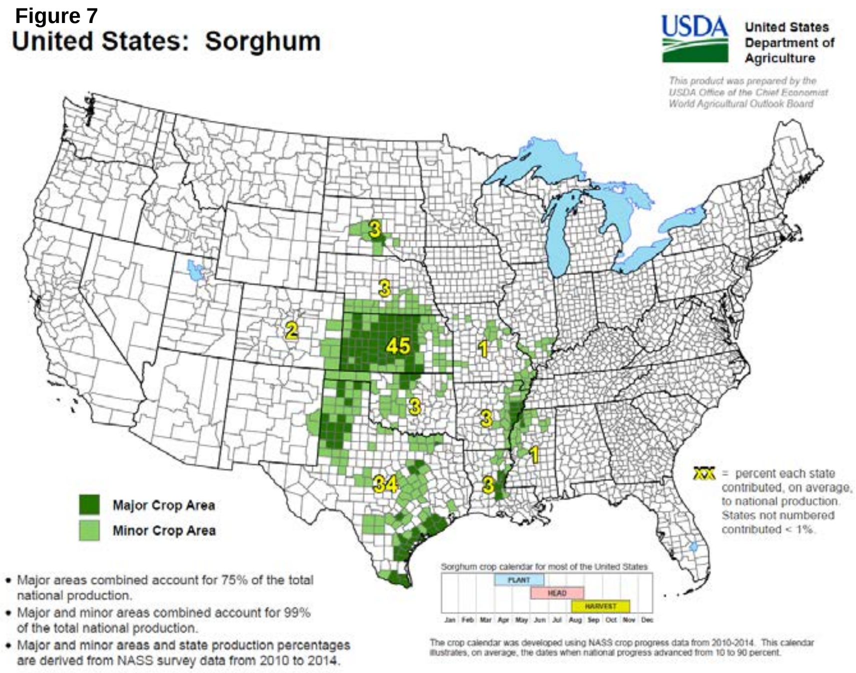
Figure 6
Monthly grain sorghum (yellow #2) prices for Kansas City



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

Stocks of sorghum on March 1 according to NASS's *Grain Stocks* report were estimated at 138 million bushels. This is 23 percent lower than a year ago. Onfarm stocks are down 38 percent, while off-farm stocks are down 22 percent. Estimated total use from December 2017 to February 2018 was also 30 percent lower this year at 89.2 million bushels.

Figure 7
United States: Sorghum



Source: USDA-Office of the Chief Economist

Barley Acreage Indicated Lower in 2018/19

NASS's *Prospective Plantings* report showed farmers intend to plant a smaller barley crop in 2018/19. At 2.286 million acres, this would be the lowest planted acres on record. Many barley producers are believed to have switched to spring wheat.

Barley supplies are projected 5 million bushels lower this month on a 5-million-bushel reduction in imports for 2017/18. Imports from Canada are projected lower and China's demand for Canadian barley has increased sharply in recent months. Total barley supplies are projected at 258 million bushels, 53 million below 2016/17.

Feed and residual use of barley is projected 10 million bushels lower this month based on indicated disappearance in the *Grain Stocks* report. With no other use changes, carryout is projected 5 million bushels higher to 65 million. If realized, this would be the lowest barley carryout since 2011/12.

The projected barley price received by producers is raised $0.10 at the low end of the range for a range of $4.30 to $4.70 per bushel based on prices received to date for feed and malting barley. The projected midpoint is $4.50 per bushel.

Oats Plantings To Rise in 2018/19

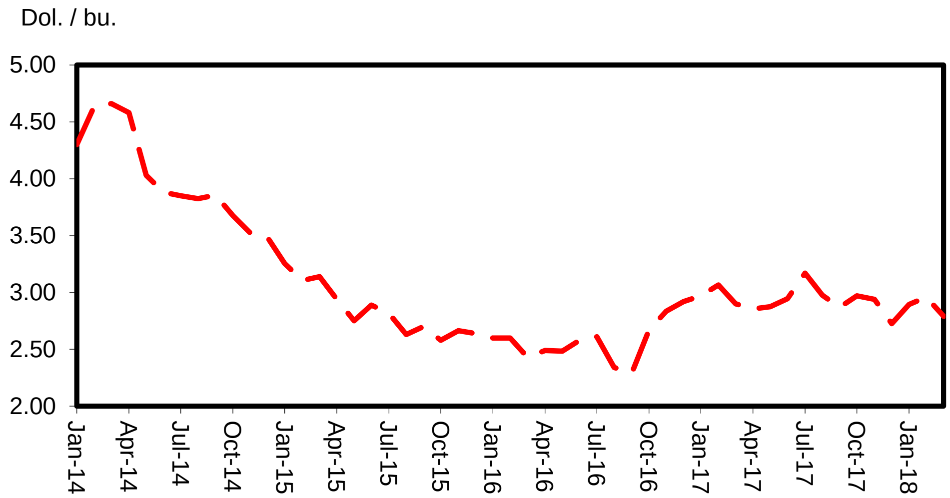
NASS's *Prospective Plantings* report indicates producers intend to increase acres planted to oats by 5 percent in 2018/19 to 2.716 million acres. The States with the largest increases in oat acres include Minnesota, Wisconsin, Nebraska, Iowa, and Kansas.

