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Feed Outlook

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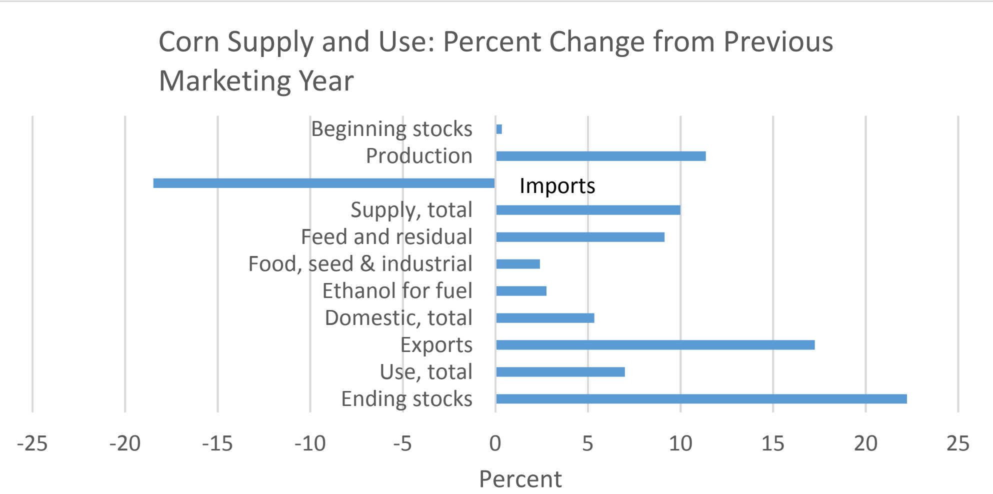
U.S. Corn Disappearance Raised on Higher Food, Seed, and Industrial Use

The next release is March 7, 2017.

Approved by the World Agricultural Outlook Board.

Projected corn disappearance is raised this month, reflecting increased prospects for ethanol and sweetener production. A 35-million-bushel increase in food, seed, and industrial (FSI) use of corn raises total disappearance to a record 14,620 million bushels, well above the previous record of 13,748 billion estimated for 2014/15. The forecast season-average price received by producers is unchanged for corn, down $0.20 per bushel for sorghum, and raised $0.05 and $0.10 for barley and oats, respectively.

World coarse grain production and beginning stocks boost 2016/17 supplies this month, but increased projected use mainly in China and the United States leaves forecast ending stocks lower. Corn trade for 2016/17 is increased, mostly due to larger exports for Ukraine. The United States is expected to export less sorghum as Chinese sorghum imports decline and the U.S. pace of sales and shipments is lagging.



Source: ERS Feed Grain Database.

Domestic Outlook

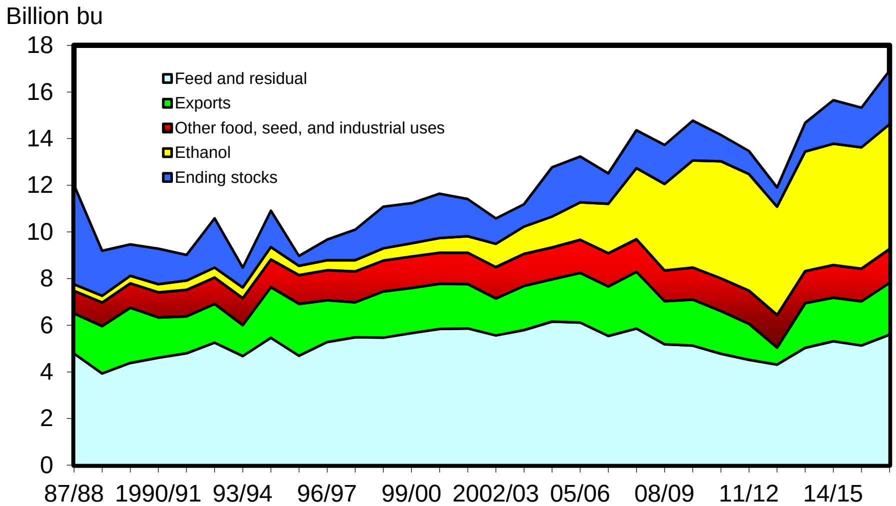
Feed and Residual Use Unchanged

Projected U.S. 2016/17 feed and residual use for the four feed grains (corn, sorghum, barley, and oats) and wheat is raised 0.6 million metric tons this month to 156.2 million, on a September-August marketing year basis. Lower forecast sorghum exports resulted in an increase in sorghum feed and residual. This month's projection is 0.6 million tons higher than feed and residual of 155.6 million tonsin 2015/16.

Grain Consuming Animal Units Projected Higher

Higher projected cattle on feed and dairy cattle inventories raise grain consuming animal units (GCAU) this month, resulting in 2016/17 projected GCAUs of 95.8 million units, less than a thousandth below last month and 1.7 million units higher than the 2015/16 revised estimate of 94.1 million. Feed and residual per GCAU is projected at 1.63 tons per GCAU this month, up slightly from last month and 0.16 tons per GCAU higher than 2015/16.

