United States Department of Agriculture

Economic Research Service

Situation and Outlook

FDS-16i

September 14, 2016

Feed Outlook

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Yield Changes Lower Feed Grain Supply

The next release is October 14, 2016

Approved by the World Agricultural Outlook Board.

USDA's National Agricultural Statistics Service (NASS) corn yield forecast is lowered 0.7 bushels per acre to 174.4 bushels. With area unchanged, the crop is now projected at 15,093 million bushels, 61 million below last month. Supplies are projected at a record 16,859 million bushels, down 51 million from last month. Feed and residual is lowered 25 million bushels. With lower stocks, the season-average price projection is raised 5 cents on both ends of the range to a midpoint of $3.20. The national sorghum yield is raised 2.2 bushels per acre for a 13.8-million-bushel increase in the crop to 488 million, boosting sorghum supplies to 525 million bushels. Sorghum prices were also raised 5 cents at the midpoint projection to $3.05 per bushel. Feed grain supplies are projected at 452 million metric tons, slightly lower than last month's.

World coarse grain production is expected to rise 5.8 percent from the year before in 2016/17, but compared with USDA's August projection, the increase is slightly smaller. World coarse grain production for 2016/17 is projected down 2.8 million tons from last month to 1,319.7 million tons, as reductions in the United States, China, and the European Union are only partly offset elsewhere. World coarse grain consumption's 2016/17 forecast is essentially unchanged from August to September, at 1,311.4 million tons, 5.1 percent higher than in 2015/16. Lower world coarse grain trade is expected compared with 2015/16—down 7.2 million tons to 174.3 million. But, compared with August, USDA's September world coarse grain trade forecast is marginally higher—up 1.1 million tons, or 0.7 percent. Global coarse grain ending stocks are expected to rise 8.3 million tons from the year before in 2016/17 but are forecast to be virtually unchanged relative to global consumption. Global coarse grain endings stocks are forecast to reach 253.3 million tons, the highest since 1987/88.

Recent *Feed Outlook* Special Articles

"Boutique Brews, Barley, and the Balance Sheet," pdf pages 18-23 of the January 2015 *Feed Outlook* report (http://www.ers.usda.gov/publications/fds-feed-outlook/fds-15a.aspx).

"World Corn Use Expands Despite High Prices in 2012/13," pdf pages 17-22 of the June 2013 *Feed Outlook* report (http://www.ers.usda.gov/publications/fds-feed-outlook/fds-13f.aspx).

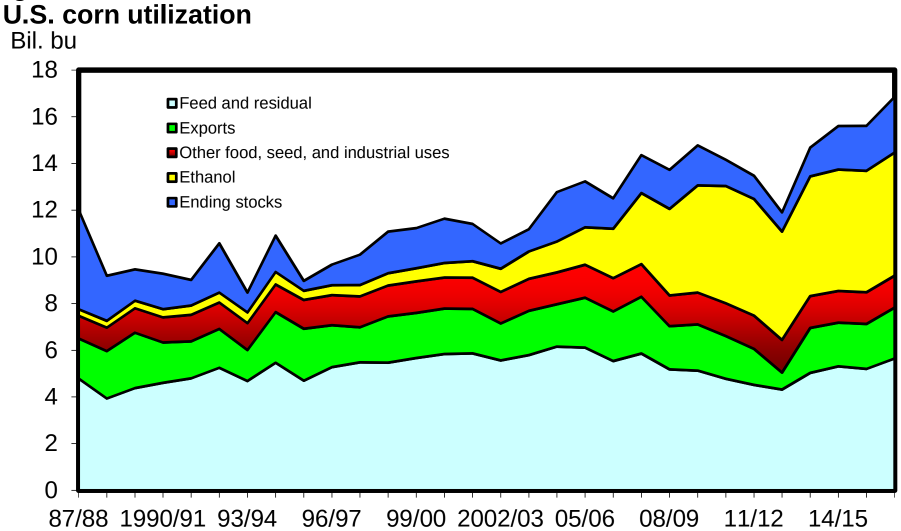
Domestic Outlook

Corn Yield Lowered, Sorghum Raised for Slight Decline in Feed Grain Supplies

The second survey-based corn yield forecast of the 2016/17 crop by USDA's National Agricultural Statistics Service (NASS) puts the national corn yield at 174.4 bushels per acre, 0.7 bushels lower than last month, trimming the projected crop 61 million bushels to 15,093 million. A 2.2-bushel-per-acre increase in forecast sorghum yields raised that crop 13.8 million bushels to 488 million. With no change this month to barley or oats production, total feed grain production is projected at 401.0 million metric tons. Carryin of 47.5 million tons and imports of 3.3 million put total feed grain supplies at 451.8 million tons, 1.0 million below last month's forecast and 34.6 million tons over the estimated supplies for 2015/16.

Total feed grain use is projected at 387.1 million tons, 0.4 million below last month's forecast. Feed and residual use is lowered 0.5 million tons to 148.6 million. Food, seed, and industrial (FSI) use is raised 0.1 million tons based on an increase in the projected amount of sorghum used for ethanol production. Total feed grain use is forecast at 387.1 million tons, 0.4 million below last month's forecast but 17.4 million higher than last year's estimate of 369.7 million.

Figure 1
U.S. corn utilization

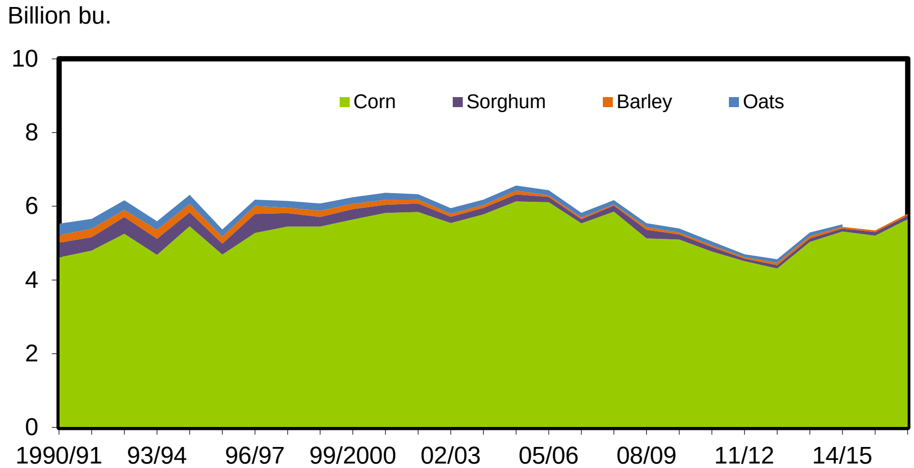


Note: Marketing years. 2015/16 and 2016/17 are projected.
Source: USDA, World Agricultural Outlook Board, *WASDE.*