Oat imports are lowered 3 million bushels this month to 87 million, based on imports during the first three quarters of the marketing year, leaving supply projected at 187 million bushels for 2017/18, 25 million bushels lower than 2016/17.

Feed and residual use is lowered 5 million bushels based on the *Grain Stocks* report. With use falling faster than supply, ending stocks are projected 2 million bushels higher than last month. Total disappearance is projected at 165 million bushels, up slightly from 2016/17.

The projected price range for oats in 2017/18 is $2.50 to $2.60 per bushel, lowered $0.05 on the low end and $0.15 on the high end. The projected midpoint price is $2.55 per bushel, down $0.10.

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



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

Intended Hay Harvested Acres Slightly Lower for 2018

For 2018, U.S. hay producers report intentions to harvest 53.726 million acres, a 915,000-acre increase from the 2017 producer intentions of 52.811 million. If realized, this will be the second lowest hay harvested area since 1908, only behind 2016. Small changes are reported for a number of States. Gains in Montana, North Dakota, and South Dakota are offset by reductions in Pennsylvania and several Southeastern States. Record lows for all hay harvested area are expected in California, Connecticut, Illinois, Rhode Island, and Wisconsin in 2018. Last year's NASS *Prospective Plantings* report indicated that farmers intended to harvest 52,811 million acres of all hay types in 2017; ultimately, more acres (53,784 million) were harvested. In due course, harvested hay acres for 2018 will be determined by weather conditions and relative economics, which influence planting decisions and the number of cuttings.

International Outlook

South America Drives Changes in World Coarse Grain

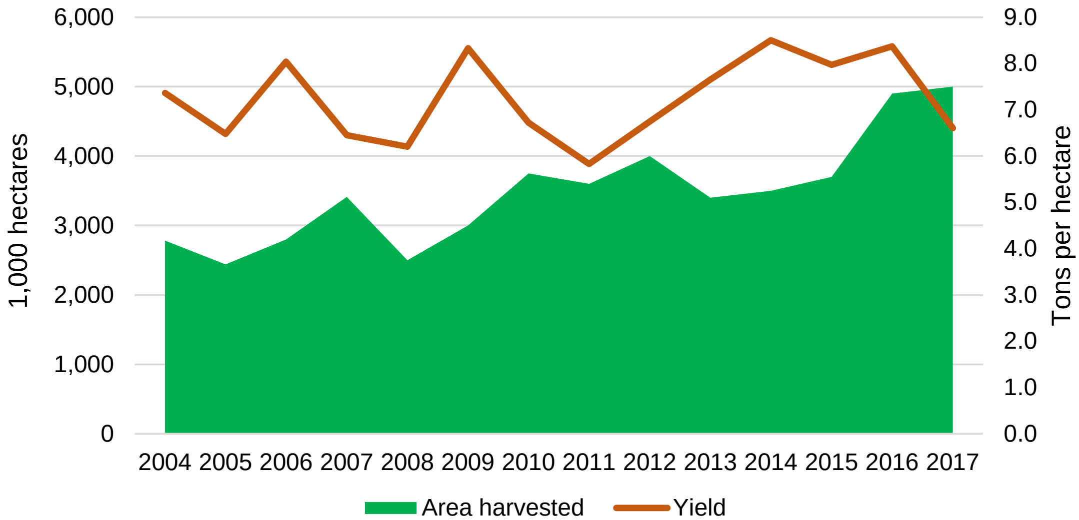
World 2017/18 coarse grain production is forecast down 7.0 million tons this month, while estimated 2016/17 production increased slightly by 0.2 million and 2015/16 production fell by 1.2 million. The main driver of this month's changes for 2017/18 is reduced corn production in the South American countries of Argentina, Brazil, and Paraguay, by a total of 5.9 million tons. Changes for the 2 previous years are driven by a revision in Paraguay going back to 2015/16.

