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Economic Research Service

Situation and Outlook

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Feed Outlook

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U.S. Corn Production Increased

The next release is November 14, 2017.

Approved by the World Agricultural Outlook Board.

A 1.9-bushel-per-acre increase in U.S. projected corn yield for 2017/18 raised production nearly 100 million bushels to 14.280 billion. Feed and residual use is raised 25 million bushels and food, seed, and industrial use is raised 10 million. Resulting ending stocks are projected up slightly at 2,340 million bushels. U.S. sorghum production was lowered as higher yields were offset by a reduction in acreage.

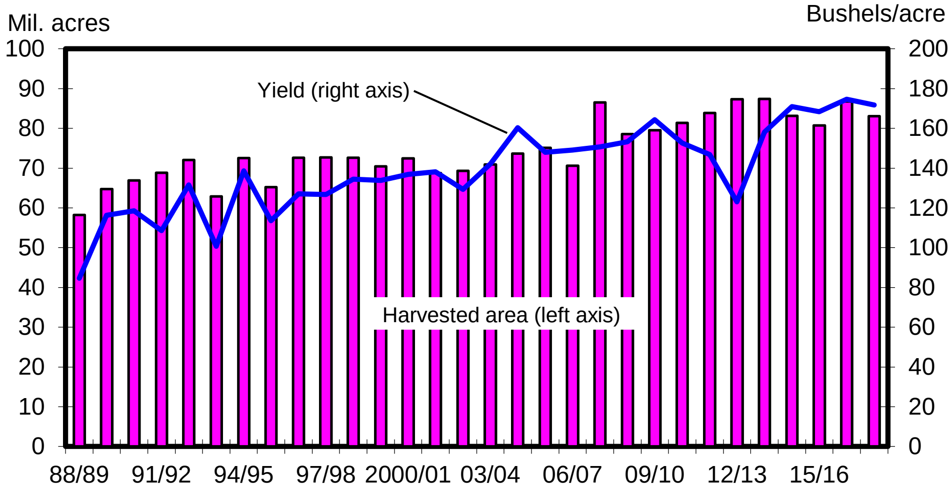
World 2017/18 coarse grain production is projected higher this month. Foreign corn production is up but is almost offset by reduced output of oats, rye, millet, and mixed grain. Trade year basis foreign coarse grain trade is reduced, led by lower Argentine, Russian, and Ukrainian exports. Coarse grain use is boosted for China but reduced for Vietnam.

Domestic Outlook

Corn Crop Raised From Last Month

USDA's National Agricultural Statistics Service (NASS) October *Crop Production* report raised projected yield 1.9 bushels per acre. The combined effect of a 0.4-million decline in estimated harvested acreage will result, if realized, in a U.S. crop of 14,280 million bushels, 95.6 million higher than last month and the second-highest ever. With a 55-million-bushel decrease in carryin and no change in imports, supply is projected at 16,625 million bushels, 40.5 million higher than last month.

Figure 1
U.S. corn harvested area and yield

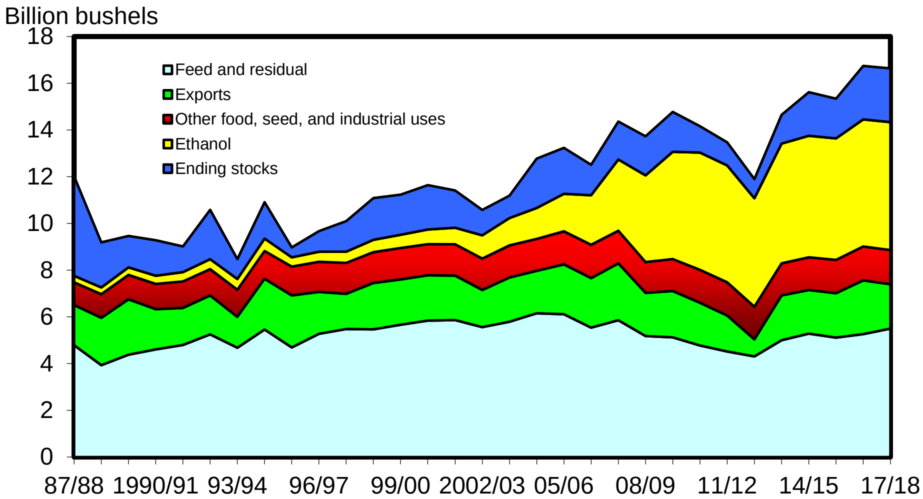


Sources: USDA, National Agricultural Statistics Service, *QuickStats* and USDA, World Agricultural Outlook Board, *WASDE.*

2017/18 Corn Disappearance Raised 35 Million Bushels

Feed and residual use for 2017/18 is projected 25 million bushels higher at 5,500 million as a result of larger supplies. Food, seed, and industrial (FSI) use is raised 10 million bushels this month on higher pace of corn used for glucose and dextrose, now projected at 380 million bushels. Strong demand during 2016/17 is expected to continue into 2017/18. Total FSI use is projected at 6,935 million bushels, 44.6 million higher than 2016/17. Carryout is projected at 2,340 million bushels, up 5.5 million from last month, resulting in a stocks-to-use ratio of 16.4, unchanged from last month.