Feed and Residual Use Lowered for Four Feed Grains and Wheat

U.S. feed and residual use for the four feed grains plus wheat in 2016/17 is projected at 155.1 million metric tons, down 0.5 million from the August forecast but 10.2 million higher than the revised 2015/16 level of 144.9 million. Most of the projected decline is in corn feeding, with a small partly offsetting increase in sorghum feed and residual. Corn is projected to account for 93 percent of total four feed grains plus wheat feeding in 2016/17, up from 91 percent in 2015/16.

Figure 2
U.S. feed grain feed and residual



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

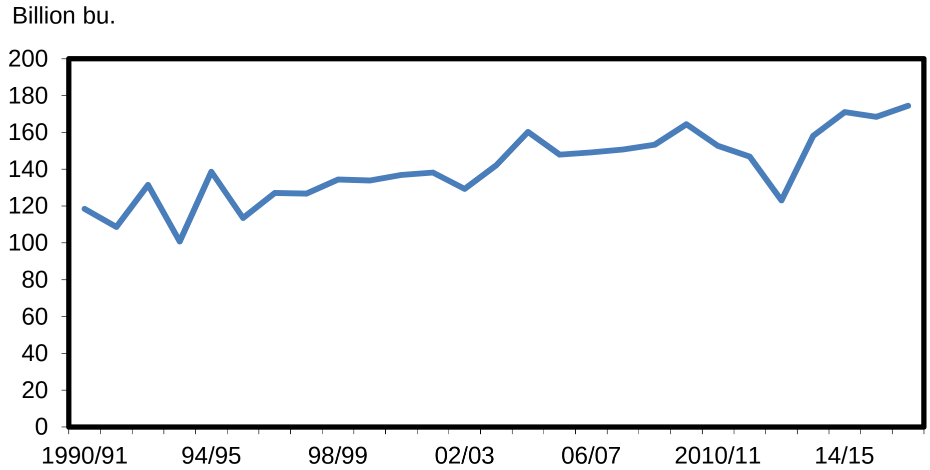
The 2016/17 projected index of grain-consuming animal units (GCAUs) is 95.0, up from 94.9 last month and 1.2 million units higher than the revised forecast of 93.8 for 2015/16. Feed use per GCAU is 1.63 tons, slightly less than last month's figure but higher than last year. In the index components, the largest GCAU gains were for a higher projected number of cattle on feed with slower marketings, partially offset by a projected moderation in the growth of broiler production. USDA's *Quarterly Hogs and Pigs* report will be released on September 30 and will provide an indication of sow farrowing intentions into early 2017.

Corn Yield Decline Trims Supplies

The aforementioned 0.7-bushel per acre decline in the forecast corn yield results in a projected crop of 15,093 million bushels. With carryin from 2015/16 up 10 million bushels and no change to projected imports, supplies are still projected at a record 16,859 million bushels, 51 million below last month's projection and 1,461 million over estimated 2015/16 supplies.

On the use side, the only change this month for 2016/17 is a 25-million-bushel decline in projected feed and residual use with a smaller crop and higher expected prices. This net effect of the supply and use changes is a 25.6-million-bushel reduction in projected ending stocks to 2,384 million, still the highest since 1987/88 when they were 4,259 million bushels. The stocks-to-use ratio for 2016/17 is projected at 16.5, compared with 12.5 estimated for 2015/16.

Figure 3
U.S. corn yield

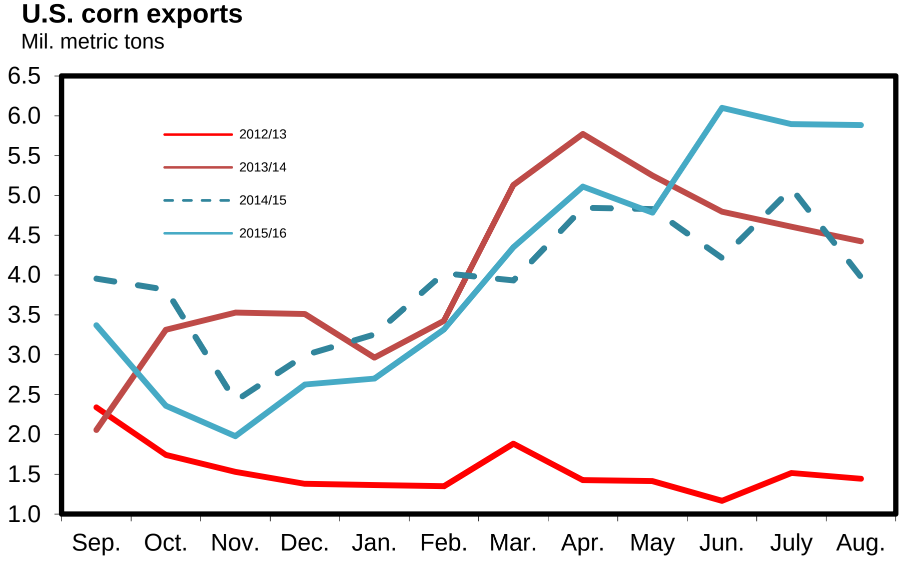


Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, World Agricultural Outlook Board, *WASDE.*

2015/16 Corn Balance Sheet

A 10-million bushel decline in estimated exports, based on the Census Bureau's reported trade through July and export inspections for August, was the only change to the demand side of the 2015/16 balance sheet. The reduction in exports carries through to a 10-million gain in ending stocks, which are now estimated at 1,716 million bushels. There were no other changes to supply and use for 2015/16.