Figure 1
U.S. corn utilization



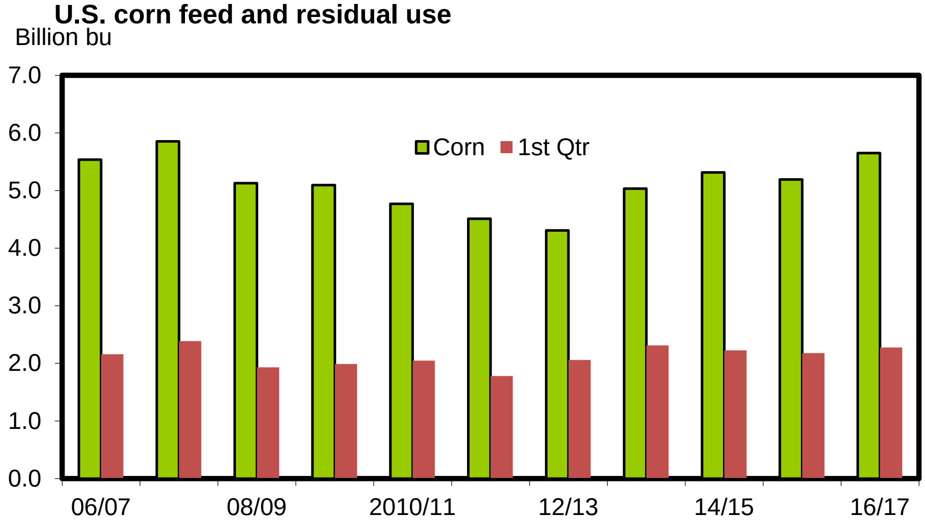
Note: Marketing years. 2015/16 and 2016/17 are projected.
Source: USDA, World Agricultural Outlook Board, *WASDE.*

Corn for Ethanol Boosts Food, Seed, and Industrial Use

Corn used to produce fuel ethanol is raised 25 million bushels to 5,350 million this month on higher use reflected in USDA's National Agricultural Statistics Service (NASS) *Grain Crushings and Co-Products Production* report and strong weekly production data for January from the Energy Information Administration (EIA). Weekly production during January implies record-high monthly production in both absolute terms and on a per-day basis. Ethanol production has been supported by strong exports, primarily to Brazil where strong international sugar prices spurred mills to shift sugar production to the export market. Brazil accounts for more than half of world trade in sugar. In addition, corn used for glucose and dextrose was raised due to robust first-quarter demand. Total FSI is raised 35 million bushels to 6,795 million, more than 100 million over 2015/16. Other demand categories were unchanged.

Feed and residual use and exports are unchanged, resulting in disappearance of 14,620 million bushels, 7 percent greater than 2015/16.

Figure 2
U.S. corn feed and residual use

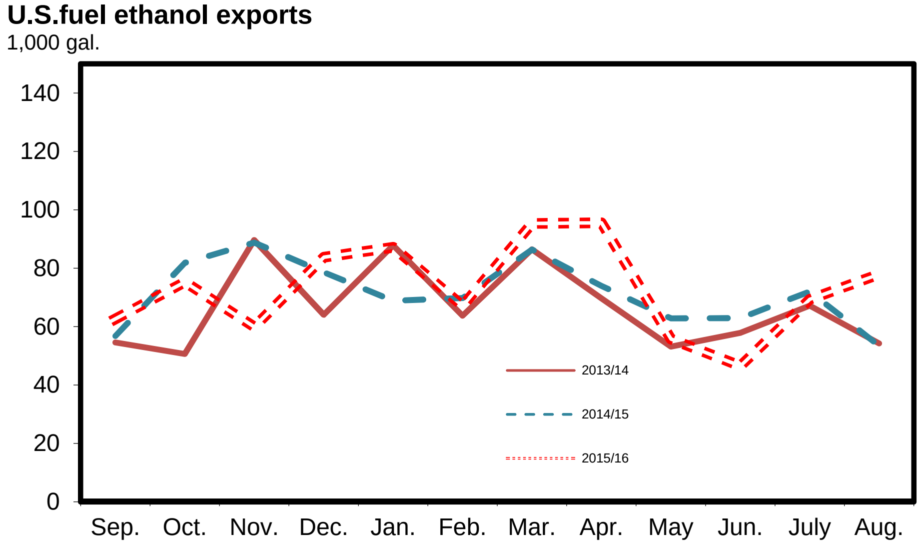


Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, World Agricultural Outlook Board, *WASDE.*

Corn Ending Stocks Reduced

The 35-million-bushel increase in FSI is reflected in a projected decline in ending stocks, now forecast at 2,320 million bushels, 34 percent higher than last year.

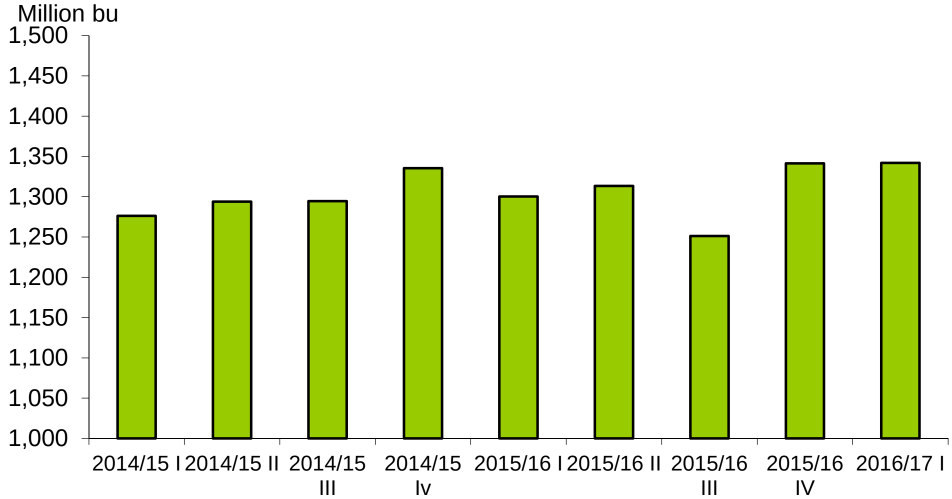
Figure 3
U.S.fuel ethanol exports



Source: USDC, U.S. Census Bureau.

The projected range for the season-average corn price received by farmers is narrowed $0.10 on both the high and low ends to $3.20 to $4.60 per bushel, with the midpoint unchanged at $3.40.