Argentina's projected coarse grain production for 2017/18 is cut 3.7 million tons to 39.8 million, which is also 8.0 million lower than last year's estimated corn output. Corn production prospects are down 3.0 million tons to 33.0 million, with a reduction in corn area and yield as persistent dryness intensified losses. Close to 25 percent of corn has been harvested, and harvest reports indicate greater-than-expected yield losses caused by dryness and excessive heat that have distressed the crop since the second part of December 2017. The crop went through pollination under duress, with record-low soil-moisture, and is currently beyond the point of healthy recovery despite good rains in April. Part of the drought-affected corn area is expected to be used to feed animals. Sorghum production in Argentina is also reduced. Although sorghum is more resistant to drought and heat than corn, it is not immune and was also hurt by the drought. Argentine oats output is projected down this month as well because of lower projected area, as some of the area has reportedly been used for grazing of livestock.

If realized, the projected 2017/18 Argentine corn harvested area for grain is still the highest on record. In the last 15 years, corn area was growing steadily but slowly. But after market reform was implemented, the growth in the country's corn area became substantial, with current corn area roughly double that in 2004-05, while the trend in corn yields is not impressive (figure 10).

Figure 9

Argentina: Corn area expansion rather than yield underpinned recent production growth



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

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 map A 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), April 2018				
Region or country	Production	Change from previous month[1]	YoY change[2]	Comments
	Million tons			
Coarse grain production (total)				
World	1,315.0	-7.0	-49.9	
Foreign	930.8	-7.0	-31.5	Numerous changes are made for a number of countries and commodities. See report text, table A2, and map A.
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	1,036.1	-5.7	-39.4	
Foreign	665.1	-5.7	-25.6	Reduced prospects for Argentina, Brazil, and Paraguay are slightly offset by increases for Mexico and South Africa. Adjustments are made for a number of countries. See table A2 and map A.
United States	371.0	No change	-13.8	See section on U.S. domestic output.
BARLEY				
World	141.9	-0.5	-4.5	
Foreign	138.8	-0.5	-3.2	Lower output projection for Belarus is partly offset by a small increase in South Africa. See table A2.
United States	3.1	No change	-1.3	See section on U.S. domestic output.
SORGHUM				
World	57.8	-0.5	-4.5	
Foreign	48.6	-0.5	-1.6	Production of sorghum is reduced in Argentina and South Africa. See table A2.
United States	9.2	No change	-3.0	
OATS				
World	23.4	-0.2	-0.5	
Foreign	22.7	-0.2	-0.3	Lower oats output is projected for Argentina. See table A2.
United States	0.7	No change	-0.2	See section on U.S. domestic output.
RYE				
World	12.4	-0.1	No change	
Foreign	12.1	-0.1	-0.1	Lower rye output is projected for Belarus. See table A2.
United States	0.2	No change	-0.1	See section on U.S. domestic output.

[1]Change from previous month. [2]YoY: year over year changes.

For changes and notes by country, see table A2.

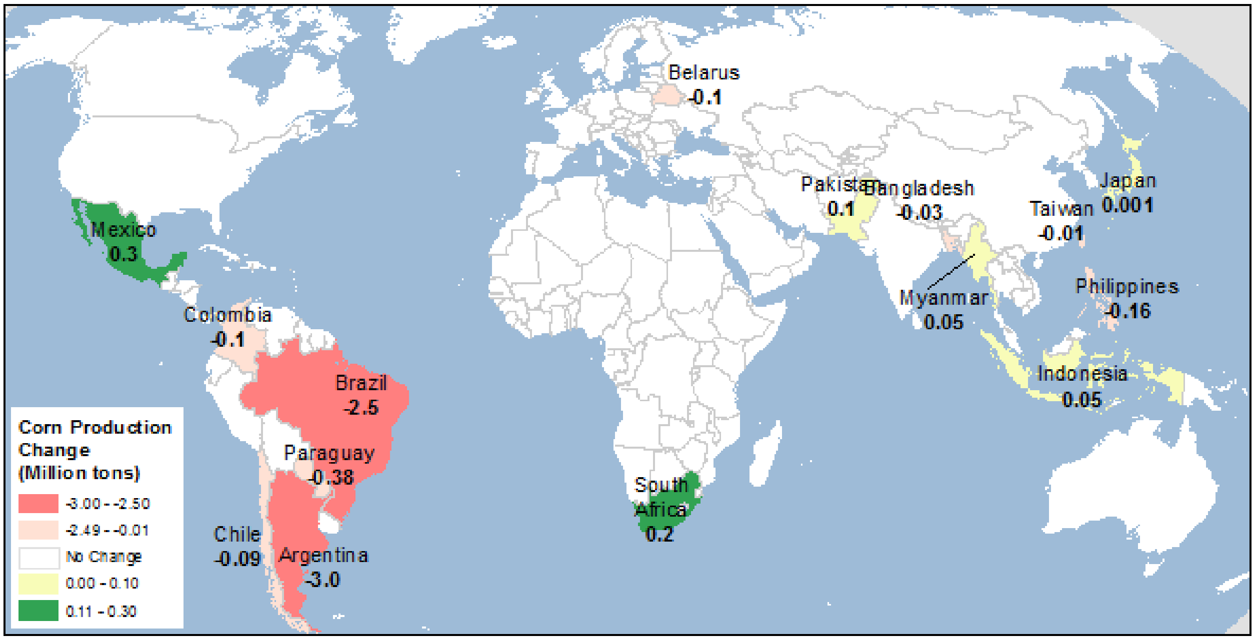
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.

