

#### **United States Department of Agriculture**

Economic Research Service

Situation and Outlook

FDS-17i

September 14, 2017

# **Feed Outlook**

Tom Capehart tcapehart@ers.usda.gov Olga Liefert oliefert@ers.usda.gov

## **U.S. Corn Yield Edges Up**

The next release is October 16, 2017
Approved by the World Agricultural Outlook Board.

USDA's National Agricultural Statistics Service (NASS) September *Crop Production* report raised the projected 2017/18 corn yield by 0.4 bushels per acre to 169.9 bushels per acre. Corn disappearance is lowered 50 million bushels due to reduced corn used for ethanol, high fructose corn syrup, and starch. Higher ending stocks result in a 10-cent decline in the average price received by farmers to \$3.20 per bushel.

Foreign corn output in 2017/18 is reduced. Serbia (which is not part of the EU) is expected to produce just over half of its corn harvest from a year ago. The reduction in Serbian corn output is expected to provide Ukraine with export opportunities for the EU market. World barley trade may grow with a Russian production surplus and with additional supplies going to Libya to support its growing barley feeding.

## **Domestic Outlook**

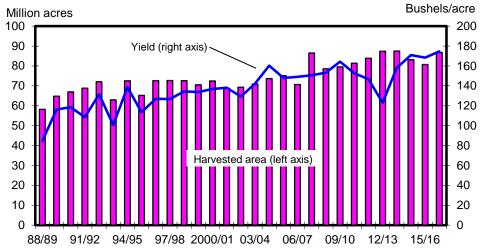
## Corn Crop Raised From Last Month

USDA's National Agricultural Statistics Service (NASS) September *Crop Production* report raised the projected yield of U.S. corn by 0.4 bushels per acre. If realized, U.S. production will reach 14,184 million bushels, 31.5 million bushels higher than last month's projection and the third-highest ever. With a 20-million-bushel decrease in carryin and steady imports, supply is projected at 16,585 million bushels, 11.5 million higher than last month.

## Corn Disappearance Lowered 50 Million Bushels

Food, seed, and industrial (FSI) use was the driver for lower projected disappearance this month, slipping 75 million bushels from last month's forecast to 6,925 million bushels. Of the FSI components, corn used for high fructose corn syrup (HFCS) is lowered 30 million bushels to 460 million; starch is lowered 20 million bushels to 235 million, both based on reductions carried through from the current crop year. Corn for fuel ethanol was lowered 25 million to 5,475 million bushels, also reflecting current year trends and reduced export prospects going forward in light of a tariff imposed on U.S. ethanol imports by Brazil, a major buyer. The tariff is raised to 20 percent for shipments over the tariff rate quota (TRQ) of 160 million gallons within the year, roughly equal to less than 2-months of total export shipments to all destinations at current levels.

Figure 1 U.S. corn harvested area and yield

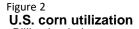


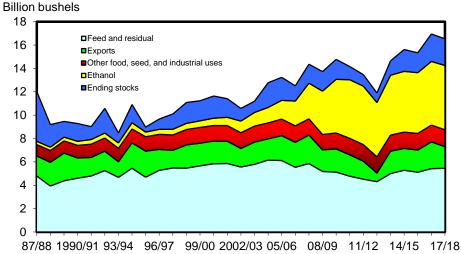
Sources: USDA, National Agricultural Statistics Service, *Quick Stats* and USDA, World Agricultural Outlook Board, *WASDE*.

Projected corn feed and residual use is increased 25 million bushels to 5,475 million based on a larger crop and lower forecast prices. Carryout is projected at 2,335 million bushels, up 61.5 million from last month, resulting in a stocks-to-use ratio of 16.4, compared with 15.9 in the previous month.

#### Corn Price for 2017/18 Lowered 10 Cents

The projected range for the average corn price received by producers is lowered 10 cents on both ends to \$2.80 to \$3.60 per bushel based on the increase in production and stocks and recent trends in the futures markets. The midpoint price is projected at \$3.20 per bushel, and if realized would be the lowest since the 2006 crop.





Note: Marketing years 2016/17 and 2017/18 are projected. Source: USDA, World Agricultural Outlook Board, *WASDE*.

## Changes in the 2016/17 Balance Sheet

Projected corn used for HFCS is lowered 20 million bushels this month to 460 million bushels based on year-to-date pace. Low world sugar prices and adequate supplies have reduced demand for HFCS both in major export markets such as Mexico and domestically. Corn for starch is lowered 15 million bushels to 235 million, also based on the current year's pace. Corn for ethanol is lowered 15 million bushels to 5,435 million, reflecting NASS-reported grain crushings to date and Energy Information Administration (EIA) weekly production data during the month of August.

Projected U.S. corn exports for 2016/17 are raised 70 million bushels to 2,295 this month based on stronger-than-expected August inspections. As a result of these balance sheet changes, 2016/17 ending stocks are reduced 20 million bushels to 2,350 million, for a stocks-to-use ratio of 16.1, compared with 16.3 in last month's forecast.