Figure 4
U.S. corn for ethanol use by quarter



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

Sorghum Exports Lowered

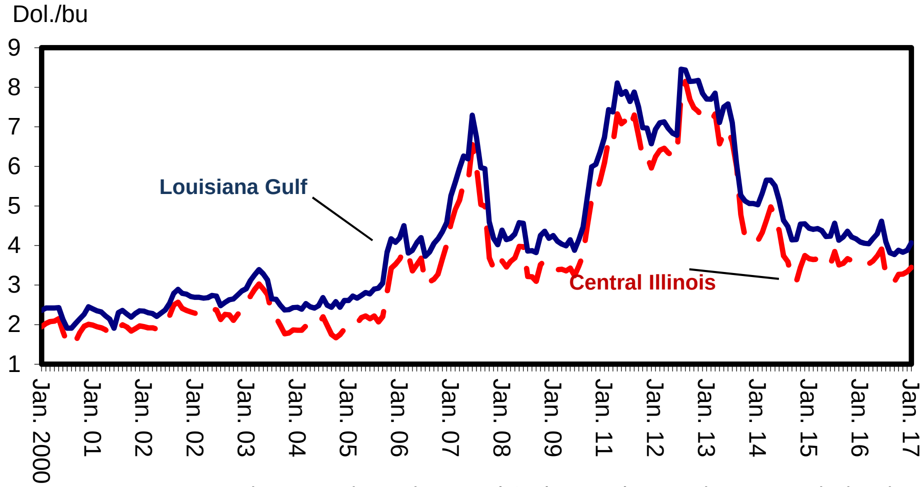
U.S. sorghum export prospects are reduced 25 million bushels this month to 225 million due to expectations of lower shipments to China and sluggish export commitments through January. Offsetting the decrease in exports is an increase in projected feed and residual use to 130 million bushels. The price relationship between sorghum and corn in some interior markets favors feeding sorghum. Grain sorghum prices are projected down $0.20 per bushel at the midpoint to $2.50 to $2.90 per bushel.

Price Adjustments for Barley and Oats

Balance sheets are steady for barley and oats this month, but price forecasts are increased for both crops. The forecast price range for barley was raised $0.10 per bushel on the low end of the range to $4.70 to $5.20. The midpoint forecast is raised $0.05 per bushel to $4.95. Higher prices for feed barley relative to corn are behind the increase. The season-average price received by producers for oats was raised $0.15 on the low end of the range and $0.05 on the high end of the range for a midpoint projection of $2.05 per bushel, based on recent reported prices.

Figure 5

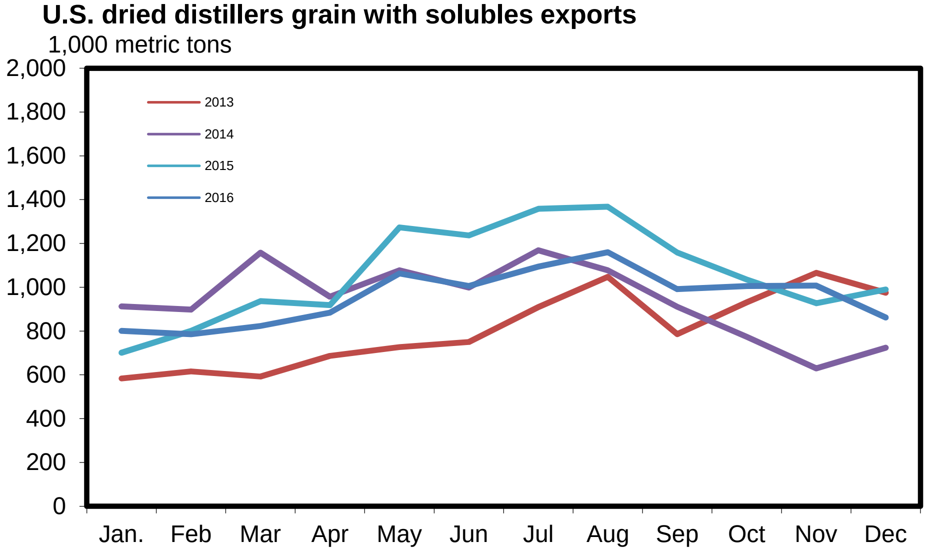
Monthly corn (yellow #2) prices for Central Illinois and Louisiana Gulf



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

Figure 6

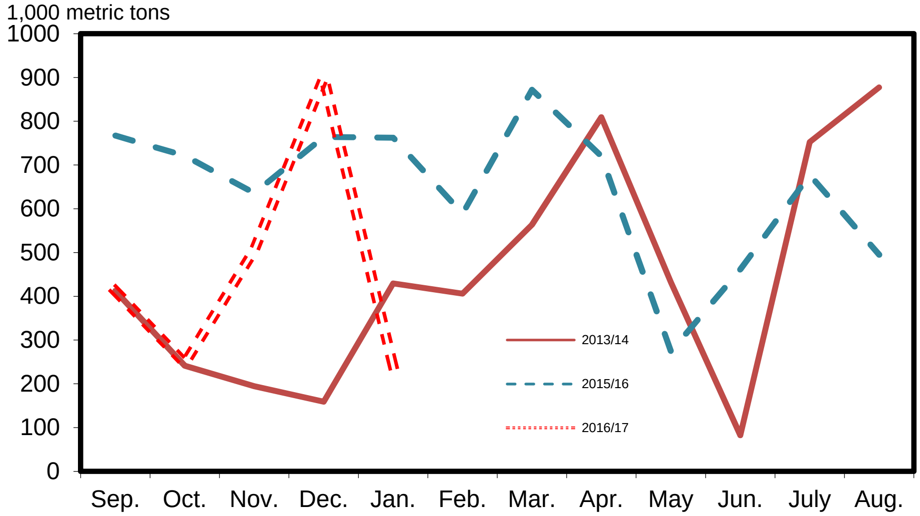
U.S. dried distillers grain with solubles exports



Source: USDC, U.S. Census Bureau.