Figure 4
U.S. corn exports



Source: U.S. Census Bureau, USDA, APHIS August 2016 *Grain Inspections.*

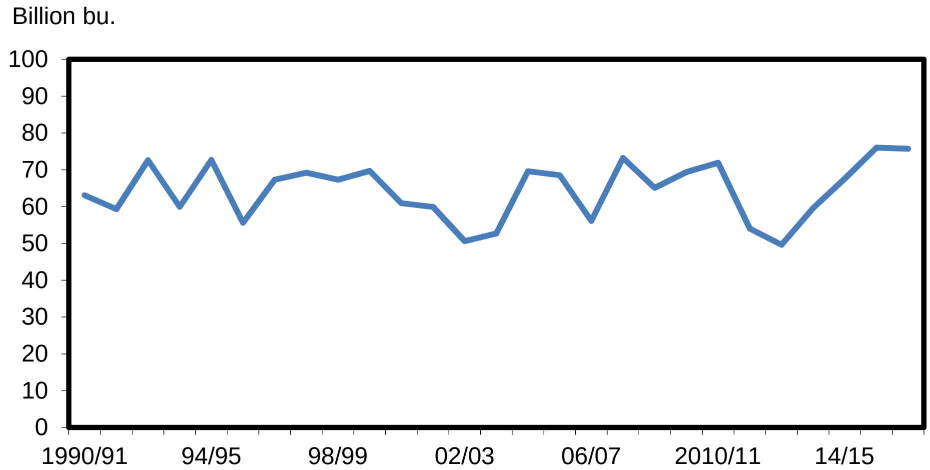
New Crop Price Projection Raised Slightly

The average price received by farmers for corn in 2016/17 was raised $0.05 per bushel on the 51-million bushel reduction in supplies. With the low and high ends each raised 5 cents, the range is now $2.90 to $3.50 per bushel, for a midpoint of $3.20. The 2015/16 price is forecast as a point estimate of $3.60, unchanged from last month's midpoint.

Sorghum Yields Improve

The projected sorghum yield is raised 2.2 bushels per acre, resulting in a 13.8-million-bushel gain in projected production to 488.5 million bushels. Yields were raised 4 bushels per acre in Kansas and 2 bushels in Texas, but the national yield is still slightly below last year's 76 bushels per acre. With no change in carryin or imports, the higher yield brings supplies to 524.6 million bushels, 95.5 million below estimated 2015/16 supply.

Figure 5
U.S. sorghum yields



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

For demand-side projections in 2016/17, feed and residual use is raised 5 million bushels to 95 million, while FSI is also raised 5 million bushels on the basis of recent data from the NASS *Grains Crushings and Co-Products* report, which indicate higher levels of sorghum being used by ethanol mills. Ending stocks edged upward by 3.8 million bushels to 54.6 million, 19.5 million over 2015/16.

Sorghum Price Raised

The effects of greater sorghum supply are outweighed by the corn-sorghum price relationship, resulting in a projected price increase this month of $0.05 per bushel on both the low and high ends of the range to $2.75 to $3.35 per bushel and a midpoint price of $3.05. For 2015/16, forecast price is a point estimate of $3.30 per bushel, unchanged from last month's midpoint.

Barley and Oats Balance Sheets Nearly Unchanged

There were no changes in the 2016/17 barley balance sheet this month. Projected oats supplies in 2016/17 were reduced 5 million bushels on expectations of lower imports with a smaller crop in Canada. The reduced supply tightens the carryout 5 million bushels to 53.7 million. Although supplies are tighter month-to-month, like sorghum, the price impact was negative due to the influence of the corn price change projected this month, as well as lower-than-expected reported prices to date. The 2016/17 oats price was lowered 5 cents on both the high and low ends of the range to $1.95 and $1.55 per bushel, respectively, for a midpoint projection of $1.75 per bushel.

International Outlook

World Coarse Grain Production Prospects Reduced This Month

World coarse grain production is expected to rise in 2016/17 from the year before, but compared with USDA's August projection, the increase is slightly smaller. World coarse grain production for 2016/17 is projected down 2.8 million tons compared with August to 1,319.7 million, as a reduction in the United States and some other countries—especially China and the European Union (EU)—are only partly offset by increases in Brazil and several other countries. While the forecast for the world's largest producer—the United States—is lower in September, U.S. corn production is still expected to rise strongly from the year before in 2016/17, up 37.9 million tons to 383.4 million.

USDA's 2016/17 forecast for foreign coarse grain production is reduced 1.6 million tons in September to 918.4 million. None of the month-to-month declines in total foreign production by individual type of coarse grain exceed 0.5 million tons, but prospects for foreign production are lower this month for each of the grains: corn, sorghum, barley, oats, and rye. See table A1 for this month's changes in the global, foreign, and U.S coarse grains production by type of grain.

Largest Production Decline in China

The largest reduction in expected production is for China's corn, down 2.0 million tons to 216.0 million tons. Though rainfall and weather conditions across the North China Plain are about average, in the region of eastern Inner Mongolia and the bordering western Heilongjiang, dryness in July-August (lowest precipitation since at least 1983 in Western Heilongjiang), when the corn was going through its reproductive stage, is expected to affect total yields. Heilongjiang and Inner Mongolia have accounted for about 25 percent of China's corn production in recent years. The projected yield is cut 1 percent to 6.0 tons per hectare. Corn area harvested is unchanged this month and is 2.1 million hectares down year-over-year, as prices and returns for domestic corn dropped as a consequence of the government policy changes aimed at reducing stockpiles of corn that are becoming untenable.

The EU barley production outlook keeps declining as preliminary harvest results continue to arrive, and output is projected down 1.1 million tons to 60.0 million this month. The largest reduction is made for Germany. EU corn output is also projected down 1.0 million tons to 61.1 million. Because of dryness in the past 2 months during flowering in France, Romania, and Bulgaria, corn yields there are projected lower. See figures 6 and 7 for this month's changes for specific EU countries.