#### Feed and Residual Use

On a September-August basis, 2017/18 U.S. feed and residual use for the four feed grains plus wheat is projected at 149.0 million tons, up from last month's forecast of 148.3 million and 2.6 million higher than the estimate for 2016/17. Corn is estimated to account for 93 percent of feed and residual use in 2017/18, compared with 94 percent in 2016/17.

The projected index of grain consuming animal units (GCAU) in 2017/18 is 98.04 million units, up from 97.64 million last month and 2.1 million higher than the 95.91 million units estimated for 2016/17. Feed and residual use per GCAU in 2017/18 is estimated at 1.52 million tons, unchanged from last month but down fractionally from 2016/17. In the index components, GCAUs are raised this month for dairy cows and heifers and turkeys.

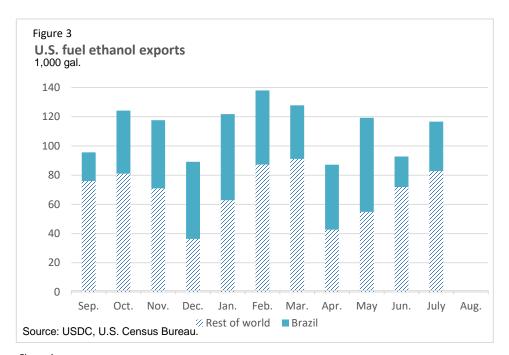
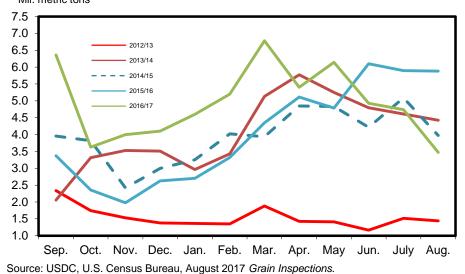


Figure 4

Monthly U.S. corn exports

Mil. metric tons



#### Source. 05DC, 0.5. Cerisus Bureau, August 2017 Orain Inspections

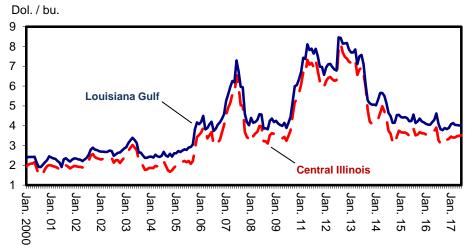
#### Sorghum Yield Raised for New Crop

NASS's *Crop Production* report for September forecast the U.S. sorghum yield 0.2 bushels per acre higher at 69.8 bushels, raising the projected harvest 1.3 million bushels to 370.7 million. With a carryin reduction of 24.2 million bushels, supplies are projected at 399.4 million bushels, the lowest level since 2012. The lower supply is carried through the balance sheet, reducing ending stocks to 29.4 million bushels.

For 2016/17, U.S. sorghum imports are projected up 0.8 million bushels based on Census Bureau trade data through July. Supplies are forecast at 518.7 million bushels. Total disappearance is raised 25 million bushels to 370 million on a 5-million-bushel increase in sorghum used for ethanol based on NASS *Grain Crushings and Co-Products Production* report data. Sorghum grind for ethanol was strong in July. Exports are forecast 20 million bushels higher on recent Census Bureau data and export inspections data through August.

These balance sheet changes result in a 24.2-million-bushel decline in projected carryout to 28.7 million bushels.

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.

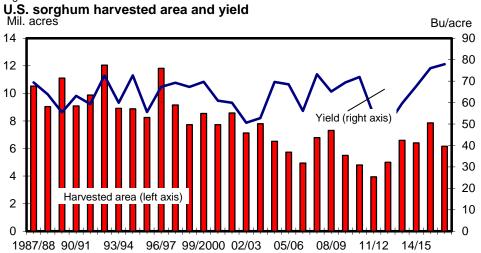
## Sorghum Price Raised for Old Crop

The projected average price received by sorghum farmers in 2016/17 was raised 10 cents on each end of the range to \$2.80 to \$2.90 per bushel for a midpoint pf \$2.85 per bushel.

#### **Barley and Oats**

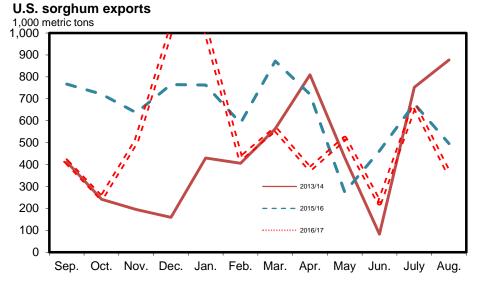
Both the barley and oats balance sheets are unchanged this month. The forecast average price received by producers for 2017/18 barley is lowered 70 cents on the high and low ends of the range to \$5.20 and \$4.20 per bushel for a midpoint forecast of \$4.70 per bushel. The movement is caused by recent declines in the malt barley market, which accounts for most barley sales. The projected 2017/18 oats price is lowered 10 cents on both the low and high ends of the range to \$2.25 to \$2.75 per bushel, for a midpoint of \$2.50 per bushel, down 10 cents from the previous forecast. The price decrease reflects recent market activity.