Table A2 - Coarse grain foreign production by country at a glance, April 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						
	Corn	*Mar-Feb*	**33.0**	**-3.0**	**-8.0**	Corn crop has been further affected by a prolonged drought and high temperatures. Harvest reports indicate lower-than-projected yields; projected harvested area is also reduced, as higher percent of abandonment is expected (see also report text).
	Sorghum	*Mar-Feb*	**3.0**	**-0.5**	**-0.4**	Though more resilient than corn, sorghum crop was also hurt by prolonged drought.
	Oats	*Dec-Nov*	**0.5**	**-0.2**	**-0.3**	Reduced area as farmers use some oats for grazing cattle.
BRAZIL						
	Corn	*Mar-Feb*	**92.0**	**-2.5**	**-6.5**	A reduction (down 0.5 million hectares), mostly in projected second-crop corn area, is in line with some increase in cotton area and a projection by Brazilian statistical agency CONAB. Farmers are expected to limit expansion in second-crop corn area this year due to relatively low corn prices at planting time
BELARUS						
	Barley	*Jul-Jun*	**1.4**	**-0.5**	**+0.2**	A reduction based on preliminary harvest results of the Government statistical agency.
	Corn	*Jul-Jun*	**0.7**	**-0.1**	**No change**	A reduction based on preliminary harvest results of the Government statistical agency.
	Rye	*Jul-Jun*	**0.7**	**-0.1**	**No change**	A reduction based on preliminary harvest results of the Government statistical agency.
PARAGUAY						
	Corn	*Jun-May*	**3.3**	**-0.4**	**No change**	A reduction of corn area is projected; the crop was planted late, and some farmers swithched to soybeans. Yileds are projected higher, with timely rains since January. Corn area and production are revised down for 2015/16 and 2016/17.
SOUTH AFRICA						
	Corn	*May-Apr*	**13.2**	**+0.2**	**-4.4**	Corn crop this year has moved from distress caused by a dry spell in November-January to a recovery. Timely February-March rains provided a relief from dryness, while improved new varieties of corn responded well to weather developments. Yields are projected at a second-high, lower only than last year's record. On March 28, South African Crop Estimates Committee (CEC) issued a forecast in line with the increase.
MEXICO						
	Corn	*Oct-Sep*	**26.8**	**+0.3**	**-0.8**	The harvest of the summer crop—which is 75 percent of total corn—is almost done, and reports indicate record-high yields.

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

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

Map A – Corn production changes for 2017/18, April 2018



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

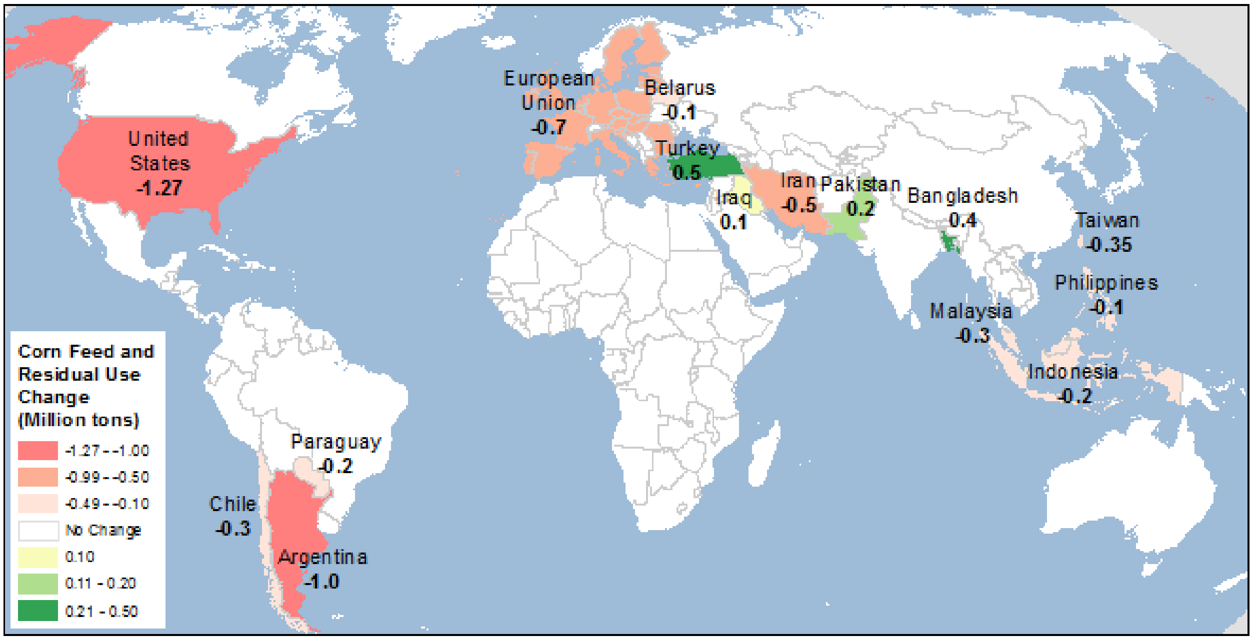
Coarse Grain Global and Foreign Use Projection Down