Figure 7

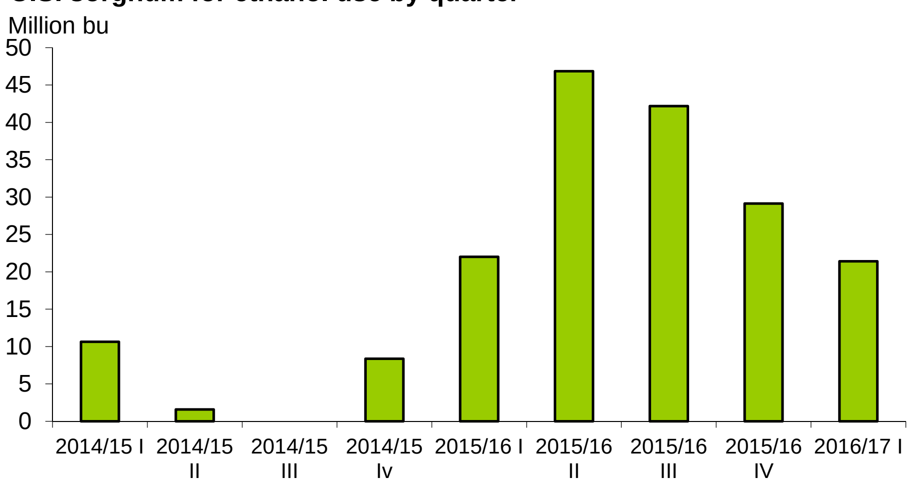
U.S. sorghum exports



Source: USDC, U.S. Census Bureau, December 2016, *Grain Inspections.*

Figure 8

U.S. sorghum for ethanol use by quarter



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

International

World Coarse Grain Production Down Marginally

Global coarse grain production in 2016/17 is projected 1.4 million tons higher this month at 1,329 million. Increased production for Ukraine, Kazakhstan, and Mexico drive the increase. Corn production is up 2.3 million tons this month, with major increases in Mexico and Ukraine; sorghum prospects are reduced 0.9 million tons, with a 15-percent reduction in Mexico; barley is down 0.1 million tons on a reduction in Iran that is partly offset by higher Kazakh and Ukrainian output; oats are up less than 0.1 million tons, with a Kazakh increase; other coarse grains are virtually unchanged.

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

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

Region or country	Production	Change[1]	Comments
	Million tons		
Coarse grain production (total)			
World	1329.0	+1.4	
Foreign	926.4	+1.4	
United States	402.6	No change	
World production of coarse grains by type of grain			
CORN			
World	1014.2	+2.3	
Foreign	655.4	+2.3	Higher corn production in Mexico and Ukraine is offset by a decline in the EU. See table A2.
United States	384.8	No change	
SORGHUM			
World	63.2	-0.9	
Foreign	51.0	-0.9	A reduction in Mexico is partly offset by an increase in Saudi Arabia. See table A2.
United States	12.2	No change	
BARLEY			
World	144.0	-0.1	
Foreign	139.6	-0.1	A reduction in barley production in Iran is partly offset by a projected increase in Kazakhstan and Ukraine. See table A2.
United States	4.3	*No change*	

[1]Change from previous month. **For changes 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, February 2017

	Type of crop	Crop year	Production	Change[1]	Comments
			Million tons		
Coarse grain production by country and by type of grain (2016/17)					
MEXICO					
↑	**Corn**	*Oct-Sep*	**26.0**	**+1.5**	The increase moves production to a record high and is attributed to higher area harvested for the country's summer corn crop. Area is projected 0.4 million hectares higher because: (a) ample precipitation during the growing period for summer rain-fed corn sharply reduced area that had been abandoned (0.1 million hectares versus last year's more than 0.4 million); and (b) corn area also benefited from a switch away from sorghum (see below).
↓	**Sorghum**	*Oct-Sep*	**5.5**	**-1.0**	Sorghum harvest has just been completed. Harvested area is reduced by 12 percent as farmers partly switched away from sorghum to corn in the major sorghum-producing States mainly to limit damage from sugacane aphid, one of the most severe insect pests of sorghum. Sorghum yields are also trimmed.
UKRAINE					
↑	**Corn**	*Oct-Sep*	**28.0**	**+1.0**	Preliminary harvest results were issued by the Ukrainian statistical agency SSC. Corn yields turned out to be at the absolute record, exceeding the previous 2011 high.
↑	**Barley**	*July-June*	**9.9**	**+0.1**	Preliminary harvest results were issued by the Ukrainian statistical agency SSC.
KAZAKHSTAN					
↑	**Barley**	*July-June*	**3.2**	**+0.5**	Preliminary harvest results were issued by the Kazakh statistical committee. Barley yields turned out to be 17 percent higher than projected before, on par with the record of 2011.
↑	**Oats**	*July-June*	**0.3**	**+0.1**	Preliminary harvest results were issued by the Kazakh statistical committee.
IRAN					
↓	**Barley**	*July-June*	**3.0**	**-0.8**	Lower barley area is projected as dry conditions in the rain-fed areas persisted at the time of planting and crop establishment.
EUROPEAN UNION					
↓	**Corn**	*Oct-Sep*	**60.3**	**-0.4**	At this point, the changes are a fine-tuning of the European crop area and output. This month, small changes are made for Hungary and Netherlands.

[1]Change from previous month. Smaller changes for coarse grain output are made for several countries.