Figure 2
U.S. corn utilization

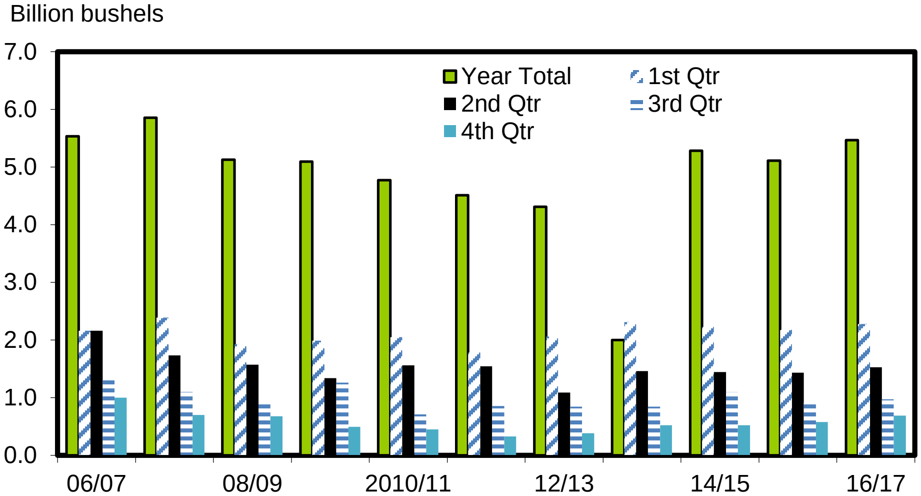


Note: Marketing year 2017/18 is projected.
Source: USDA, World Agricultural Outlook Board, *WASDE.*

Projected Corn Price Steady

The projected range for the average corn price received by producers is unchanged from last month with a range of $2.80 to $3.60 per bushel. The midpoint price is projected at $3.20 per bushel, the lowest since the 2006 crop.

Figure 3
U.S. corn feed and residual use



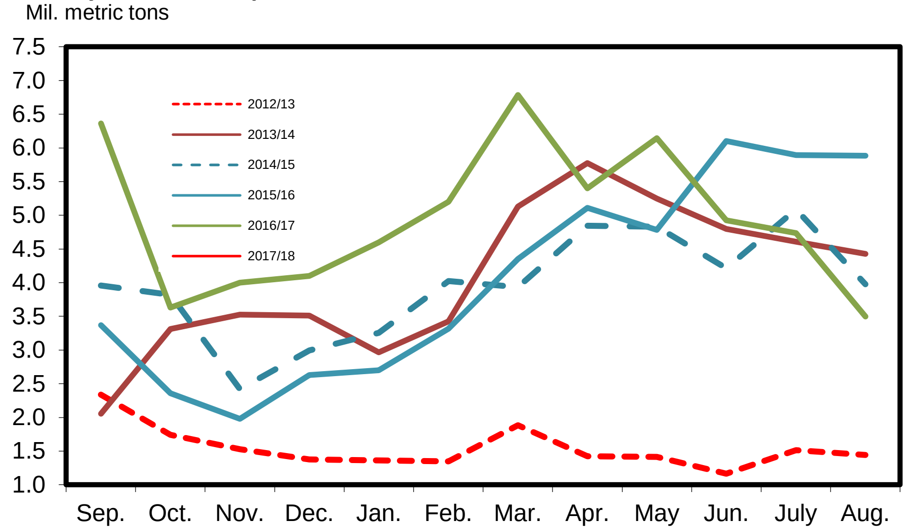
Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, World Agricultural Outlook Board, *WASDE.*

Changes in the 2016/17 Balance Sheet

Food, seed, and industrial use for 2016/17 is projected 20 million bushels higher this month at 6,890 million. Data from the NASS *Grain Crushings and Co-Products Production* report for August provide final marketing year corn for ethanol use of 5,438 million bushels, 3 million above last month's projection. Estimated corn used during the spring of 2016/17 for seeding the 2017/18 crop is revised using objective yield and acreage data from NASS's October *Crop Production* report.

Figure 4

Monthly U.S. corn exports

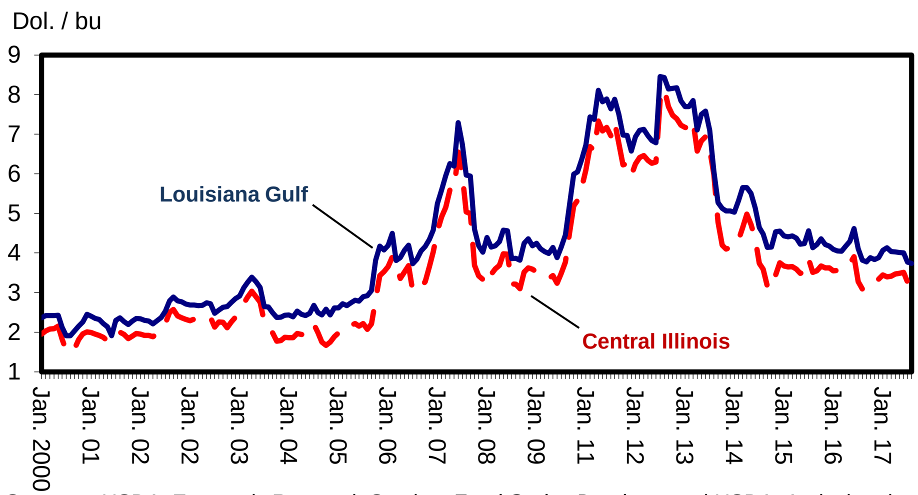


Source: USDC, U.S. Census Bureau, September 2017 *Grain Inspections*.

Fourth quarter feed and residual was 688.1 million bushels, or about 12.6 percent of total feed and residual. This is larger than the recent 5-year average of 8.4 percent for fourth quarter feed and residual share. Fourth quarter feed and residual use may have been higher due to the delayed maturity of the 2017 crop and relatively large stocks on hand as of June 1. Feed and residual for 2016/17 is estimated at 5,464 million bushels, 38.8 million above last month's estimate.

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.

Projected U.S. corn exports for 2016/17 are lowered 2.1 million bushels to 2,293 million this month based on final marketing year data from the U.S. Census Bureau. Total domestic use is 12,354 million bushels, 59.3 million higher than last month's forecast. Ending stocks for 2016/17, reported in the NASS *Grain Stocks* report released September 29, are 2,295 million bushels. Total use is estimated record high at 14,647 million bushels.