Figure 6



Sources: USDA, National Agricultural Statistics Service, QuickStats and USDA, World Agricultural Outlook Board, WASDE.

Figure 7



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

## **International Outlook**

USDA's 2017/18 forecast for foreign coarse grain production is raised 1.5 million tons in September to 942.7 million. Higher projected production for barley (up globally by 1.8 million tons, mainly in *Russia* and *Canada*)), oats (up 0.7 million tons, mainly in *Canada*), and mixed grains (up 0.6 million tons in the *European Union (EU)*) more than offset a reduction in corn output.

#### Ukraine to Supplant Serbia for Corn Exports to EU Countries

Global corn production is projected down 0.8 million tons, while foreign corn output is reduced by double that amount, or 1.6 million tons, as U.S. corn output is projected higher (see domestic section of the report).

Extensive drought and high temperatures during the corn reproductive period harmed the crop in many fields in northern *Serbia*, often to the point of no return. Fields with parched corn plants at less than 2 feet high, often affected by mold with no or tiny cobs, most likely will not be harvested. Both corn area and yield in Serbia are sharply reduced this month, and the country is expected to produce just over half of its harvest from a year ago. Crop losses are expected to limit Serbian trade prospects, cutting projected exports by 1.5 million tons (60 percent) to 0.7 million, the lowest level since 2012.

The reduction in Serbian corn output is expected to give *Ukraine* additional opportunities in the *EU* market. Serbian corn exports go almost exclusively to the European Union, which maintains strong and growing demand for imported corn. The EU is likely to replace Serbian corn with increased imports from Ukraine, which in the last 6 years became the dominant corn supplier to the region, with market share exceeding 60 percent.

Consequently, despite a 1.0-million-ton decline in Ukrainian corn production prospects this month, as yield prospects are likely curtailed by excessively dry and hot weather during August, Ukraine's exports are projected higher by 0.5 million tons – rather than being reduced – owing to the additional European demand.

Figure 8: Ukraine dominates European Union corn imports

## Million tons 18 16 14 12 10 8 6 4 2 0 2010 2011 2012 2013 2014 2015 2016 ■Ukraine ■Serbia ■Brazil ■Others

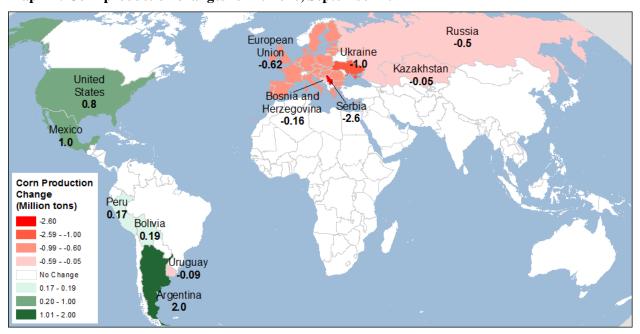
#### i iguit of extrame dominates European emon

Some of the reduced Serbian exports to the EU will likely be replaced by *Brazil*, whose corn exports are boosted 1.0 million tons this month as the current record-high pace of shipments is expected to continue. The expected massive harvest of both major Brazilian crops—soybeans and corn—pose a challenge to its storage capacities. Farmers prefer to use the existing permanent storage for soybeans as they wait for prices to rebound, while corn is either stored in silo bags or simply piled up outdoors. Given that the next soybean harvest arrives in January, farmers strive to sell corn as soon as possible amid declining prices.

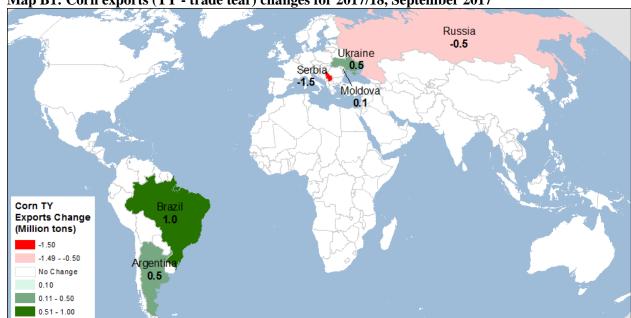
Corn planting in *Argentina* is underway and will last through the end of November. Soil moisture is reported to be excellent, and unlike soybean farmers, corn farmers are enjoying zero export taxes on this crop, which also supports an area increase. Corn area is projected up 0.3 million hectares to a record 5.2 million, with a 2.0-million-ton increase in 2017/18 output to a record 42.0 million tons. The better 2017/18 crop outlook for Argentina is partially offset this month by a reduction for the **Russian** corn crop, forecast down 0.5 tons to 16.0 million. Russian crop losses are restricting its trade prospects as the country is striving to increase its market share, while Argentine corn exports are expected to expand further, reaching 28.5 million tons for the local March-February marketing year (28.0 million tons for the October-September international trade year). Larger planted area for corn and favorable weather boost corn prospects in *Mexico*. Around 90 percent of Mexico's corn production is white corn, and with large supplies held by competing exporters such as South Africa, Mexican corn trade is not expected to change. The additional corn supplies are expected to be used for feeding and stocked for future use.