World coarse grain use in 2017/18 is projected down 6.2 million tons this month to 1.354.2 million, while foreign use is down 4.9 million (U.S. feed use is projected lower by 1.3 million tons; for a discussion, see domestic section).

Several changes reflecting production revisions, shifts in feeding among grains, the macroeconomic situation, and multiple trade changes across corn-importing and exporting countries motivated this month’s revisions. The lion’s share of foreign domestic-use changes is in corn, down 3.8 million tons; barley and sorghum foreign use is reduced 0.3 million tons each, while oats and rye are both projected 0.1 million tons lower. The largest decline in corn use is projected for Argentina, down 1.2 million tons this month, as a reflection of a sharp crop reduction this month expected to boost domestic prices and cut feeding. In some countries, relative prices favor wheat over corn for feeding, and increased wheat feeding is limiting the use of coarse grains. As an example, EU corn feeding is reduced 0.7 million tons, which partly offsets a 1.5-million-ton increase in wheat feeding. A 0.5-million-ton shift in feeding from corn to barley is projected for Iran, supported by information on its grain imports.

For more information and a visual display of this month's changes in corn feed and residual use, see map B.

Map B – Corn feed and residual use changes for 2017/18, April 2018



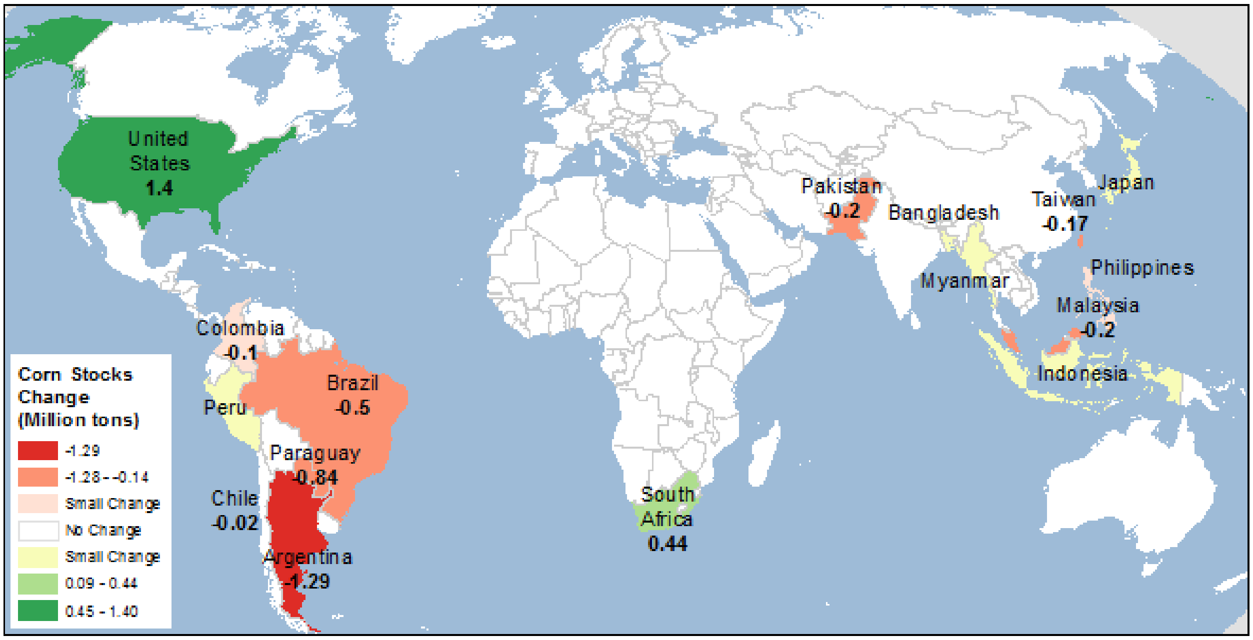
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.