Feed and Residual Use for Four Feed Grains and Wheat

On a September-August basis, 2017/18 feed and residual use for the four feed grains plus wheat is projected at 150.0 million metric tons, 1 million higher than last month's projection. Corn feeding is increased. For 2016/17, feed and residual use is lowered 0.1 million tons to 146.3 million on higher corn offset by lower wheat, sorghum, and oats feeding compared with last month. Other categories showed small declines. Feed and residual use per grain consuming animal unit (GCAU) is projected up 0.02 million units for 2017/18, at 1.54 million tons. For 2016/17, feed and residual use per GCAU was unchanged from last month at 1.53 million tons.

Grain Consuming Animal Units Edge up for 2017/18

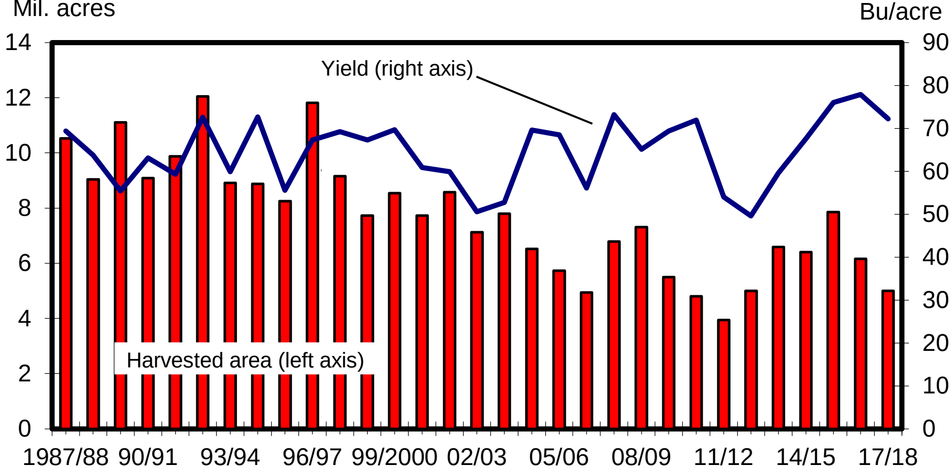
The projected index of grain consuming animal units for 2017/18 is raised 1.9 million units this month to 97.7 million. Larger inventories for beef cattle and hogs were behind the increase. For 2016/17, GCAUs are lowered slightly, ending the year at 95.8 million units.

Sorghum Yield Raised for New Crop

The 2017/18 sorghum yield is projected 2.4 bushels per acre higher at 72.2 bushels, compared with a 5-year average of 66.1 bushels. With a harvested area reduction of 0.3 million acres, production is forecast down 6.2 million bushels to 364.5 million. The combined effect of a carryin increase of 4.8 million bushels results in projected supplies of 398.0 million bushels, the lowest since 2012. With no change in projected disappearance, the lower supply is carried through the balance sheet, lowering ending stocks to 28.0 million bushels.

For 2016/17, U.S. sorghum imports are projected down less than 1 million bushels to1.7 million, based on Census Bureau trade data through August. Supplies are estimated at 518.6 million bushels.

Figure 6
U.S. sorghum harvested area and yield



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

Sorghum Use Unchanged for 2017/18

Projected sorghum use is unchanged for 2017/18 at 370.0 million bushels. The decline in supply is carried through to ending stocks, resulting in a projected 28-million-bushel carryout, 5.5 million below 2016/17.

For 2016/17, disappearance is lowered 4.9 million bushels to 485.1 million on a 0.6-million-bushel increase in sorghum used for ethanol based on NASS *Grain Crushings and Co-Products Production* report data. Total FSI is projected at 115.4 million bushels. Exports are forecast 4.4 million bushels lower to 240.6 million on August Census Bureau data.

The September 29 *Grain Stocks* estimated sorghum stocks in all positions on September 1 at 33.5 million bushels.

Sorghum Price Lowered for Old Crop

The projected average price received for sorghum by farmers in 2016/17 was lowered 6 cents per bushel to $2.79 based on year-end marketing data. The projected price for the new crop has a range of $2.50 to $3.30 for a midpoint of $2.90 per bushel, unchanged from last month's projection.

Barley

Projected new crop barley production is raised 1.7 million bushels to 141.9 million based on area and yield changes reported in NASS's September 29 *Small Grains Summary*. Planted area is projected up 105,000 acres to 2.5 million, and harvested area is raised 8,000 acres to 2.0 million. With imports of 15 million acres, the combined effect results in supplies of 263.3 million bushels. With no change in use, the increase is passed through to carryout of 70.3 million bushels.

For 2016/17, the barley crop is raised 0.6 million bushels on higher estimated area reported in NASS's *Small Grains Summary* report. Both planted and harvested acres were raised 7,000 acres this month, resulting in a crop of 199.9 million bushels. With imports of 9.6 million bushels, the combined effect results in supplies of 311.7 million.

With June 1 stocks known from the *Grain Stocks* report, feed and residual was increased 1.9 million bushels. The increase results in estimated total use of 205.3 million bushels. Estimated ending stocks are down 1.7 million bushels to 106.4 million bushels, based on the *Grain Stocks* report.

The projected 2017/18 average price received by producers was lowered 10 cents on each end for a range of $4.10 to $5.10 per bushel and a midpoint of $4.60 per bushel. Continued weak prices for malting barley were behind the price shift.

Oats

The NASS 2017 *Small Grains Summary* reports a 79,000 decrease in oats harvested acres to 801,000 acres and a decrease of 5,200 acres in planted acres to 2.6 million acres. The combined effect of a 0.7-bushel increase in projected yield to 61.7 bushels results in production of 49.4 million bushels, 4.3 million below last month. Combined with a 2.2-million-bushel decline in carryin and 100 million in imports, supply is projected at 199.7 million bushels, about 12 million below last year.

For 2017/18, total use is reduced 2 million bushels on lower FSI use. Oats food use is indicated lower. The reduction, partially offsetting reduced supply, reduces ending stocks to 29.7 million bushels.