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

World Coarse Grain Use Projected Higher

Global coarse grain consumption in 2016/17 is projected up 4.9 million tons this month, more than offsetting the increased supply and pushing ending stocks down. The largest increase is for China, up 3.5 million tons to 249.1 million. Corn use, both for feed and for industrial purposes, is projected higher in China as demand for corn and corn products is on the rise because of declining corn prices and government support aimed at reducing corn stocks. Feed consumption of corn is projected up 2.0 million tons this month. While sorghum imports as well as sorghum feed use for China are declining, corn has been largely replacing sorghum in feed use for animals. Another major reason for the increase in corn feeding is the sharp reduction in imports of distiller's dried grains (DDG). DDGs are used for feeding and in the past have been a popular energy feed substitute given the absence of import quotas and relatively high internal market prices for energy relative to protein. An increase in Chinese food and industrial (FSI) use is mainly a result of the government support for corn processors. Production of corn starch, glucose, and other corn-based products in China skyrocketed recently, and the country's exports of these products are growing.

For more information and a visual display of this month's changes in coarse grain use, see table B; see map B1 for corn feed and residual use and map B2 for corn FSI use.

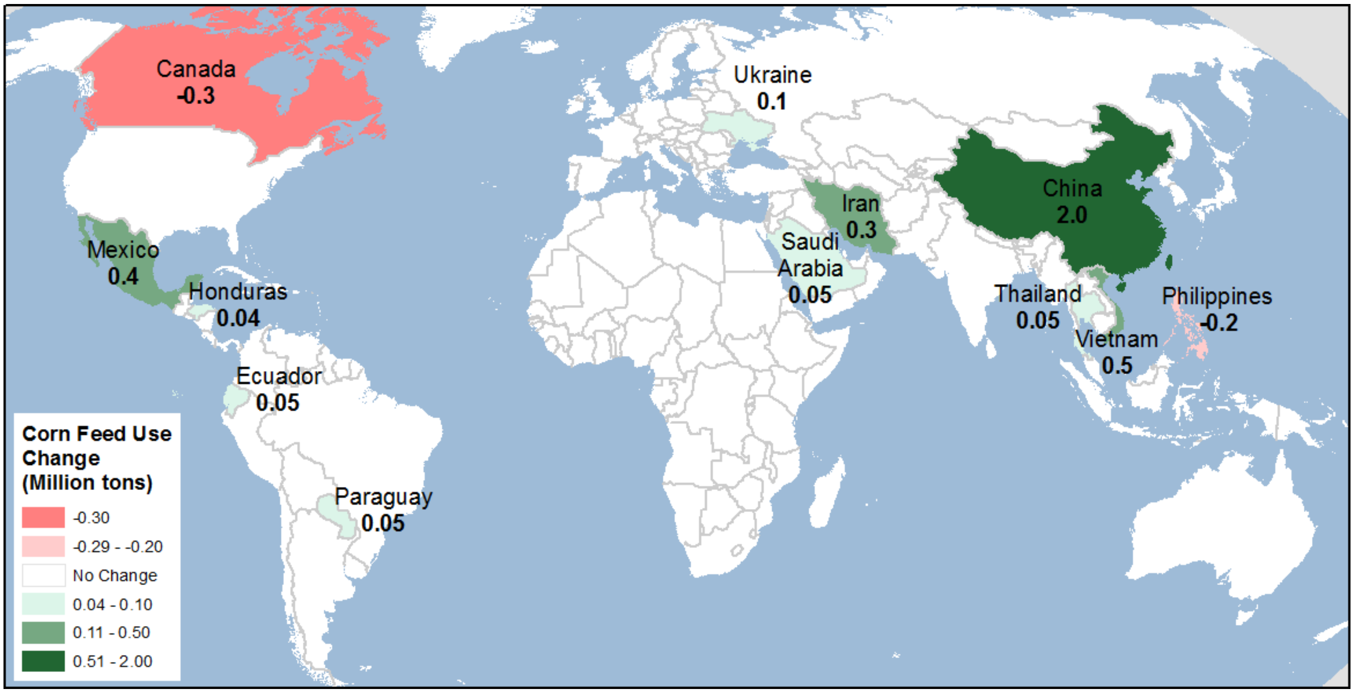
Table B - Coarse grain domestic consumption at a glance (2016/17), February 2017

	Country or region	Feed and residual	Change[1]	Comments
		Million tons		
↑	World	1324.4	+4.9	
↑	Foreign	995.3	+3.3	Increases of 0.6 million tons in feed and residual and 2.6 million tons in food, seed, and industrial (FSI) use. The totals can differ because of rounding.
↑	United States	329.1	+1.6	See section on U.S. domestic coarse grains.
↑	China	249.1	+3.5	Coarse grain feed consumption is up 1.1 million tons (2.0 million tons of higher corn feeding partly offset by 0.9 million lower sorghum feeding). FSI consumption is up 2.4 million tons (2.0 million tons of corn and 0.4 million tons of sorghum). See explanation in the text of the report.
↑	Vietnam	12.9	+0.5	The country's pace of corn imports is high. Additional corn is expected to be partly used to expand feeding. It should be noted that the feed and residual use category by definition includes unaccounted-for corn sent to neighboring countries.
↓	Canada	22.1	-0.4	Higher projected corn exports and slightly higher ending stocks (based on stocks report) result in reduced corn feeding.
↓	Iran	15.5	-0.4	Barley feeding is projected 0.7 million tons lower (reflecting smaller output), while corn feeding is up 0.3 million tons, partly compensating for the loss.

[1]Change from previous month. Smaller changes are made for a number of countries; see map B1 for changes in ***corn*** feeding, and map B2 for corn food, seed, and industrial consumption (FSI).