Coarse Grain Stocks Are Down, Led by Argentina

Foreign coarse grain ending stocks for 2017/18 are projected down 2.8 million tons this month to 166.9 million, while U.S. stocks are projected 1.3 million tons higher (see domestic section). The largest change is a projected decline in corn grain stocks for Argentina, down 1.3 million tons to 4.0 million, due to a cut in corn production, while lower exports and domestic use partly offset the decline. Another notable change is for Brazil, where stocks are projected down 0.5 million tons to 10.9 million, with lower corn output partly offset by reduced local marketing year exports. A reduction in Paraguayan stocks, down 0.8 million tons to 0.6 million, is the result of a multiyear (3-year) data revision. Partly offsetting is an increase in corn stocks in South Africa, up 0.4 million tons to 2.6 million, due to higher corn supplies. 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 2017/18, April 2018



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

South American Corn Exports Down, Boosting U.S. Competitiveness

Global corn trade for the October-September international trade year (TY) 2017/18 is forecast down 1.4 million tons this month, though still to a record of 150.3 million. Export prospects for Argentine corn are revised down 1.0 million tons, as declining supplies are expected to reduce its price competitiveness.

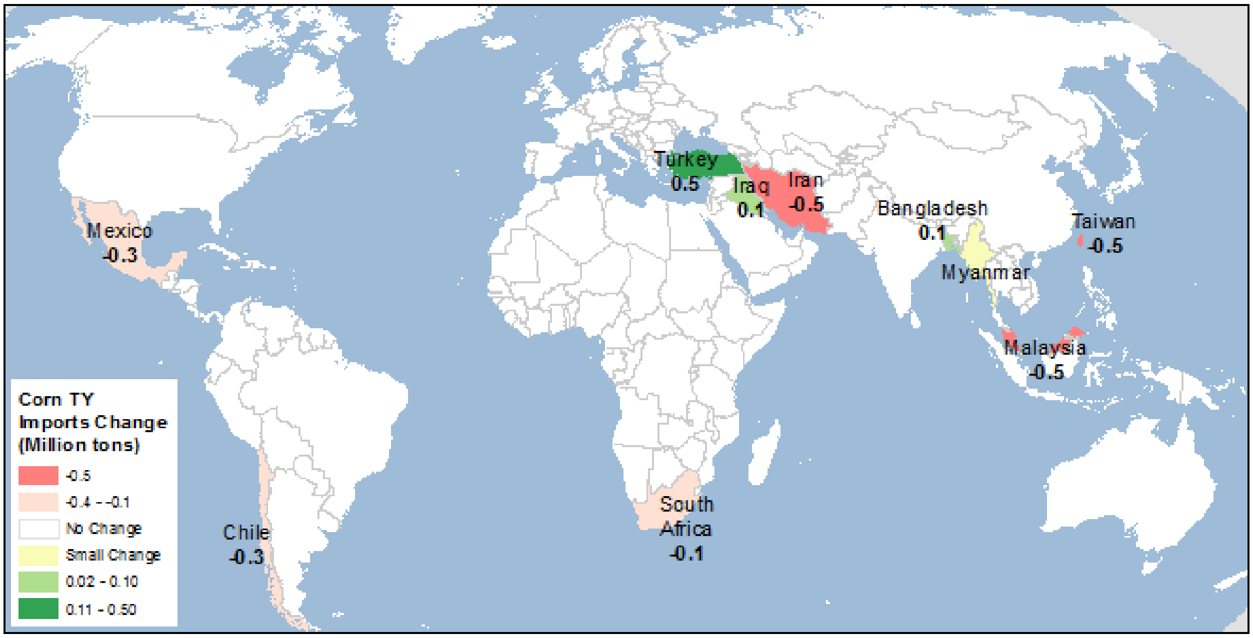
Brazil's corn exports for the 2017/18 October-September trade year are left unchanged at 31.0 million, despite the fact that the Brazilian pace of corn exports has been lagging behind the forecast. The slow pace of corn exports is typical for this time of the year, as soybean shipments are expected to get priority at ports, limiting corn exports into the coming months. However, Brazil's corn exports are expected to pick up again after the second-crop corn is harvested starting July-August 2018. Yet, a projected 2.5-million-ton decline in Brazilian corn production prospects this month is expected to reduce its 2017/18 local marketing year exports (March 2018-February 2019) that started this March, down 2.0 million tons to 33.0 million. USDA will release its 2018/19 trade year projections in May.