Feed and residual is raised 3.9 million bushels to 81.8 million. FSI is lowered 1.7 million to 76.3 million. With no change in exports, total use is projected at 161.5 million bushels. Ending stocks are lowered 2.2 million bushels to 50.3 million, based on June 1 stocks as reported in NASS's *Grain Stocks* report.

The projected average price received by producers for 2017/18 is unchanged with a range of $2.25 to $2.75 per bushel for a midpoint of $2.50 per bushel. For 2016/17, the price is estimated at $2.06 per bushel, unchanged from last month's projection.

Hay

NASS's October 12 *Crop Production* report forecasts all U.S. hay production in 2017 at 131.9 million tons, down 2 percent from 2016 as lower yields more than offset a slight increase in area. Based on October 1 conditions, the all-hay yield is expected to be 2.46 tons per acre, down from 2.52 tons per acre in 2016. Harvested acres are forecast at 53.5 million acres, slightly above last year.

Production of alfalfa hay and mixtures is forecast at 56.0 million tons, down from the previous forecast and down 4 percent from 2016. Yields are forecast to average 3.27 tons per acre, lower relative to the 3.45 tons per acre producers harvested in 2016.

Other hay area harvest is lower than last year at 36.4 million acres. The October 12 *Crop Production* report indicates that other hay production is down slightly from the August forecast to 75.9 million tons. Yields are down 0.01 tons per acre to 2.08 tons.

Roughage-consuming animal units (RCAUs) in 2017/18 are estimated at 71.4 million, up 0.4 million from last year. Despite the higher RCAUs, the year-to-year decline in expected hay production results in lower hay use per RCAU, forecast at 1.85 tons.

International Outlook

Global coarse grain production in 2017/18 is projected up 2.8 million tons this month to 1,319.4 million, while foreign coarse grain output is up slightly by 0.7 million tons to 943.3 million, though it is still down 21.0 million tons from the year before. The changes in global, foreign, and U.S coarse grain production by type of grain are presented in table A1.

Table A1 - World and U.S. coarse grain production at a glance (2017/18), October 2017

Region or country	Production	Change from previous month	YoY change[1]	Comments
	Million tons			c
Coarse grain production (total)				
World	1,319.4	+2.8	-47.6	
Foreign	943.3	+0.7	-21.0	Partly offsetting changes are made for a number of countries and commodities. See table A2.
United States	376.0	+2.2	-26.6	See section on U.S. domestic output.
World production of coarse grains by type of grain				
CORN				
World	1,038.8	+6.2	-36.5	
Foreign	676.1	+3.7	-14.5	Changes in the SSA[2] countries and Turkey are partly offset by reduced prospects in Russia and Ukraine. See table A2.
United States	362.7	+2.4	-22.0	See section on U.S. domestic output.
BARLEY				
World	142.0	+0.1	-6.0	
Foreign	138.9	+0.1	-4.8	Higher EU[3] output is partly offset by a reduction in Algeria.
United States	3.0	Smaller than 0.05	-1.3	See section on U.S. domestic output.
SORGHUM				
World	60.7	+0.2	-2.4	
Foreign	51.4	+0.4	+0.6	Revision for the SSA[3] countries (mainly for Chad). See table A2.
United States	9.3	-0.2	-2.9	See section on U.S. domestic output.
OATS				
World	22.9	-0.2	-0.8	
Foreign	22.1	-0.1	-0.5	Lower oats output is projected for the EU.[4] See table A2.
United States	0.7	-0.1	-0.2	See section on U.S. domestic output.
RYE				
World	12.5	-0.3	-0.1	
Foreign	12.2	-0.2	No change	Lower rye output is projected for the EU. See table A2.
United States	0.2	-0.1	-0.1	See section on U.S. domestic output.
MILLET				
World/Foreign	26.6	-3.0	-2.3	Series revision for Nigeria. See text and table A2.
MIXED GRAIN				
World/Foreign	16.0	-0.3	+0.5	Lower production projected for the EU. See table A2.

[1]YoY: year over year changes. [2]SSA: Sub-Saharan Africa. [3]European Union.

For changes and notes by country, see table A2.

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

For a glance at information and specific causes for the revisions of this month's changes in coarse grain production by country and type of grain, see table A2. See map A for changes in corn production.