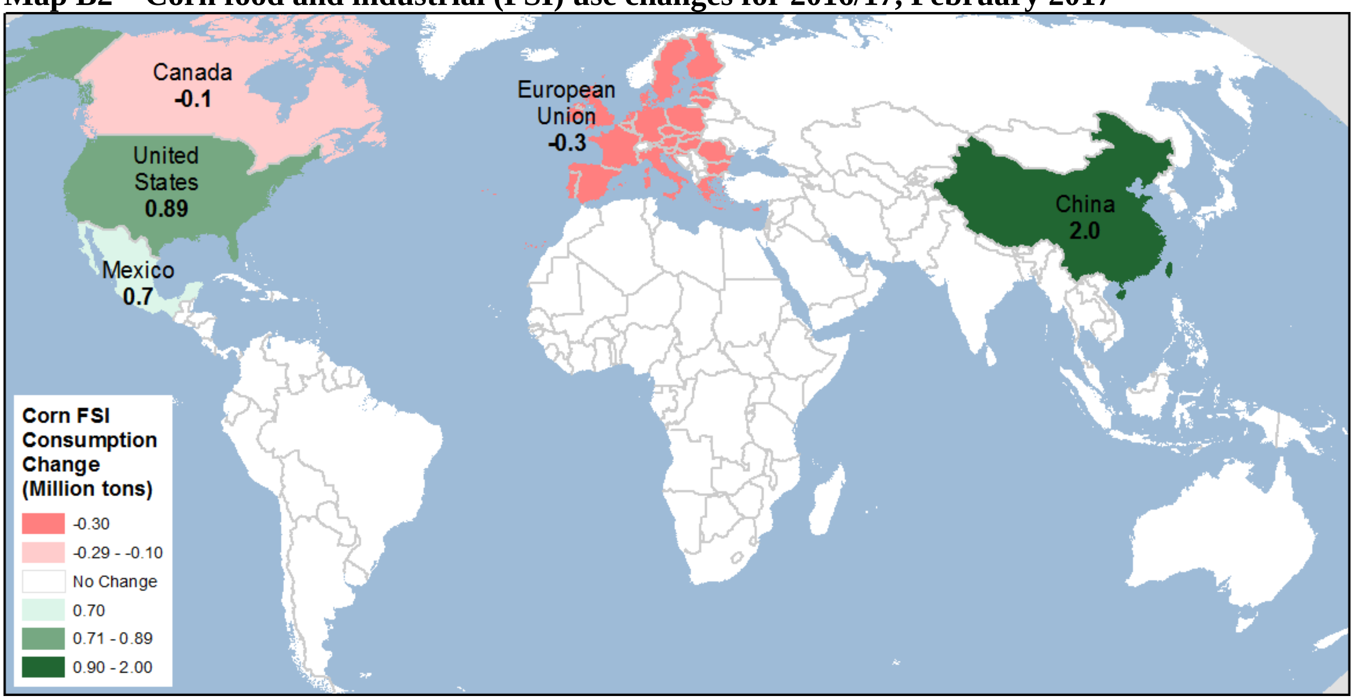
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.

Map B1 – Corn feed and residual use changes for 2016/17, February 2017



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

Map B2 – Corn food and industrial (FSI) use changes for 2016/17, February 2017



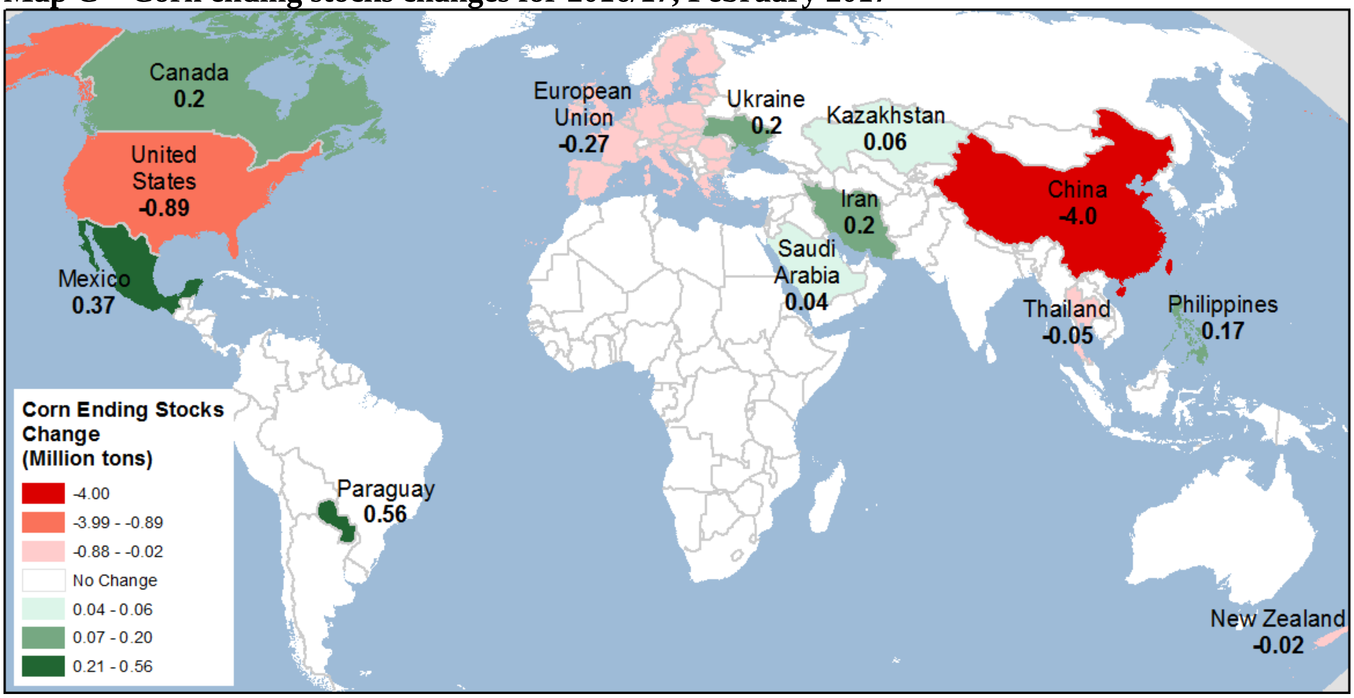
Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

Projected Global Ending Stocks Reduced

Increased projected use, mainly in China and the United States, leaves forecast ending stocks lower. World coarse grain ending stocks for 2016/17 are projected down 3.2 million tons this month to 250.7 million, with most of the reduction in China and the United States. Corn ending stocks are forecast down 3.4 million tons this month to 217.5 million tons but are still expected to be record high. Global barley stocks are reduced 0.1 million tons to 22.9 million.