U.S. 2016/17 October-September trade year export prospects for corn are raised 0.5 million tons to 55.5 million tons based on the pace of recent shipments. Census data for October 2016 through July 2017 and a modest September shipment pace are assumed to reach the increased trade year export forecast. The 2016/17 September-August local marketing year U.S. corn exports are done, but the Census data for August are not yet available. Based on August grain inspections, U.S. corn exports for 2016/17 are raised 1.8 million tons.

For additional information on this month's changes in corn production and exports, see maps A1 and B1.



Map A1: Corn production changes for 2017/18, September 2017



Map B1: Corn exports (TY - trade tear) changes for 2017/18, September 2017

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

### World Barley Trade May Grow With Russian Production Surplus

Driven by the higher expected crop for *Russia*, global barley output for 2017/18 is forecast up 1.8 tons this month to 141.9 million, though it's still about 6.0 million tons lower than a year ago.

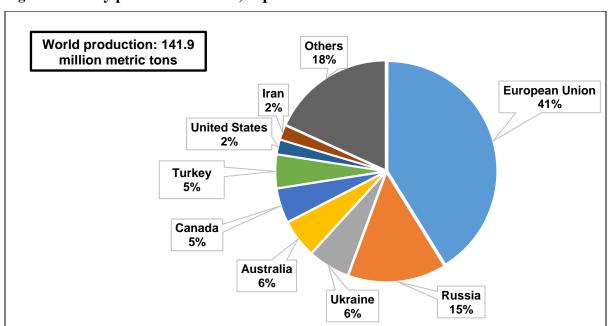


Figure 9: Barley production shares, September 2017/18

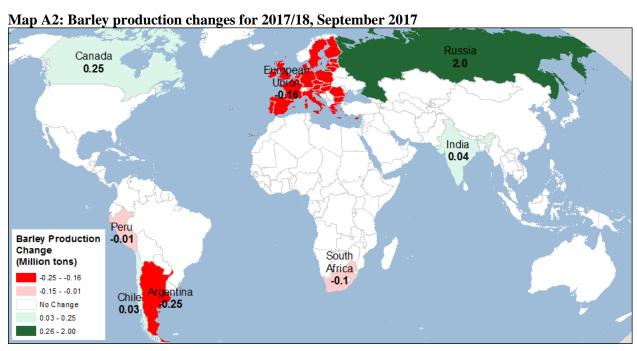
**Russian** barley production for the 2017/18 crop is forecast up 2.0 tons this month to 20.5 million—17 percent higher than in 2016/17. The barley crop in Russia is planted all over the country, with a large portion being cultivated in the Siberian part of the country. More than 80 percent of the crop has been already harvested, and the latest accumulated yield is 20.5 percent higher than a year ago. The barley yield trend in Russia is virtually flat as there are few investments going into development of this crop. It appears that this year's high barley yields are mostly weather-driven.

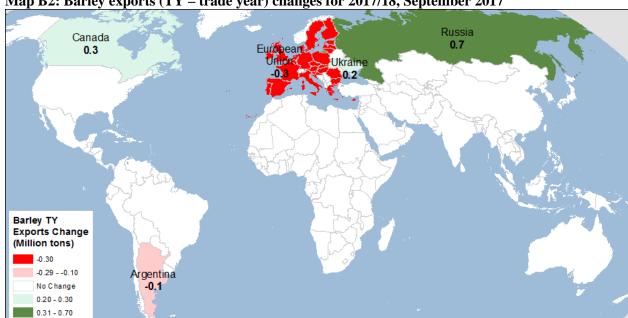
Russia habitually exports 20-30 percent of its barley supplies, mainly to the countries of the Middle East. With additional supplies, Russian barley exports are projected 0.7 million tons higher (for both the October-September international trade year and July-June local marketing year) and are expected to go to Libya to support its growing barley feeding.

Libyan barley use for feeding and barley imports are forecast higher this month for both 2016/17 and 2017/18. For 2016/17, they are raised by 0.4 million tons, and for 2017/18, both feeding and imports are up 0.6 million tons. *Ukraine* and the *European Union*, in addition to Russia, are the major barley suppliers to Libya. And since both barley output and exports for the EU are trimmed this month, higher demand for barley in Libya is expected to drive up Ukrainian barley export prospects by 0.2 million tons.

For *Canada*, 2017/18 production is forecast 0.3 million tons higher to 7.3 million, although 8.8 million lower than in 2016/17. The increase is based on a higher reported sown area more than offsetting a reduction in yield. As a consequence, new-crop exports are projected at 5.8 million tons, up 0.3 million tons from last month, although 3.5 million tons lower than the 2016/17 forecast of 9.3 million tons. The better 2017/18 crop outlook for Canada is fully offset this month by a reduction for the Argentina barley crop, forecast down 0.3 million tons to 2.8 million due to area reduction.