Table A2 - Coarse grain foreign production by country at a glance, October 2017

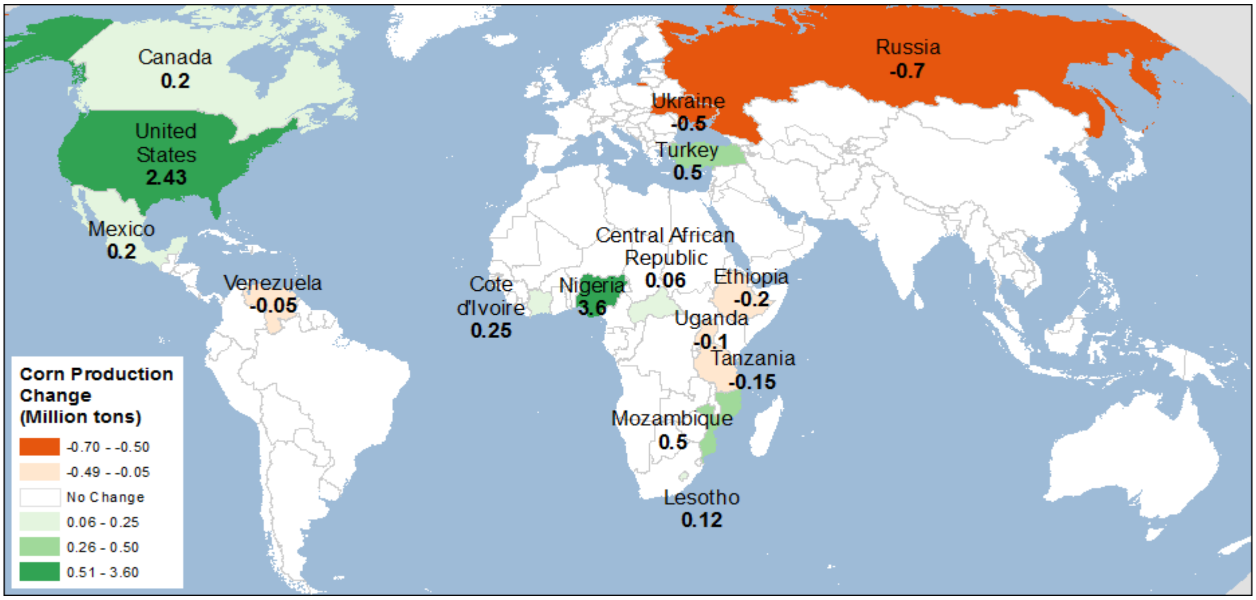
	Type of crop	Crop year	Production	Change in forecast[1]	YoY[2] change	Comments
			Million tons			
Coarse grain production by country and by type of grain (2017/18)						
SUB-SAHARAN AFRICA						
	Corn	*Oct-Sep*	**67.8**	**+4.1**	**-1.5**	Following a biannual review for the 58 Sub-Saharan Africa countries, area and production for **Nigeria** are significantly revised (see the text). Sizeable revisions are also made for **Mozambique**, **Ethiopia**, **Tanzania**, **Uganda**, and many other SSA countries.
	Sorghum	*Oct-Sep*	**26.0**	**+0.3**	**-1.8**	A result of a biannual review and updates for past years for SSA countries. Sorghum output in **Chad is projected higher.** Production is also revised for many other SSA countries.
	Millet	*Oct-Sep*	**12.2**	**-3.0**	**-1.4**	Lower area and output are projected for **Nigeria** (see the text)
TURKEY						
	Corn	*Sep-Aug*	**6.0**	**+0.5**	**+0.5**	Despite significant heat during the reproductive period, better corn yields are projected with larger irrigated corn area. The heat did not last sufficiently long to damage irrigated crop.
RUSSIA						
	Corn	*Oct-Sep*	**15.3**	**-0.7**	**No change**	Harvest report indicates lower-than-expected yields. Corn suffered from high temperatures and dryness.
UKRAINE						
	Corn	*Oct-Sep*	**27.0**	**-0.5**	**-1.0**	Rain deficit and high temperatures in September affected corn yields in Ukraine. Harvest relults to date support the reduction.
EUROPEAN UNION (EU)						
	Corn	*Oct-Sep*	**59.4**	**No change**	**-1.7**	Harvest reports indicate higher **French** corn output that is fully offset by lower **Italian** production.
	Barley	*Jul-Jun*	**58.8**	**+0.3**	**-1.1**	Higher-than-projected yields in the **United Kingdom (UK)**. Small adjustments are made for a number of EU countries.
	Oats	*Jul-Jun*	**8.0**	**-0.1**	**-0.1**	Adjustments based on harvest reports are made for **Spain, Sweden,** and several other countries.
	Rye	*Jul-Jun*	**7.6**	**-0.2**	**+0.1**	Harvest reports indicate lower-than-projected yields mainly in **Spain**, while fractional changes are made for a number of countries in the EU.
	Mixed grain	*Jul-Jun*	**15.7**	**-0.3**	**+0.6**	Harvest reports indicate lower-than-projected yields mainly in **Spain**, while fractional changes are made for a number of other EU countries.

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

[2] YoY: year over year changes.

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

Map A – Corn production changes for 2017/18, October 2017

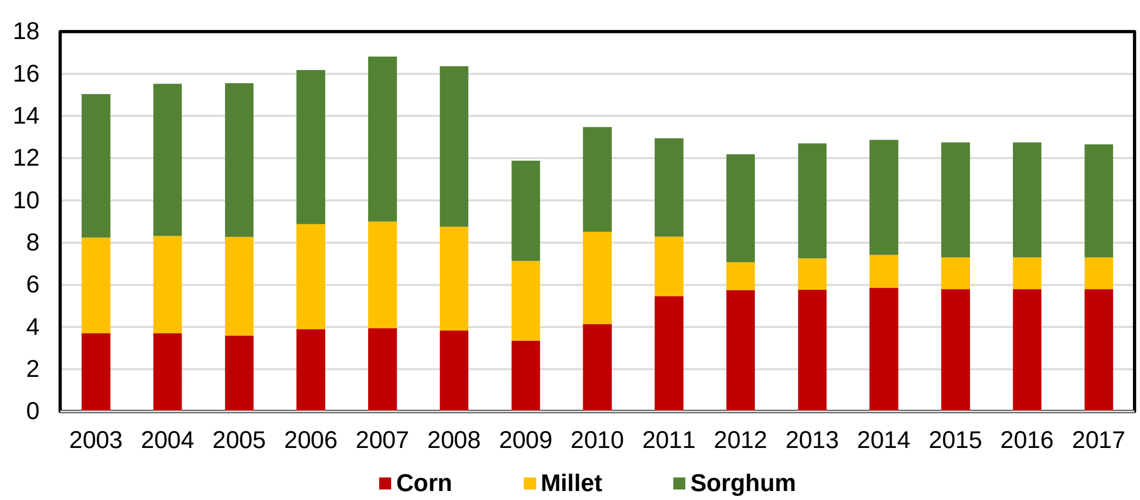


Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution database.