For a visual display of the changes in corn ending stocks, see map C.

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



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

World Corn Trade in 2016/17 Projected Higher This Month

Global corn trade in 2016/17 (October-September trade year) is projected up 1.0 million tons this month to 143.1 million, still almost 2 million tons lower than the record corn trade last year.

U.S. corn exports are forecast at 56.5 million tons, unchanged this month despite the strong pace of sales and commitments. However, as mentioned in last month's outlook report, in coming months, U.S. sales and shipments of corn are expected to slow down, mainly due to increased competition from Brazil and Argentina, where the upcoming corn harvest will pose a serious challenge to U.S. exporters. Current forward export prices indicate that Argentina will be competitive relative to the United States starting in March, and harvest of early planted corn in Argentina is reported to have started in Santa Fe and Entre Rios.

U.S sorghum exports are reduced 0.5 million tons this month to 5.8 million. The pace of sorghum export sales are dismal, and commitments at the end of January are about only half the number of those last year.

For information on this month's main changes in 2016/17 coarse grain trade with country-specific details, see table D.

Table D - Coarse grain trade at a glance (2016/17), February 2017

	Country or region	Trade	Change[1]	Comments
		Million tons		*October-September international trade year*
↑	**World**	**180.1**	**+0.6**	
↑	**Foreign**	**117.6**	**+0.1**	
Coarse grain exports (2016/17)				
↓	**United States**	**62.5**	**-0.5**	Projected **sorghum** exports are reduced reflecting a dismal pace of sales and a reduction in Chinese sorghum imports.
↑	**Ukraine**	**23.9**	**+0.7**	Higher projected **corn** output and vigorous pace of sales (an additional 0.5 million tons were shipped to Iran).
↑	**Canada**	**4.5**	**+0.4**	Higher-than-projected pace of export sales of **corn** (to the EU) and of **oats**, up 0.3 and 0.1 million tons, respectively.
↑	**Kazakhstan**	**1.1**	**+0.3**	Higher projected **barley** output and a healthy pace of exports. Barley exports are forecast to be record high at 1.0 million tons.
↓	**European Union**	**62.5**	**-0.5**	Projected **barley** exports are reduced based on slow pace of sales.
Corn imports (2016/17)				
↑	**Iran**	**9.1**	**+0.5**	Increase in **corn** imports is expected to partly compensate for lower barley production.
↑	**Vietnam**	**8.0**	**+0.5**	The country's pace of **corn** imports is high. Additional corn is expected to be partly used to expand feeding. However, it should be noted that the feed and residual use category by definition includes unaccounted-for-corn sent to neighboring countries.
↓	**China**	**12.7**	**-0.4**	**Sorghum** imports are reduced. Lower internal market prices are expected to increase use of domestic corn supplies. Government is supporting domestic corn use to reduce huge corn stocks, and sorghum is being increasingly replaced by corn in feeding. Pace of sorghum imports supports the reduction.

[1]Change from previous month.

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

Contacts and Links

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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 2/13/2017

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	1,652	1,438	340	3,431	7,822	3.64
		Mar-May	7,822		20	7,842	1,645	925	561	3,131	4,711	3.60
		Jun-Aug	4,711		17	4,728	1,706	590	695	2,991	1,737	3.55
		Mkt yr	1,731	13,602	67	15,401	6,635	5,131	1,898	13,664	1,737	3.61
	2016/17	Sep-Nov	1,737	15,148	14	16,899	1,689	2,275	551	4,516	12,384	3.25
		Mkt yr	1,737	15,148	55	16,940	6,795	5,600	2,225	14,620	2,320	3.20-3.60
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	47.05	-11.46	86.33	121.93	201.58	3.17
		Mar-May	201.58		0.01	201.59	42.75	-4.99	73.47	111.24	90.35	3.10
		Jun-Aug	90.35		0.01	90.36	29.75	-40.37	64.35	53.73	36.63	3.33
		Mkt yr	18.41	596.75	4.59	619.75	141.70	102.83	338.59	583.12	36.63	3.31
	2016/17	Sep-Nov	36.63	480.26	0.00	516.90	21.51	138.23	45.86	205.60	311.30	2.62
		Mkt yr	36.63	480.26	1.00	517.89	125.00	130.00	225.00	480.00	37.89	2.50-2.90

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 2/13/2017

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
		Mkt yr	102	199	16	317	153	55	6	214	103	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	76	2.03
		Mkt yr	57	65	95	217	78	90	2	170	47	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: 2/10/2017

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

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	-0.3	0.2	0.3	36.7	-0.0	36.7		
	Q3 Mar-May	23.5	-0.1	0.0	0.2	23.6	-1.0	22.6		
	Q4 Jun-Aug	15.0	-1.0	0.7	0.7	15.4	7.3	22.6		
	MY Sep-Aug	130.3	2.6	1.0	1.5	135.4	3.3	138.7	94.1	1.5
2016/17	Q1 Sep-Nov	57.8	3.5	0.0	0.2	61.6	-0.8	60.8		
	MY Sep-Aug	142.2	3.3	1.4	1.4	148.4	7.8	156.2	95.8	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, 2/13/2017