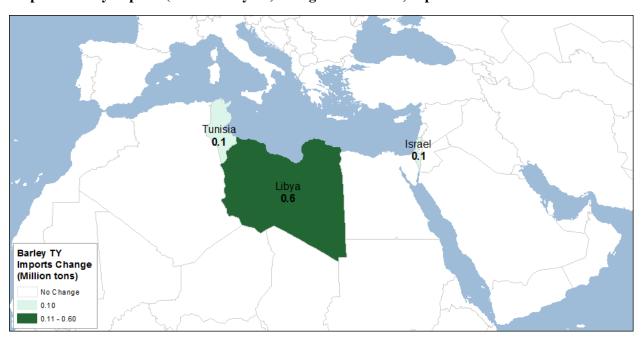
For additional information on this month's changes in barley production and trade (both exports and imports), see maps A2 and B2-B3.





Map B2: Barley exports (TY - trade year) changes for 2017/18, September 2017

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



Map B3: Barley imports (TY - trade year) changes for 2017/18, September 2017

### Chinese Demand for Sorghum Remains Robust

For the last several years, *China* has been the world's largest sorghum importer, with the *United States* as its primary supplier. Recently, China stepped up sorghum purchases in the United States, driven by a jump in estimated import margins in South China. Chinese sorghum imports for the 2016/17 October-September international trade year are forecast 0.3 million tons higher this month to 5.0 million, due to expectations of larger imports in August and September 2017. Consequently, *U.S.* sorghum exports for the same period are raised 0.3 million tons to 6.1 million, as China is by far the primary destination for U.S. sorghum exports.

#### Larger Production of Oats in Canada and Mixed Grains in the EU To Be Used Domestically

Global oats production for 2017/18 is forecast 0.7 million tons higher this month to 23.0 million. For *Canada*, production is forecast 0.5 tons higher to 3.7 million. The increase is based on higher reported sown area. The increase is expected to be utilized domestically and will not affect Canadian oats exports of 1.8 million tons.

Mixed grains output in the *European Union* is forecast 0.5 million tons higher this month to 15.9 million. In *Poland*, mixed grains area is reported to be higher than expected. Presumably, the additional output will be used for feeding within the country.

## **Contacts and Links**

#### **Contact Information**

Tom Capehart (domestic), (202)-694-5313, tcapehart@ers.usda.gov Olga Liefert, (international), (202)-694-5155, oliefert@ers.usda.gov

#### **Subscription Information**

Subscribe to ERS e-mail notification service at

http://www.ers.usda.gov/subscribe-to-ers-e-newsletters.aspx to receive timely notification of newsletter availability. Printed copies can be purchased from the USDA Order Desk by calling 1-800-363-2068 (specify the issue number)

To order printed copies of the five field crop newsletters—cotton and wool, feed, rice, oil crops, and wheat—as a series, specify series SUB-COR-4043

#### Data

<u>Feed Grains Database</u> 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

ERS Corn Topic page

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and, where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

#### E mail Notification

Readers of ERS outlook reports have two ways they can receive an e-mail notice about release of reports and associated data.

- Receive timely notification (soon after the report is posted on the web) via USDA's Economics, Statistics and Market Information System (which is housed at Cornell University's Mann Library). Go to http://usda.mannlib.cornell.edu/ MannUsda/aboutEmailService.do and follow the instructions to receive email notices about ERS, Agricultural Marketing Service. National Agricultural Statistics Service, and World Agricultural Outlook Board products
- Receive weekly notification (on Friday afternoon) via the ERS website. Go to here and follow the instructions to receive notices about ERS outlook reports, Amber Waves magazine, and other reports and data products on specific topics

Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 9/14/2017

Commodi	ity, market	vear,	Beginning		•	Total	Food, seed, and industrial	Feed and residual		Total disappear-	Ending	price 2/ (dollars per
and quart	er 1/		stocks	Production	Imports	supply	use	use	Exports	ance	stocks	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	1,691	2,275	548	4,514	12,386	3.25
		Dec-Feb	12,386		12	12,398	1,710	1,529	537	3,777	8,621	3.39
		Mar-May	8,621		17	8,638	1,747	976	689	3,413	5,225	3.46
		Mkt yr	1,737	15,148	55	16,940	6,870	5,425	2,295	14,590	2,350	3.30-3.40
	2017/18	Mkt yr	2,350	14,184	50	16,585	6,925	5,475	1,850	14,250	2,335	2.80-3.60
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
J		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	3.77	90.79	127.62	180.53	2.69
		Mar-May	180.53		0.00	180.53	35.33	2.23	57.48	95.03	85.50	2.77
		Mkt yr	36.63	480.26	1.80	518.69	115.00	130.00	245.00	490.00	28.69	2.80-2.90
	2017/18	Mkt yr	28.69	370.67		399.36	100.00	60.00	210.00	370.00	29.36	2.50-3.30