Brazil's 2015/16 second-crop corn harvest has concluded, and yield is reported lower in Brazilian government statistics than earlier forecast. Corn production is estimated down 1.5 million tons to 67.0 million. For 2016/17, corn area is projected to expand 0.5 million hectares this month, up about 2 percent from the previous year. Corn domestic prices are currently running high, reflecting short supply, and are motivating an increase in corn area at the expense of soybeans. Planting has already started. Corn production for 2016/17 is projected up 2.5 million tons to 82.5 million.

For at a glance information and specific causes of the revisions and details of this month's changes in coarse grain production, see tables A1 and A2, and maps A1, A2, and A3. The changes in the global, foreign, and U.S coarse grain production by type of grain are presented in table A1, while coarse grain production changes by country and by type of grain are presented in table A2.

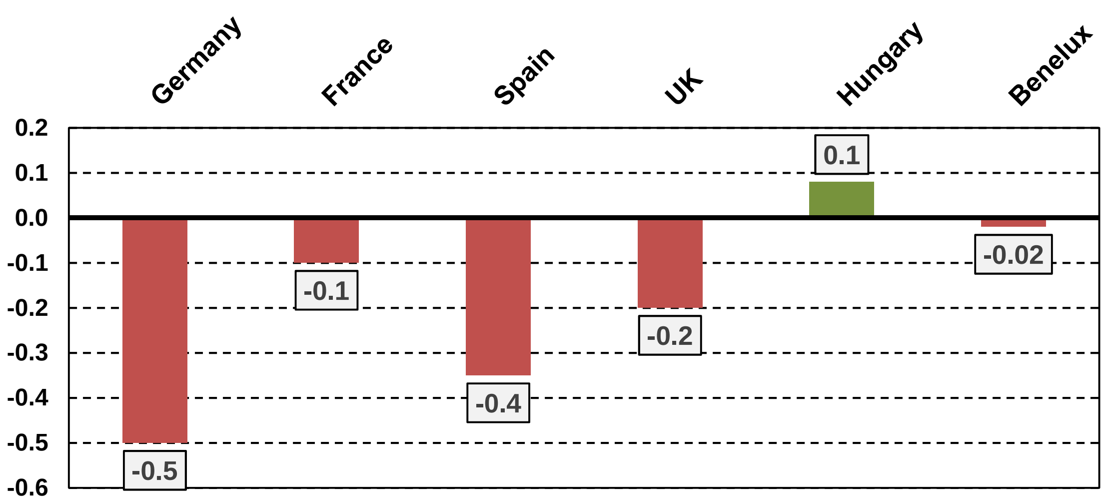
Figure 6
EU 2016/17 corn production changes from month earlier, September 2016
Million tons

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

Figure 7

EU 2016/17 barley production changes from month earlier, September 2016

Million tons



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

Table A1 - World and U.S. coarse grains production at a glance (2016/17), September 2016				
	Type of crop	Production	Change [1]	Comments
		Million tons		
Coarse grains production (total)				
↓	**World**	**1.319.7**	**-2.82**	
↓	**Foreign**	**918.4**	**-1.6**	
↓	**United States**	**401.3**	**-1.2**	See section on U.S. domestic feed grains.
World production of coarse grains by type of grain				
CORN				
↓	**World**	**1026.6**	**-1.8**	
↓	**Foreign**	**643.2**	**-0.3**	Reductions in the EU and China outweigh increase in Brazil. See table A2.
↓	**United States**	**383.4**	**-1.5**	See section on U.S. domestic feed grains.
SORGHUM				
↓	**World**	**65.2**	**less than 0.1**	A tiny reduction because of rounding.
↓	**Foreign**	**52.8**	**-0.4**	A reduction in Mexico. See table A2.
↑	**United States**	**12.4**	**0.4**	See section on U.S. domestic feed grains.
BARLEY				
↓	**World**	**144.7**	**-0.5**	
↓	**Foreign**	**140.6**	**-0.5**	Reductions in the EU, Russia, and Kazakhstan more than offset increases in Argentina, Australia, and Canada. See table A2.
	United States	**4.1**	**No change**	
OATS				
↓	**World**	**23.0**	**-0.3**	
↓	**Foreign**	**21.9**	**-0.3**	Reductions in Canada and the EU (Germany and the UK) more than offset a small increase in Chile.
	United States	**1.1**	**No change**	
RYE				
↓	**World**	**13.1**	**-0.2**	
↓	**Foreign**	**12.8**	**-0.2**	Reduction in the EU (Germany).
	United States	**0.3**	**No change**	

[1]Change from previous month. **For changes by country in corn, sorghum, and barley, see table A2.**

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

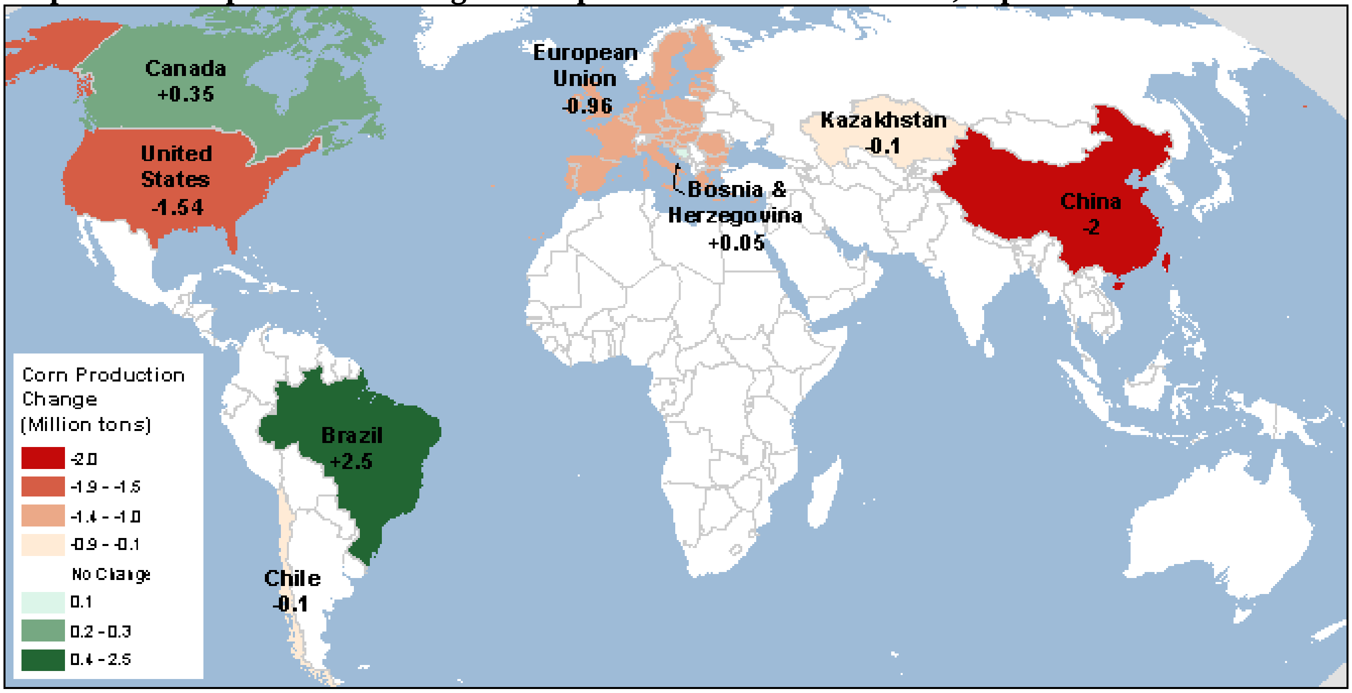
Table A2 - Coarse grains production by country at a glance, September 2016