Imports for several countries sourcing their corn from Argentina are expected to be limited by a downgrade in Argentine supplies and exports. Corn imports are projected down 0.5 million tons each for such traditional Argentine customers as Iran, Taiwan, and Malaysia and down 0.3 million tons for Chile. Corn imports for Mexico are lagging behind the forecast and are reduced by 0.3 million tons. South Africa, with increased production, is reduced 0.1 million tons. These changes are partly offset by increased corn imports expected for Turkey, up 0.5 million tons, as well as for Bangladesh and Iraq, up 0.1 million tons each.

A big hike in projected U.S. 2017/18 corn exports last month allows that projection to remain unchanged this month at 56.0 million tons (2,225 million bushels for the September-August local marketing year). This is despite a pickup in recent sales and shipments, reflecting increasingly competitive corn export prices that adjusted in anticipation of lower competition from South America.

Although U.S. corn exports for October 2017 through February 2018 (from Census data) were 16.5 million tons, down over 20 percent from a year earlier, March 2018 export inspections reached 6.3 million. What's more, at the end of March, outstanding export sales were 23.1 million tons, up over 40 percent from a year ago, and inspections for the week ending on April 5 reached nearly 2.0 million tons. Reduced corn output in South America that boosts U.S competitiveness is expected to support a stronger pace of corn export sales and shipments in the second half of 2017/18 than in the first part of the year. For a visual display of this month’s changes in corn TY imports, see map D.

Map D – Corn TY imports changes for 2017/18, April 2018



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

Barley Trade Projected Higher, Sorghum Fractionally Lower

Global barley trade for the October-September international trade year is projected higher, up 0.7 million tons to 27.8 million, with increased exports from Argentina that go to the Middle East (Kuwait, Saudi Arabia, United Arab Emirates) and from Russia, which exports barley mainly to Turkey, Saudi Arabia, and Iran. Barley imports are revised for Iran, up 0.8 million tons, and for China, up 0.2 million tons. Several small downward revisions are partly offsetting. U.S. 2017/18 trade year barley imports are down 0.1 million tons to 0.2 million, signaling slower Canadian shipments.

Sorghum trade is projected fractionally lower, with a small reduction in Argentina exports and a corresponding decline in Chilean imports.

Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 4/12/2018

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	1,712	1,527	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	6,883	5,472	2,293	14,649	2,293	3.36
	2017/18	Sep-Nov	2,293	14,604	11	16,908	1,745	2,248	349	4,342	12,567	3.22
		Dec-Feb	12,567		9	12,575	1,737	1,508	441	3,687	8,888	3.30
		Mkt yr	2,293	14,604	50	16,947	7,040	5,500	2,225	14,765	2,182	3.20-3.50
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	112.19	45.60	171.71	227.49	3.10
		Dec-Feb	227.49		0.05	227.55	9.30	8.56	71.42	89.27	138.27	3.19
		Mkt yr	33.46	363.83	2.00	399.29	45.00	80.00	245.00	370.00	29.29	3.05-3.35

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 4/12/2018

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	-19	2	23	159	4.43
		Dec-Feb	159		2	161	39	-9	1	31	129	4.47
		Mkt yr	106	142	10	258	162	25	6	193	65	4.30-4.70
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	17	1	36	66	2.58
		Dec-Feb	66		20	86	18	13	1	31	55	2.97
		Mkt yr	50	49	87	187	78	85	2	165	22	2.50-2.60

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: 4/12/2018

Table 2--Feed and residual use of wheat and coarse grains, 4/12/2018

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	144.2	1.6	145.9	95.7	1.5
2017/18	Q1 Sep-Nov	57.1	2.8	-0.4	0.3	59.9	-1.5	58.4		
	Q2 Dec-Feb	38.3	0.2	-0.2	0.2	38.6	-0.4	38.2		
	MY Sep-Aug	139.7	2.0	0.8	1.6	144.2	2.6	146.8	98.6	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, 4/12/2018

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	3.52	4.05	4.04	4.36		
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	2017/18
Jun	2.59	2.36	2.05			4.70	2.89	2.58	2.95
Jul	2.70	2.33	2.05			4.67	2.82	2.61	3.17
Aug	2.41	2.08	2.10			4.70	2.63	2.34	2.98
Sep	2.39	1.95	2.10	4.95		4.70	2.70	2.29	2.87
Oct	2.57	2.00	2.10	4.95		4.70	2.58	2.67	2.97
Nov	2.60	2.00	2.36				2.67	2.84	2.94
Dec	2.60	2.00	2.61			4.85	2.64	2.92	2.73
Jan	2.58	2.00	2.65			4.85	2.60	2.97	2.90
Feb	2.50	2.00	2.81			4.85	2.60	3.07	2.96
Mar	2.46	2.02	2.85		4.70	4.50	2.43	2.90	2.79
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/lg.