This month's changes in coarse grains, though partly offsetting, are dominated by the revisions for the Sub-Saharan African countries. A biannual review of grain production 2017/18 forecasts and updates for past years was made for each of the 58 Sub-Saharan Africa (SSA) countries maintained by the USDA, Foreign Agricultural Service

Figure 7: Nigerian coarse grain area – corn expands at the expense of millet

Million hectares

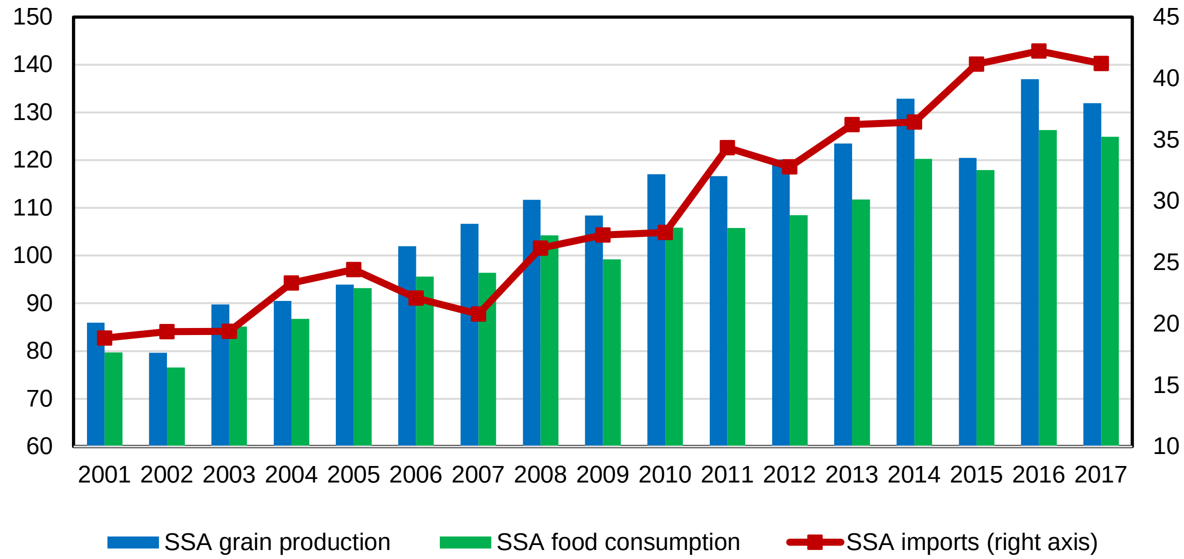


Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

The revision also indicates a bigger drop in yields in 2015/16, a year when coarse grain production in these countries fell by 13 million tons. The drought that year happened in South and Southeast Africa, where in some grain-producing regions precipitation that year was the lowest in 35 years and grain imports soared to partly offset the shortfall. In the following 2016/17 year, the situation was reversed and SSA countries enjoyed record grain output. However, a surge in grain production in 2016/17 did not curb record-high imports. In 2016/17, SSA grain imports became even stronger, pushing food consumption (food, seed, and industrial (FSI) use) of all grains (wheat, rice, corn, sorghum, millet, barley, and oats) to the highest ever aggregate level, projected to stay almost as high in 2017/18. This month, food consumption of all grains in SSA is projected 2.5 million tons higher. (See figure 8.)

Figure 8: Sub-Saharan Africa (SSA) food consumption stays high

Million tons



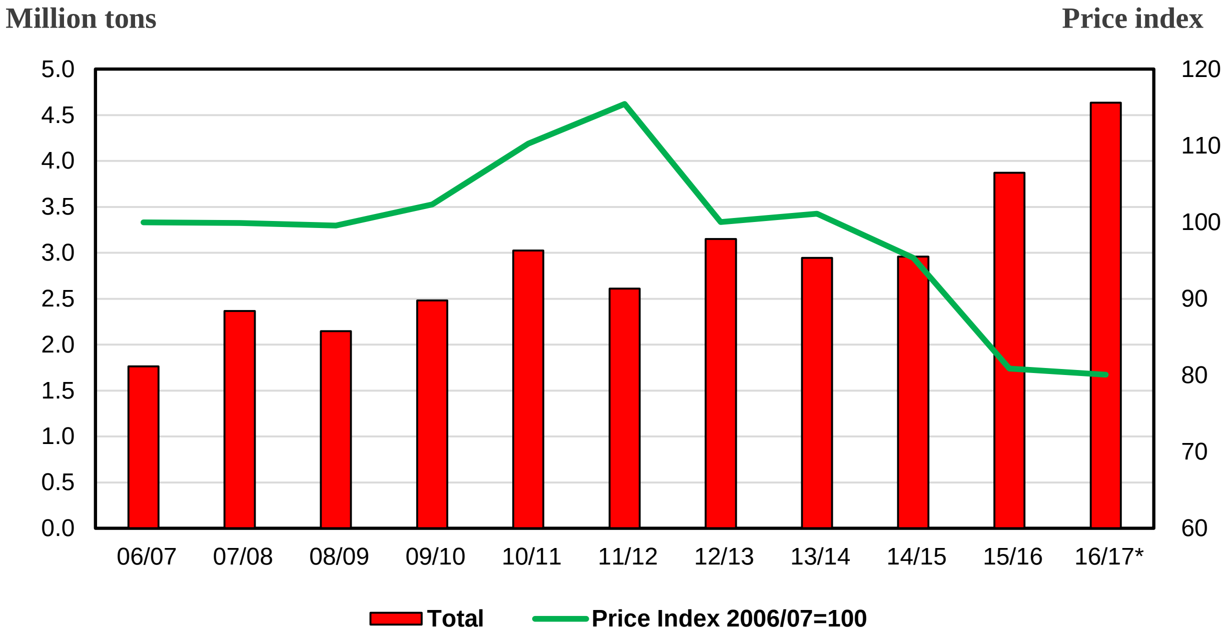
Source: USDA, Foreign Agricultural Service, Production, Supply, and Distribution online database.

Chinese Coarse Grain Use Is Projected Higher

Global coarse grain use in 2017/18 is projected up 4.4 million tons to 1352.2 million. Foreign use projections for many countries are revised this month with many offsetting changes, and foreign use is up 3.6 million tons to 1,025.1 million. Feed use prospects are revised for several countries, reducing foreign feed and residual use 0.8 million tons. However, FSI use for foreign countries in the aggregate is increased (changes to the sum of the difference of local marketing year imports and exports have an effect on calculated global consumption).