	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**	*March-Feb*	**82.5**	**+2.5**	Relative domestic prices support corn area increase at the expense of soybeans. Projected corn area is up 0.5 million hectares.
ARGENTINA					
↑	**Barley**	*Dec-Nov*	**3.7**	**+0.7**	Planting is complete, and higher area (though 20% lower on the year) has been reported by the Ministry of Agriculture and other statistical agencies.
AUSTRALIA					
↑	**Barley**	*Nov-Oct*	**9.9**	**+0.5**	Growing conditions are favorable, most areas have good soil moisture. Crop is reported to be in good to excellent condition.
CANADA					
↑	**Corn**	*Sep-Aug*	**12.4**	**+0.4**	Based on higher area and slightly higher yield. Reported by Statistics Canada (see below).
↑	**Barley**	*Aug-July*	**8.7**	**+0.2**	A report on Production of Principal Field crops issued by Statistics Canada on August 23, 2016 is based on a survey of 13,100 Canadian farms, conducted from July 21 to August 4, 2016.
CHINA					
↓	**Corn**	*Apr-March*	**216.0**	**-2.0**	Persistent dryness during reproductive period in western Heilongjiang and the bordering eastern Inner Mongolia provinces affected corn yields in that region. The area produces about 25 percent of China corn.
EUROPEAN UNION					
↓	**Corn**	*Oct-Sep*	**61.1**	**-1.0**	Dryness in ***Romania*** during flowering affected yields and lowered its production prospects by 0.7 million tons. Changes in projected corn output for other countries are smaller and partly offsetting.
↓	**Barley**	*July-June*	**60.0**	**-1.1**	Based on preliminary harvest results. The main decline is projected for ***Germany***. Barley production is also down in a number of countries in the west of the EU region.
RUSSIA					
↓	**Barley**	*July-June*	**18.5**	**-0.5**	Harvest reports indicate lower-than-expected spring barley yields, with about 90 percent of area already harvested.
MEXICO					
↓	**Sorghum**	*Oct-Sep*	**6.5**	**-0.4**	Smaller reported planted area.
Coarse grain production by country and by type of grain (2015/16)					
MEXICO					
↑	**Corn**	*Oct-Sep*	**25.8**	**+0.8**	Favorable weather conditions, and higher reservoir levels resulted in improved fall/winter corn production (about 30% of the total corn crop).
BRAZIL					
↓	**Corn**	*March-Feb*	**67.0**	**-1.5**	Monthly government statistics once again reduced the 2015/16 corn crop, as the impact of dry weather conditions and an early freeze appeared to be stronger than expected.

[1] Change from previous month. Smaller changes are made for a number of countries, see maps A1, A2, and A3.

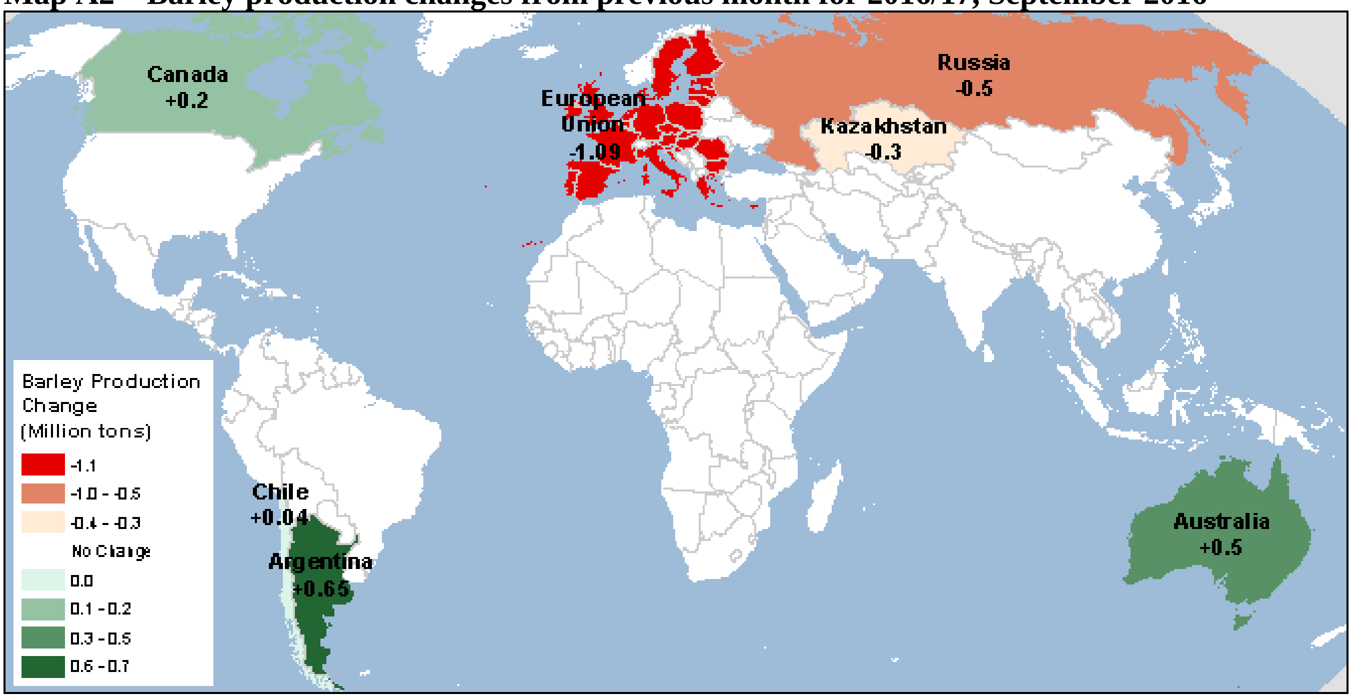
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution Online database.