Data run: 4/11/2018

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

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	379.85	216.50	210.63	323.13	87.00	87.13	105.50	445.50	505.63	524.75
Apr	303.81	305.67	384.50	207.50	195.00	275.00	73.25	75.00	101.50	434.00	501.13	518.00
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	158.88	97.89	84.66	114.61	127.00	155.00
Mar	261.00	284.38	275.00	134.50	98.25	164.13	68.64	80.76	99.69	134.00	
Apr	316.25	266.25	317.50	122.38	99.25	162.50	65.12	58.03	88.20	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	152.00

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), 4/12/2018

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
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	106.75	88.53	56.36	1,371.21	36.35	52.33	0.00	1,711.53
	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	465.88	370.56	235.46	5,431.95	146.00	204.30	29.30	6,883.46
2017/18	Q1 Sep-Nov	112.55	93.62	59.71	1,391.29	36.30	51.50	0.00	1,744.97
	Q2 Dec-Feb	105.21	87.91	56.87	1,397.46	38.10	51.60	0.00	1,737.15
	MY Sep-Aug	460.00	380.00	240.00	5,575.00	149.00	207.10	28.90	7,040.00

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

Date run: 4/11/2018

Table 6--Wholesale corn milling product and byproduct prices, 4/12/2018

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	16.09	18.80	17.76	14.20	14.08	39.00	39.25	28.25	
Mar	17.06	16.13	18.40	17.80	14.41	14.53	39.00	39.25	28.25	
Apr	16.99	16.23	18.58	17.90	14.29		39.00	39.25	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: 4/11/2018

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 4/12/2018

Import and country/region		---------- 2015/16 ----------		---------- 2016/17 ----------		2017/18
		Mkt year	Jun-Feb	Mkt year	Jun-Feb	Jun-Feb
Oats	Canada	1,378	1,110	1,508	1,221	1,131
	Sweden	62	62	27	5	41
	Finland	34	27	21	21	16
	All other countries	0	0	0	0	0
	Total 2/	1,475	1,200	1,556	1,248	1,188
Malting barley	Canada	285	237	103	68	57
	All other countries	0	0	17	17	0
	Total 2/	285	238	119	85	58
Other barley 3/	Canada	116	87	89	58	82
	All other countries	4	3	2	1	0
	Total 2/	119	89	90	60	82

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: 4/11/2018

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 4/12/2018

		---------- 2015/16 ----------		---------- 2016/17 ----------		2017/18
Export and country/region		Mkt year	Sep-Feb	Mkt year	Sep-Feb	Sep-Feb
Corn	Mexico	13,337	5,784	13,916	6,221	6,820
	Japan	10,439	3,197	13,527	5,853	4,341
	Colombia	4,548	2,331	4,730	2,161	2,409
	South Korea	2,964	543	5,601	2,933	1,099
	Peru	2,383	971	2,986	1,318	1,648
	China (Taiwan)	2,038	332	2,966	1,464	302
	Saudi Arabia	1,389	298	2,138	1,111	200
	Venezuela	1,155	226	419	158	255
	Canada	1,014	526	704	410	688
	Guatemala	906	398	993	464	311
	Egypt	852	189	323	211	55
	Algeria	663		91	61	0.119
	El Salvador	631	269	593	259	132
	Costa Rica	552	144	819	395	381
	Honduras	550	212	505	233	249
	Morocco	450	32	871	562	88
	European Union-27	413	7	843	203	179
	Vietnam	413	70	200	199	0.028
	Panama	392	133	504	265	246
	Israel	388	0.029	83	0.052	0.025
	Chile	353	0.338	543	543	0.574
	China (Mainland)	321	67	807	22	32
	Jamaica	283	132	275	130	141
	Nicaragua	258	65	329	146	64
	Dominican Republic	253	5	807	382	62
	All other countries	1,342	387	2,670	1,863	380
	Total 2/	48,288	16,319	58,242	27,566	20,082
Sorghum	China (Mainland)	7,034	4,468	4,801	2,799	2,790
	Mexico	625	275	585	308	53
	Sub-Saharan Africa	593	270	475	249	59
	Pakistan	205	15	0.466	0.441	
	All other countries	170	72	250	79	71
	Total 2/	8,626	5,099	6,111	3,435	2,972
		---------- 2015/16 ----------		---------- 2016/17 ----------		2017/18
		Mkt year	Jun-Feb	Mkt year	Jun-Feb	Jun-Feb
Barley	Mexico	142	137	2	1	0.524
	Canada	52	46	63	39	60
	Morocco	14	14			
	China (Taiwan)	7	6	4	2	3
	All other countries	21	17	26	16	32
	Total 2/	235	220	95	58	95

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.

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Data

Feed Grains Database 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.

Related Websites

Mann Library Feed Outlook page
Mann Library WASDE page

Grain Circular https://www.fas.usda.gov/commodities/grain-and-feed

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