The largest change is for China's projected 2017/18 coarse grain use, up 3.5 million tons this month to 259.1 million. Increases are projected for both its FSI use and feed and residual use. After years of support for corn farmers has left China with a substantial stockpile, the government removed price supports for corn production, and corn prices plunged. The government also began to encourage growth of the industrial use of corn by supporting processing plants. As could be expected, the output of corn byproducts, such as starch, glucose, and fructose, has been expanding for the last 2 years, while Chinese exports of corn products have been soaring. Corn FSI use in China is projected higher this month by 2.0 million tons.

Figure 9: China's corn product exports soar as corn prices plunge



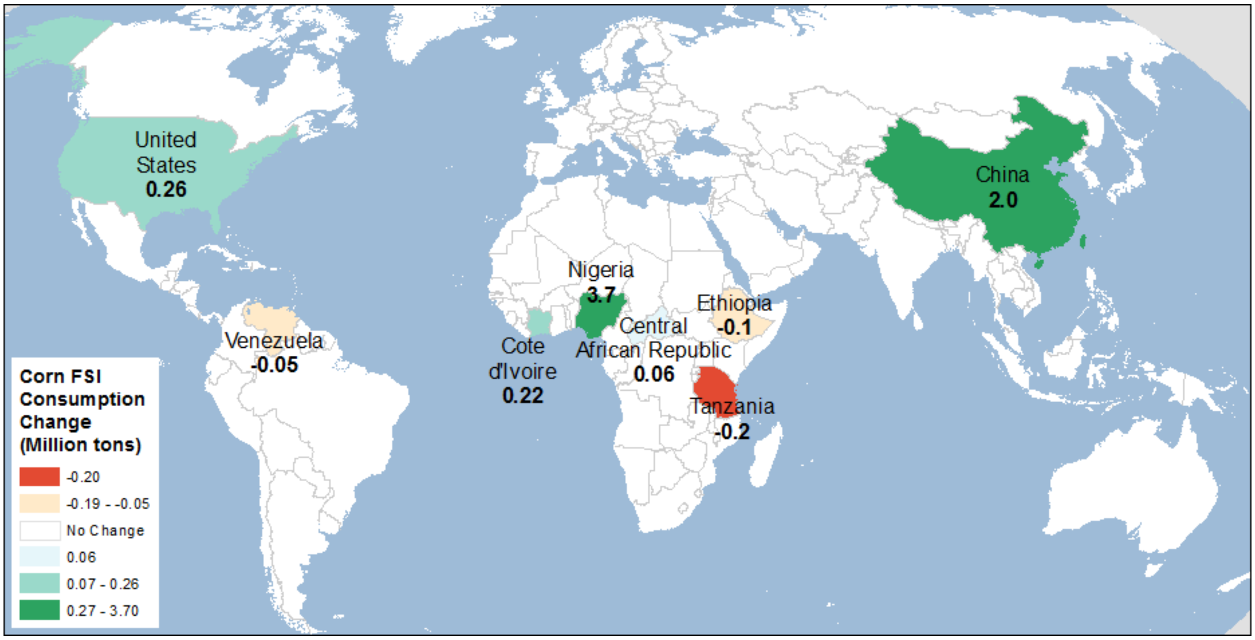
Note: 2016/17 total prorated data to date. Products include starch, glucose/dextrose, fructose, starch residues, citric acid, esters of citric acid, and glutamic acid. * Prorated data.
Source: China Customs, unconverted product weight, Oct-Sep basis.

While corn imports in China are subject to a quota, the country has not restricted imports of barley and sorghum largely destined to the feed market, using them as a substitute for domestically procured inputs in feed rations and reduced imported DDGS (distiller's dried grains with solubles). Barley import prospects are boosted 1.0 million tons, supporting an increase in barley feed use of 1.0 million, while sorghum imports are increased 0.6 million tons and used for both feeding and alcohol production.

Another important change in coarse grain consumption is a projected decline in corn feeding for Vietnam, down 1.0 million tons to 12.0 million. Feed demand has been growing fast in Vietnam, more than doubling in the last 5 years (from 5.3 million tons in 2012 to 12.0 million projected for 2017). The growth has been fueled by expansion of its swine industry, as Vietnam is believed to have exported live swine to neighboring countries, mainly China. Recently China enforced closure of its border with Vietnam, citing quality concerns, which is expected to have partly reduced undocumented imports of live pigs from the country.

For additional information on this month’s changes in corn domestic consumption, see map B.

Map B – Corn FSI consumption changes for 2017/18, August 2017



FSI = food, seed, and industrial use.

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

World Corn Trade Reduced for 2016/17

The international corn trade year (October-September) for 2016/17 ended September 30, but the publication of trade data often lags. However, the published data and the pace of shipments indicate that global corn trade is down 2.6 million tons. The largest reduction is for Argentine corn exports, down 2.5 million tons to 23.5 million, as Argentina slowed down its corn exports to Vietnam. Argentina is the major supplier of corn to Vietnam and bears the effects of reduced feed demand there (see above). Corn exports for Brazil are projected down 0.7 million tons, based on complete data for September 2017, as the country has not accumulated sufficient corn exports to fulfil the forecast, even with record-high exports in August-September. Brazilian 2016/17 local marketing year (March-February) exports are unchanged at 36.0 million. Corn exports are also increased 0.6 million tons for Mexico. There are smaller changes for several other countries.