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 9/14/2017

	dity, market	year,	Beginning	Production	Imports		Food, seed, and industrial	Feed and residual use	Exports	Total disappear- ance	Ending stocks	Farm price 2/ (dollars per bushel)
and qua Barley		Jun-Aug	82	182	7	supply 271	use 39	48	4	91	180	5.69
Бапеу	2014/13	Sep-Nov	180	102	, 5	184	38	-14	4	28	156	5.25
		Dec-Feb	156		6	163	37	5	3	44	118	5.23
		Mar-May	118		6	124	37	4	4	45	79	4.86
		Mkt yr	82	182	24	287	152	43	14	209	79 79	5.30
		WIKE YI	02	102	24	201	132	43	14	209	13	5.50
	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	32	1	73	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	37	1	2	40	108	4.96
		Mkt yr	102	199	10	311	153	46	4	203	108	4.96
	2017/18	Mkt yr	108	140	15	263	153	35	5	193	70	4.20-5.20
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	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	44	1	64	79	1.87
		Sep-Nov	79		28	106	19	11	1	31	75	2.03
		Dec-Feb	75		24	100	18	18	1	37	63	2.35
		Mar-May	63		18	81	23	4	1	29	52	2.42
		Mkt yr	57	65	90	212	78	78	3	159	52	2.06
	2017/18	Mkt yr	52	54	100	206	80	90	2	172	34	2.25-2.75

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.

Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Data run: 9/13/2017

<sup>1/</sup> Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year.

<sup>2/</sup> 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.

Market ye		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	59.7	-2.9	56.8		
	Q2 Dec-Feb	36.5	-0.2	0.2	0.3	36.9	0.1	37.0		
	Q3 Mar-May	23.2	-0.1	0.0	0.2	23.3	-1.2	22.1		
	Q4 Jun-Aug	14.8	-1.1	0.7	0.7	15.2	7.3	22.5		
	MY Sep-Aug	129.9	2.7	1.0	1.5	135.1	3.2	138.3	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	24.8	0.1	0.0	0.1	25.0	-1.7	23.3		
	MY Sep-Aug	137.8	3.3	1.0	1.3	143.4	3.0	146.4	95.9	1.5
2017/18	MY Sep-Aug	139.1	1.5	1.1	1.6	143.2	5.7	149.0	98.0	1.5

<sup>1/</sup> 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, 9/14/2017

Table 3C	asn feed gr	ain prices,	9/14/2017							
	Corn	, No. 2 yell	ow,	Corn	, No. 2 yell	ow,	Sorghum, No. 2 yellow,			
Mkt year	(	Central IL			ulf ports, La		Gı	ulf ports, L	4	
and	(dolla	rs per bus	hel)	(dolla	ars per bus	hel)	(dollars per cwt)			
month 1/	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	
Sep	3.16	3.55	3.09	4.14	4.22	3.78	7.91	8.08		
Oct	3.09	3.67	3.27	4.15	4.36	3.88	8.52	8.23		
Nov	3.45	3.62	3.28	4.54	4.22	3.83	9.04	7.89		
Dec	3.75	3.62	3.34	4.55	4.17	3.88	9.85			
Jan	3.67	3.55	3.45	4.44	4.09	4.07	10.41			
Feb	3.65	3.56	3.51	4.41	4.06	4.14	10.70			
Mar	3.66	3.54	3.40	4.43	4.05	4.04				
Apr	3.59	3.61	3.41	4.38	4.17	3.98	9.97			
May	3.49	3.74	3.47	4.23	4.30	4.03	7.44			
Jun	3.52	3.91	3.49	4.24	4.62	4.01			7.56	
Jul	3.85	3.28	3.51	4.56	4.11	4.00				
Aug	3.51	3.09	3.27	4.14	3.82	3.77	8.09			
Mkt year	3.53	3.56	3.37	4.35	4.18	3.95	9.10	8.07	7.56	
	Barle	y, No. 2 fe	ed,	Barley	, No. 3 ma	lting,	Oats, N	o. 2 white	neavy,	
	Mini	neapolis, M	1N	Min	neapolis, N	ΛN	Min	neapolis, N	/N	
	(dolla	ırs per bus	hel)	(dolla	ars per bus	hel)	(dolla	rs per bus	hel)	
•	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		4.95			2.70	2.29		
Oct	2.57	2.00		4.95			2.58	2.67		
Nov	2.60	2.00					2.67	2.84		
Dec	2.60	2.00					2.64	2.92		
Jan	2.58	2.00					2.60	2.97		
Feb	2.50	2.00					2.60	3.07		
Mar	2.46	2.02			4.70		2.43	2.90		
Apr	2.45	2.05					2.49	2.86		
May	2.44	2.05					2.49	2.88		
Mkt year	2.52	2.07		4.95	4.70		2.63	2.74		

<sup>1/</sup> 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.

Data run: 9/13/2017

Source: USDA, Agricultural Marketing Service, http://marketnews.usda.gov/portal/lg.