Map A1 – Corn production changes from previous month for 2016/17, September 2016



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

Map A2 – Barley production changes from previous month for 2016/17, September 2016



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

Map A3 – Sorghum production changes from previous month for 2016/17, September 2016

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

World Coarse Grain Consumption Prospects Unchanged; Trade Higher This Month

UDSA's 2016/17 world coarse grain consumption forecast is essentially unchanged from August to September, at 1,311.4 million tons. This is 63.8 million tons—or 5.1 percent—higher than estimated 2015/16 consumption. A 344,000-ton decline in the 2016/17 global total is attributable to a 1.0-million-ton drop in China's expected barley consumption and a 635,000-ton decline in U.S. corn consumption. Forecasts for the EU and Saudi Arabia barley consumption were raised slightly, partly offsetting these declines. While the outlook is for slightly lower expected U.S. corn consumption compared with August, USDA's September forecast is for a 13.5-million-ton increase in U.S. corn consumption compared with the year before in 2016/17, reflecting a larger crop, lower expected prices, and continued growth in animal numbers. This would be more than double the size of the next largest expected increase in coarse grain consumption: China's 5.9 million gain.

World coarse grain trade is expected to shrink slightly from the year before in 2016/17—down 7.2 million tons to 174.3 million. But, compared with August, USDA's September forecast is marginally higher—up 1.1 million tons, or 0.7 percent. U.S. expected corn exports are unchanged at 55.0 million tons, but there were changes for other exporters. The outlook for EU coarse grain exports declined and rose for Argentina, Australia, Brazil, and Ukraine. The largest month-to-month change on the import side came in China, with a 2-million-ton increase in 2016/17 expected corn imports. This was in part offset by a 1.0-million-ton decline in expected barley imports, and on a year-to-year basis, China's coarse grain imports are expected to decline 3.2 million tons. China is reducing its corn production and imports in 2016/17 in an effort to reduce stocks.

Global coarse grain ending stocks are expected to rise 8.3 million tons from the year before in 2016/17 but are forecast to be virtually unchanged relative to global consumption. While China's coarse grain stocks are expected to fall 7.3 million tons, a 13.5-million-ton increase in U.S. ending stocks of corn is expected to be more than offsetting. Global coarse grain endings stocks are forecast to reach 253.3 million tons; China's coarse grain ending stocks are forecast to reach 104.6 million; and U.S. coarse grain ending stocks are forecast to reach 64.5 million tons. Corn accounts for most U.S. coarse grain ending stocks, at 60.5 million tons forecast in 2016/17.

Contacts and Links

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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

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(http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1273
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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 9/14/2016

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	
		Dec-Feb	10,453		7	10,459	1,602	1,459	390	3,451	7,008	
		Mar-May	7,008		9	7,017	1,671	858	636	3,165	3,852	
		Jun-Aug	3,852		6	3,858	1,677	404	544	2,626	1,232	
		Mkt yr	821	13,829	36	14,686	6,500	5,033	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	
		Dec-Feb	11,211		6	11,217	1,622	1,445	400	3,468	7,750	
		Mar-May	7,750		10	7,760	1,662	1,105	540	3,307	4,453	
		Jun-Aug	4,453		11	4,464	1,668	538	526	2,733	1,731	
		Mkt yr	1,232	14,216	32	15,479	6,567	5,314	1,867	13,748	1,731	3.70
	2015/16	Sep-Nov	1,731	13,601	13	15,345	1,631	2,175	301	4,107	11,238	
		Dec-Feb	11,238		18	11,256	1,645	1,451	340	3,437	7,819	
		Mar-May	7,819		20	7,838	1,630	926	561	3,116	4,722	
		Mkt yr	1,731	13,601	65	15,397	6,567	5,200	1,915	13,682	1,716	3.60
	2016/17	Mkt yr	1,716	15,093	50	16,859	6,650	5,650	2,175	14,475	2,384	2.90-3.50
Sorghum	2013/14	Sep-Nov	15.15	392.33	0.01	407.49	45.00	97.71	33.39	176.10	231.39	
		Dec-Feb	231.39		0.01	231.40	10.00	6.52	39.15	55.67	175.73	
		Mar-May	175.73		0.01	175.74	12.01	0.25	71.05	83.32	92.42	
		Jun-Aug	92.42		0.07	92.49	2.88	-11.81	67.39	58.46	34.03	
		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	
		Dec-Feb	222.59		0.12	222.71	1.80	2.37	98.69	102.86	119.86	
		Mar-May	119.86		0.00	119.86	1.43	-14.99	99.13	85.57	34.29	
		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	22.00	160.11	114.44	296.54	322.22	
		Dec-Feb	322.22		0.98	323.20	47.05	-11.61	86.33	121.78	201.42	
		Mar-May	201.42		0.01	201.42	37.13	2.56	73.47	113.16	88.27	
		Mkt yr	18.41	596.75	5.00	620.16	145.00	100.00	340.00	585.00	35.16	3.30
	2016/17	Mkt yr	35.16	488.48	1.00	524.64	125.00	95.00	250.00	470.00	54.64	2.75-3.35