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	
	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		4.41	4.06		10.70	
Mar	3.66	3.54		4.43	4.05			
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		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	2.61
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		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: 2/17/2017

Table 4--Selected feed and feed byproduct prices (dollars per ton), 2/13/2017

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		302.50	238.13		117.25	102.38		631.25	457.50	
Mar	357.83	276.23		310.50	216.50		107.20	87.00		613.00	445.50	
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	2014/15	2015/16	2016/17
Oct	385.00	291.88	237.50	96.00	123.13	116.25	111.48	105.93	79.43	193.00	155.00	135.00
Nov	383.79	266.25	229.00	113.13	132.63	111.70	106.87	106.53	85.53	182.00	147.00	130.00
Dec	424.22	221.67	211.67	159.30	133.13	104.84	135.83	99.55	101.62	180.00	149.00	129.00
Jan	382.49	200.13	255.60	186.50	132.50	96.30	140.93	104.16	98.25	170.00	141.00	
Feb	370.63	193.75		187.13	136.63		124.85	97.89		167.00	137.00	
Mar	376.00	261.00		189.50	134.50		1,118.55	68.64		169.00	139.00	
Apr	390.63	316.25		191.00	122.38		81.93	65.12		175.00	154.00	
May	368.75	310.10		178.50	141.10		64.25	60.72		187.00	147.00	
Jun	313.50	345.00		157.50	170.50		60.27	57.94		178.00	142.00	
Jul	333.75	381.67		153.50	149.38		77.96	61.48		172.00	140.00	
Aug	388.75	347.00		115.13	130.90		92.72	60.61		161.00	138.00	
Sep	344.00	285.63		139.30	127.75		112.67	64.43		160.00	137.00	
Mkt yr	371.79	285.03		155.54	136.21		185.69	79.42		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), 2/13/2017

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	115.06	76.77	59.91	1,313.32	36.58	50.43	0.00	1,652.05
	Q3 Mar-May	124.71	92.65	59.70	1,251.13	38.27	50.92	27.93	1,645.30
	Q4 Jun-Aug	127.31	88.73	61.67	1,341.42	33.27	51.13	2.63	1,706.15
	MY Sep-Aug	477.89	330.49	243.57	5,206.06	143.00	203.10	30.56	6,634.66
2016/17	Q1 Sep-Nov	112.55	88.84	59.90	1,342.19	35.78	49.92	0.00	1,689.17
	MY Sep-Aug	480.00	335.00	250.00	5,350.00	146.00	204.60	29.40	6,795.00

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

Date run: 2/9/2017

Table 6--Wholesale corn milling product and byproduct prices, 2/13/2017

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	16.79	19.17	48.46	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	17.10	19.11	18.77	14.35		39.00	39.00	26.75	28.25
Mar	17.13		18.92		14.71		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: 2/9/2017

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 2/13/2017

Import and country/region		---------- 2014/15 ---------- Mkt year	Jun-Dec	---------- 2015/16 ---------- Mkt year	Jun-Dec	2016/17 Jun-Dec
Oats	Canada	1,731	998	1,379	889	963
	Sweden	72	72	62	20	
	Finland	62	40	34	18	10
	All other countries	12	9	0	0	0
	Total 2/	1,876	1,119	1,475	927	973
Malting barley	Canada	334	198	283	161	47
	All other countries	28	0	0	0	17
	Total 2/	362	198	284	161	63
Other barley 3/	Canada	147	90	116	64	41
	All other countries	4	2	4	3	1
	Total 2/	152	91	119	67	42

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: 2/9/2017

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 2/13/2017

		---------- 2014/15 ----------		---------- 2015/16 ----------		2016/17
Export and country/region		Mkt year	Sep-Dec	Mkt year	Sep-Dec	Sep-Dec
Corn	Japan	12,003	2,934	10,392	1,981	3,531
	Mexico	11,333	3,314	13,337	3,811	4,412
	Colombia	4,371	1,443	4,548	1,427	1,407
	South Korea	3,934	555	2,964	72	1,947
	Peru	2,555	1,400	2,383	588	895
	China (Taiwan)	1,839	268	2,049	245	876
	Canada	1,490	607	1,006	403	305
	Egypt	1,235	391	852	124	235
	Saudi Arabia	1,185	177	1,389	144	708
	Guatemala	852	272	883	232	304
	Costa Rica	774	276	552	117	240
	China (Mainland)	747	125	321	67	18
	Venezuela	710	377	1,155	196	158
	Dominican Republic	607	118	253	0.193	263
	El Salvador	538	171	654	150	208
	Panama	450	187	392	88	191
	Honduras	428	141	550	137	174
	European Union-27	361	78	417	3	202
	Morocco	298	31	450	0.888	323
	Jamaica	282	87	283	95	84
	Algeria	239		663		16
	Nicaragua	191	51	258	48	108
	Iran	138		0.095		
	New Zealand, No Islands	106	52	55	28	12
	Trinidad And Tobago	89	22	92	26	22
	All other countries	666	118	2,305	296	1,491
	Total 2/	47,421	13,193	48,202	10,278	18,130
Sorghum	China (Mainland)	8,328	2,570	7,008	3,342	1,679
	Sub-Saharan Africa	486	271	593	183	113
	Japan	83	34	79	29	28
	Mexico	21	8	625	154	196
	All other countries	17	6	296	40	9
	Total 2/	8,935	2,889	8,600	3,748	2,025
		---------- 2014/15 ----------		---------- 2015/16 ----------		2016/17
		Mkt year	Jun-Dec	Mkt year	Jun-Dec	Jun-Dec
Barley	Mexico	99	42	142	108	1
	Japan	90	56	5	3	12
	Canada	52	19	52	42	21
	China (Taiwan)	32	18	7	4	2
	All other countries	38	36	30	25	2
	Total 2/	311	171	235	184	38

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: 2/9/2017