Table 4--Selected feed and feed byproduct prices (dollars per ton), 9/14/2017

Mkt year	h	ybean meal igh protein, tral Illinois,		4	onseed me 1% solvent, emphis, TN	,		n gluten fee 1% protein, Midwest	d,		n gluten me: 0% protein, Midwest	al,
1/	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17
Oct	381.50	327.97	323.26	346.88	292.50	241.88	90.13	96.00	77.00	549.38	509.38	466.13
Nov	441.40	308.60	322.42	313.13	291.88	221.00	105.13	109.63	83.50	581.88	477.50	477.50
Dec	431.74	289.78	321.03	334.38	265.00	217.50	143.30	113.13	92.83	613.50	482.25	501.67
Jan	380.03	279.57	332.34	313.75	248.75	223.50	135.25	109.63	97.50	632.50	452.50	502.50
Feb	370.39	273.61	334.32	302.50	238.13	221.88	117.25	102.38	88.13	631.25	457.50	516.50
Mar	357.83	276.23	320.34	310.50	216.50	210.63	107.20	87.00	87.13	613.00	445.50	505.63
Apr	336.61	303.81	305.67	288.13	207.50	195.00	83.13	73.25	75.00	575.63	434.00	501.13
May	320.23	376.36	293.68	274.38	242.50	179.50	72.25	87.00	71.00	549.38	464.10	485.30
Jun	335.03	408.58	258.75	281.00	284.00	179.38	74.40	107.13	68.38	571.60	568.13	475.75
Jul	375.48	371.49	326.04	299.38	280.00	200.84	91.25	95.01	71.35	560.00	573.13	467.88
Aug	357.85	340.80	301.05	295.63	280.00	198.50	88.75	90.30	73.10	550.63	507.20	475.50
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	
										Alfalfa	hay,	
	Meat a	and bone m	ieal,	Distille	ers dried gra	ains,	Whe	eat middling	s,	weighted-	average	
_	C	Central US		Cen	tral Illinois,	IL	Kan	sas City, M	0	farm pri	ice 2/	
-	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2015/16	2016/17	
Oct	385.00	291.88	237.50	96.00	123.13	116.25	111.48	105.93	79.43	155.00	135.00	
Nov	383.79	266.25	229.00	113.13	132.63	111.70	106.87	106.53	85.53	147.00	130.00	
Dec	424.22	221.67	211.67	159.30	133.13	104.84	135.83	99.55	101.62	149.00	127.00	
Jan	382.49	200.13	255.60	186.50	132.50	96.30	140.93	104.16	98.25	141.00	126.00	
Feb	370.63	193.75	285.00	187.13	136.63	98.88	124.85	97.89	84.66	137.00	127.00	
Mar	376.00	261.00	284.38	189.50	134.50	98.25	1,118.55	68.64	80.76	139.00	134.00	
Apr	390.63	316.25	266.25	191.00	122.38	99.25	81.93	65.12	58.03	154.00	150.00	
May	368.75	310.10	245.50	178.50	141.10	100.50	64.25	60.72	48.41	146.00	157.00	
Jun	313.50	345.00	248.13	157.50	170.50	105.25	60.27	57.94	60.39	140.00	154.00	
Jul	333.75	381.67	276.25	153.50	149.38	110.63	77.96	61.48	67.10	138.00	152.00	
Aug	388.75	347.00	318.50	115.13	130.90	110.00	92.72	60.61	63.15	137.00		
Sep	344.00	285.63		139.30	127.75		112.67	64.43		136.00		
Mkt yr	371.79 -September	285.03		155.54	136.21		185.69	79.42		158.00	136.00	

<sup>1/</sup> October 1-September 30 except for hay. Simple average of monthly prices for the marketing year except for hay.

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), 9/14/2017

Mkt year a	and qtr 1/	High-fructose corn syrup (HFCS)	Glucose and dextrose	Starch	Alcohol for fuel		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	113.17	88.81	59.93	1,343.08	35.78	49.92	0.00	1,690.67
	Q2 Dec-Feb	106.39	88.16	56.08	1,371.14	36.35	52.33	0.00	1,710.44
	Q3 Mar-May	119.64	96.14	59.72	1,353.63	36.72	54.45	27.20	1,747.49
	MY Sep-Aug	460.00	360.00	235.00	5,435.00	146.00	204.30	29.70	6,870.00
2017/18	MY Sep-Aug	460.00	370.00	235.00	5,475.00	149.00	206.50	29.50	6,925.00

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

Source: Calculated by USDA, Economic Research Service.

Date run: 9/13/2017

<sup>2/</sup> May 1-April 30 marketing year. U.S. season-average price based on monthly price received by farmers weighted by monthly marketings.