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 9/14/2016

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	214	4	297	40	35	3	78	219	5.39
		Sep-Nov	219		4	223	38	0	4	42	181	5.52
		Dec-Feb	181		7	188	37	10	3	50	138	5.66
		Mar-May	138		4	141	38	0	1	39	102	5.43
		Mkt yr	79	214	19	311	153	46	11	209	102	5.52
	2016/17	Mkt yr	102	190	20	312	153	50	15	218	94	4.55-5.35
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	18	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	Mkt yr	57	77	90	224	78	90	2	170	54	1.55-1.95

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: 9/14/2016

Table 2--Feed and residual use of wheat and coarse grains, 9/14/2016

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	28.1	-0.4	0.1	0.2	27.9	-1.6	26.4		
	Q4 Jun-Aug	13.7	-1.4	0.8	0.8	13.8	7.8	21.6		
	MY Sep-Aug	135.0	2.1	0.6	1.6	139.3	4.0	143.3	92.3	1.6
2015/16	Q1 Sep-Nov	55.2	4.1	0.0	0.3	59.7	-3.0	56.7		
	Q2 Dec-Feb	36.9	-0.3	0.2	0.3	37.1	-0.0	37.1		
	Q3 Mar-May	23.5	0.1	0.0	0.2	23.8	-1.2	22.6		
	MY Sep-Aug	132.1	2.5	1.1	1.5	137.2	7.7	144.9	93.8	1.5
2016/17	MY Sep-Aug	143.5	2.4	1.1	1.6	148.6	6.5	155.1	95.0	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, 9/14/2016

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)		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Sep	4.78	3.16	3.55	5.27	4.14	4.22	9.84	7.91	8.08
Oct	4.20	3.09	3.67	5.13	4.15	4.36	9.31	8.52	8.23
Nov	4.10	3.45	3.62	5.06	4.54	4.22	8.86	9.04	7.89
Dec	4.13	3.75	3.62	5.06	4.55	4.17	9.34	9.85	
Jan	4.13	3.67	3.55	5.03	4.44	4.09	9.77	10.41	
Feb	4.33	3.65	3.56	5.32	4.41	4.06	10.16	10.70	
Mar	4.64	3.66	3.54	5.65	4.43	4.05	10.57		
Apr	4.98	3.59	3.61	5.65	4.38	4.17		9.97	
May	4.72	3.49	3.74	5.51	4.23	4.30		7.44	
Jun	4.37	3.52	3.91	5.14	4.24	4.62			
Jul	3.74	3.85	3.28	4.64	4.56	4.11			
Aug	3.59	3.51	3.09	4.48	4.14	3.82	8.41	8.09	
Mkt year	4.31	3.53	3.56	5.16	4.35	4.18	9.53	9.10	8.07

	Barley, No. 2 feed, Minneapolis, MN (dollars per bushel)			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	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	2.56
Aug	2.58	2.41	2.02	5.79		3.83	2.63	2.34
Sep	2.30	2.39		5.98	4.95	3.86	2.70	
Oct	2.44	2.57		7.28	4.95	3.68	2.58	
Nov	2.48	2.60		7.35		3.53	2.67	
Dec	2.68	2.60		7.35		3.49	2.64	
Jan	2.79	2.58		7.10		3.26	2.60	
Feb	2.73	2.50		6.75		3.11	2.60	
Mar	2.75	2.46				3.14	2.43	
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: 9/13/2016

Table 4--Selected feed and feed byproduct prices (dollars per ton), 9/14/2016

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		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Oct	443.63	381.50	327.97	355.00	346.88	292.50	157.50	90.13	96.00	601.25	549.38	509.38
Nov	451.13	441.40	308.60	345.00	313.13	291.88	158.38	105.13	109.63	631.25	581.88	477.50
Dec	498.31	431.74	289.78	401.88	334.38	265.00	168.00	143.30	113.13	638.13	613.50	482.25
Jan	479.54	380.03	279.57	378.34	313.75	248.75	165.00	135.25	109.63	625.00	632.50	452.50
Feb	509.25	370.39	273.61	388.75	302.50	238.13	167.50	117.25	102.38	668.13	631.25	457.50
Mar	497.82	357.83	276.23	401.25	310.50	216.50	177.63	107.20	87.00	744.38	613.00	445.50
Apr	514.01	336.61	303.81	405.50	288.13	207.50	166.60	83.13	73.25	784.00	575.63	434.00
May	519.38	320.23	376.36	416.88	274.38	242.50	157.00	72.25	87.00	761.25	549.38	464.10
Jun	501.72	335.03	408.58	412.50	281.00	284.00	131.88	74.40	107.13	694.50	571.60	568.13
Jul	450.79	375.48	371.49	359.50	299.38	280.00	113.70	91.25	95.01	574.00	560.00	573.13
Aug	490.33	357.85	340.80	310.00	295.63	280.00	109.25	88.75	90.30	572.88	550.63	507.20
Sep	525.72	333.63		360.63	293.50		98.70	95.50		587.50	525.00	
Mkt yr	490.13	368.48		377.93	304.43		147.59	100.29		656.86	579.48	

	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO			Alfalfa hay, weighted-average farm price 2/	
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2014/15	2015/16
Oct	385.53	385.00	291.88	216.50	96.00	123.13	153.37	111.48	105.93	193.00	155.00
Nov	410.95	383.79	266.25	217.13	113.13	132.63	138.69	106.87	106.53	182.00	147.00
Dec	459.57	424.22	221.67	220.50	159.30	133.13	198.00	135.83	99.55	180.00	149.00
Jan	456.88	382.49	200.13	200.00	186.50	132.50	151.62	140.93	104.16	170.00	141.00
Feb	438.75	370.63	193.75	214.38	187.13	136.63	150.24	124.85	97.89	167.00	137.00
Mar	501.25	376.00	261.00	245.00	189.50	134.50	156.62	1,118.55	68.64	169.00	139.00
Apr	560.00	390.63	316.25	243.50	191.00	122.38	133.38	81.93	65.12	175.00	154.00
May	516.25	368.75	310.10	222.75	178.50	141.10	131.07	64.25	60.72	187.00	147.00
Jun	506.88	313.50	345.00	184.50	157.50	170.50	102.43	60.27	57.94	178.00	142.00
Jul	489.83	333.75	381.67	148.00	153.50	149.38	70.36	77.96	61.48	172.00	140.00
Aug	464.37	388.75	347.00	116.88	115.13	130.90	81.24	92.72		161.00	
Sep	435.00	344.00		123.00	139.30		106.62	112.67		160.00	
Mkt yr	468.77	371.79		196.01	155.54		131.14	185.69		196.00	158.00

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), 9/14/2016

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	77.29	50.18	1,294.53	37.85	50.47	27.72	1,661.77
	Q4 Jun-Aug	128.08	75.96	43.19	1,335.39	33.64	50.68	1.54	1,668.46
	MY Sep-Aug	478.91	299.83	215.53	5,200.09	142.19	201.21	29.26	6,567.02
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	115.06	70.21	59.91	1,313.32	36.58	50.43	0.00	1,645.49
	Q3 Mar-May	124.73	77.13	59.70	1,251.02	38.27	50.92	27.93	1,629.70
	MY Sep-Aug	470.00	300.00	220.00	5,200.00	143.00	203.10	30.56	6,566.66
2016/17	MY Sep-Aug	470.00	310.00	220.00	5,275.00	144.00	202.10	28.90	6,650.00

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

Source: Calculated by USDA, Economic Research Service.

Table 6--Wholesale corn milling product and byproduct prices, 9/14/2016

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)	
	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16
Sep	17.32	17.80	18.99	19.47	14.14	14.20	34.50	37.00	21.25	23.25
Oct	17.44	17.96	19.11	19.63	13.30	14.29	34.50	37.00	21.25	23.25
Nov	18.44	17.53	20.14	19.20	12.91	14.95	34.50	37.00	21.25	23.25
Dec	18.89	17.50	20.56	19.17	13.90	14.80	34.50	37.00	21.25	23.25
Jan	18.94	17.42	20.61	19.09	14.11	14.62	37.00	39.00	23.25	26.75
Feb	18.71	17.44	20.39	19.11	13.93	14.35	37.00	39.00	23.25	26.75
Mar	18.51	17.13	20.06	18.92	13.90	14.71	37.00	39.00	23.25	26.75
Apr	17.90	17.70	19.57	19.37	14.08	14.71	37.00	39.00	23.25	26.75
May	17.62	18.21	19.29	19.88	14.50	15.10	37.00	39.00	23.25	26.75
Jun	17.81	18.27	19.48	19.94	14.50	15.40	37.00	39.00	23.25	26.75
Jul	18.40	17.03	20.07	18.70	14.41	15.43	37.00	39.00	23.25	26.75
Aug	17.65	16.64	19.32	18.31	15.37	13.63	37.00	39.00	23.25	26.75
Mkt year 2/	18.14	17.55	19.80	19.23	14.09	14.68	36.17	38.33	22.58	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: 9/13/2016

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 9/14/2016

Import and country/region		---------- 2014/15 ----------		---------- 2015/16 ----------		2016/17
		Mkt year	Jun-Jul	Mkt year	Jun-Jul	Jun-Jul
Oats	Canada	1,731	301	1,379	179	172
	Sweden	72		62		
	Finland	62	40	34	18	
	All other countries	12	5	0	0	0
	Total 2/	1,876	345	1,475	197	172
Malting barley	Canada	334	85	283	39	14
	All other countries	28	0	0	0	17
	Total 2/	362	85	284	39	31
Other barley 3/	Canada	147	37	116	24	11
	All other countries	4	1	4	1	1
	Total 2/	152	38	119	24	11

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: 9/13/2016

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 9/14/2016

Export and country/region		---------- 2013/14 ---------- Mkt year	Sep-Jul	---------- 2014/15 ---------- Mkt year	Sep-Jul	2015/16 Sep-Jul
Corn	Japan	11,939	10,833	12,003	10,935	9,173
	Mexico	10,490	9,492	11,333	10,230	12,120
	South Korea	4,961	4,126	3,934	3,587	2,400
	Colombia	3,562	3,334	4,371	4,085	4,266
	China (Mainland)	2,732	2,716	747	747	321
	Egypt	2,710	2,472	1,235	1,082	697
	China (Taiwan)	1,781	1,707	1,839	1,766	1,663
	Peru	1,246	1,165	2,555	2,377	2,042
	European Union-27	1,204	1,053	361	341	315
	Venezuela	1,128	1,038	710	540	976
	Saudi Arabia	1,031	960	1,185	1,112	1,246
	Guatemala	752	684	852	728	788
	Dominican Republic	596	553	607	585	219
	Costa Rica	593	546	774	723	493
	Vietnam	509	509	11	11	321
	Canada	479	337	1,490	1,363	900
	Israel	469	469	26	26	269
	El Salvador	409	348	538	496	599
	Honduras	375	346	428	376	513
	Panama	333	316	450	387	367
	Jamaica	283	256	282	250	252
	Morocco	202	175	298	298	397
	Cuba	137	137	26	26	59
	Nicaragua	121	112	191	183	226
	Indonesia	116	116	45	45	163
	All other countries	631	564	1,128	1,098	1,756
	Total 2/	48,790	44,364	47,421	43,397	42,541
Sorghum	China (Mainland)	4,260	3,409	8,328	7,485	6,623
	Sub-Saharan Africa	444	421	486	457	548
	Japan	293	293	83	83	68
	Mexico	251	250	21	19	573
	All other countries	112	109	17	16	293
	Total 2/	5,359	4,482	8,935	8,060	8,105
		---------- 2014/15 ---------- Mkt year	Jun-Jul	---------- 2015/16 ---------- Mkt year	Jun-Jul	2016/17 Jun-Jul
Barley	Mexico	99	21	142	19	
	Japan	90	20	5	1	2
	Canada	52	4	52	20	9
	China (Taiwan)	32	5	7	2	0.851
	All other countries	38	2	30	4	0.655
	Total 2/	311	52	235	46	12

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: 9/13/2016