Table 6--Wholesale corn milling product and byproduct prices, 9/14/2017

Mkt year and	Corn meal Chicag (dollars p	o, IL	Corn meal New You (dollars p	k, NY	Corn st Midwe (dollars p	st 3/	Dextro Midw (cents per	est	High-fructo syrup (4 Midw (cents per	12%), est
month 1/	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17	2015/16	2016/17
Sep	17.80	16.71	19.47	18.38	14.20	13.21	37.00	39.00	23.25	26.75
Oct	17.96	17.06	19.63	18.73	14.29	13.39	37.00	39.00	23.25	26.75
Nov	17.53	16.89	19.20	18.56	14.95	13.87	37.00	39.00	23.25	26.75
Dec	17.50	16.84	19.17	18.51	14.80	14.23	37.00	39.00	23.25	26.75
Jan	17.42	17.07	19.09	18.74	14.62	14.05	39.00	39.00	26.75	28.25
Feb	17.44	17.13	19.11	18.80	14.35	14.20	39.00	39.00	26.75	28.25
Mar	17.13	17.06	18.92	18.40	14.71	14.41	39.00	39.00	26.75	28.25
Apr	17.70	16.99	19.37	18.58	14.71	14.29	39.00	39.00	26.75	28.25
May	18.21	16.91	19.88	18.58	15.10	14.38	39.00	39.00	26.75	28.25
Jun	18.27	16.89	19.94	18.56	15.40	14.74	39.00	39.00	26.75	28.25
Jul	17.03	16.89	18.70	18.56	15.43	15.04	39.00	39.00	26.75	28.25
Aug	16.64	16.25	18.31	17.92	13.63		39.00	39.00	26.75	28.25
Mkt year 2/	17.55	16.89	19.23	18.53	14.68		38.33	39.00	25.58	27.75

<sup>1/</sup> September-August. Latest month is preliminary.

Date run: 9/13/2017

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 9/14/2017

		2015	5/16	2016	5/17	2017/18
Import and coun	try/region	Mkt year	Jun-Jul	Mkt year	Jun-Jul	Jun-Jul
Oats	Canada	1,378	178	1,508	172	82
	Sweden	62		27		
	Finland	34	18	21		
	All other countries	0	0	0	0	0
	Total 2/	1,475	196	1,556	172	82
Malting barley	Canada	285	39	103	14	16
	All other countries	0	0	17	17	0
	Total 2/	285	39	119	31	16
Other barley 3/	Canada	116	24	89	11	17
	All other countries	4	1	2	1	0
	Total 2/	119	24	90	11	17

<sup>1/</sup> Grain only. Market year (June-May) and market year to date.

Date run: 9/13/2017

<sup>2/</sup> Simple average of monthly prices for the marketing year.

<sup>3/</sup> Bulk-industrial, unmodified.

Source: Milling and Baking News, except for corn starch which is from private industry.

<sup>2/</sup> Totals may not add due to rounding.

<sup>3/</sup> 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.

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 9/14/2017

		20′	14/15	20°	15/16	2016/17
Export an	d country/region	Mkt year	Sep-Jul	Mkt year	Sep-Jul	Sep-Ju
Corn	Japan	12,003	10,935	10,439	9,171	12,701
	Mexico	11,333	10,230	13,337	12,120	12,682
	Colombia	4,371	4,085	4,548	4,266	4,354
	South Korea	3,934	3,587	2,964	2,400	5,526
	Peru	2,555	2,377	2,383	2,042	2,694
	China (Taiwan)	1,839	1,766	2,038	1,584	2,930
	Canada	1,490	1,363	1,014	907	632
	Egypt	1,235	1,082	852	697	323
	Saudi Arabia	1,185	1,112	1,389	1,246	2,067
	Guatemala	852	728	906	811	877
	Costa Rica	774	723	552	493	772
	China (Mainland)	747	747	321	321	737
	Venezuela	710	540	1,155	976	401
	Dominican Republic	607	585	253	219	791
	El Salvador	538	496	631	576	535
	Panama	450	387	392	367	482
	Honduras	428	376	550	513	467
	European Union-27	361	341	413	311	830
	Morocco	298	298	450	397	871
	Jamaica	282	250	283	252	244
	Algeria	239	239	663	520	91
	Nicaragua	191	183	258	226	307
	Iran	138	138	0.095	0.095	0.031
	New Zealand, No Islands	106	106	55	55	12
	Trinidad And Tobago	89	73	92	78	74
	All other countries	666	651	2,349	1,959	3,341
	Total 2/	47,421	43,397	48,288	42,509	54,742
Sorahum	China (Mainland)	8,328	7,485	7,034	6,648	4,575
g	Sub-Saharan Africa	486	457	593	548	398
	Japan	83	83	79	68	225
	Mexico	21	19	625	573	568
	All other countries	17	16	296	293	24
	Total 2/	8,935	8,060	8,626	8,131	5,791
			15/16		16/17	2017/18
		Mkt year	Jun-Jul	Mkt year	Jun-Jul	Jun-Ju
Barley	Mexico	142	19	2	341-341	Juli-Ju
	Canada	52	20	63	9	15
	Morocco	14	20	30	Ŭ	
	China (Taiwan)	7	2	4	0.851	0.837
	All other countries	21	5	26	2	0.007
	Total 2/	235	46	95	12	23

<sup>1/</sup> Grain only. Market year (September-August for corn and sorghum, June-May for barley) and market year to date.

Date run: 9/13/2017

<sup>2/</sup> Totals may not add due to rounding.

Source: U.S. Department of Commerce, Bureau of the Census, Foreign Trade Statistics.