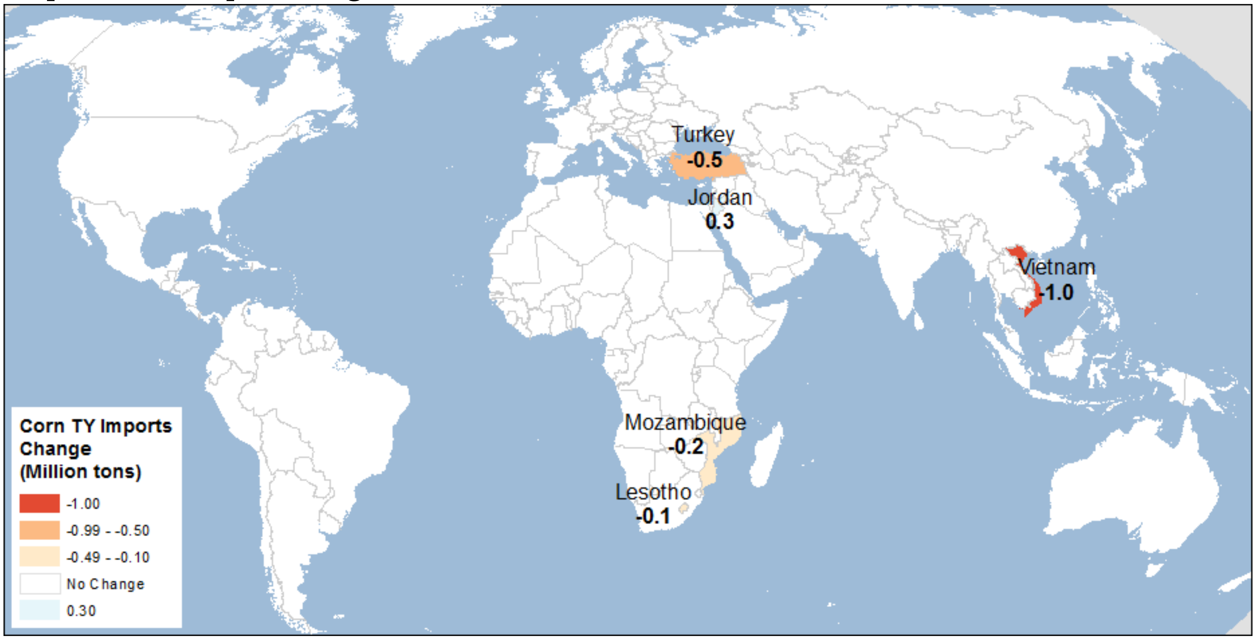
Corn Trade Prospects for 2017/18 Reduced

World corn trade projected for 2017/18 is reduced 1.4 million tons this month to 150.9 million. The largest changes are lower corn imports in Vietnam and a corresponding reduction of exports for Argentina, both reduced by 1.0 million tons. See the above discussion on Vietnamese feed use (in the coarse grain use section) and on Argentine exports in the section on 2016/17 trade. Output-related reductions are made for Russian and Ukrainian corn exports (both down 0.5 million tons). Mexican exports are up 0.6 million tons, reflecting expectations of increasing trade of white corn to African countries (Kenya).

U.S. corn export prospects for 2017/18 are unchanged this month at 47.0 million tons. U.S. export projections for 2017/18 for all other coarse grains are also unchanged.

For changes in corn imports, see map C.

Map C – Corn import changes for 2017/18, October 2017



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

Contacts and Links

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Data

Feed Grains Database is a queryable database that contains monthly, quarterly, and annual data on prices, supply, and use of corn and other feed grains. This includes data published in the monthly Feed Outlook.

Related Websites

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

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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 10/16/2017

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	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	3.26
		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	1,748	972	689	3,409	5,229	3.46
		Jun-Aug	5,229		14	5,243	1,742	688	518	2,948	2,295	3.40
		Mkt yr	1,737	15,148	57	16,942	6,890	5,464	2,293	14,647	2,295	3.36
	2017/18	Mkt yr	2,295	14,280	50	16,625	6,935	5,500	1,850	14,285	2,340	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
		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	35.25	3.10	57.48	95.83	84.71	2.79
		Jun-Aug	84.71		1.73	86.44	25.47	-20.44	47.87	52.90	33.54	3.53
		Mkt yr	36.63	480.26	1.74	518.63	115.41	129.11	240.57	485.10	33.54	2.79
	2017/18	Mkt yr	33.54	364.46		398.00	100.00	60.00	210.00	370.00	28.00	2.50-3.30

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 10/16/2017

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	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	152	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	200	2	304	40	33	1	74	230	4.99
		Sep-Nov	230		2	232	39	0	1	40	193	4.78
		Dec-Feb	193		2	195	37	12	1	50	145	5.04
		Mar-May	145		3	148	37	2	2	41	106	4.96
		Mkt yr	102	200	10	312	153	48	4	205	106	4.96
	2017/18	Jun-Aug	106	142	2	251	40	30	2	71	180	4.52
		Mkt yr	106	142	15	263	153	35	5	193	70	4.10-5.10
Oats	2014/15	Jun-Aug	25	70	27	122	18	30	1	48	74	3.34
		Sep-Nov	74		25	99	18	14	0	32	67	3.16
		Dec-Feb	67		32	99	17	22	0	40	59	3.08
		Mar-May	59		25	84	24	6	1	31	54	2.89
		Mkt yr	25	70	109	204	77	71	2	150	54	3.21
	2015/16	Jun-Aug	54	90	18	161	18	49	0	68	94	2.15
		Sep-Nov	94		26	120	18	19	1	37	83	2.08
		Dec-Feb	83		25	108	17	15	0	33	75	2.09
		Mar-May	75		16	91	23	10	1	34	57	2.11
		Mkt yr	54	90	86	229	77	94	2	172	57	2.12
	2016/17	Jun-Aug	57	65	21	142	19	44	1	64	79	1.87
		Sep-Nov	79		28	106	18	12	1	31	75	2.03
		Dec-Feb	75		24	100	17	18	1	37	63	2.35
		Mar-May	63		18	81	22	8	1	31	50	2.42
		Mkt yr	57	65	90	212	76	82	3	162	50	2.06
	2017/18	Jun-Aug	50	49	19	119	18	28	1	47	72	2.35
		Mkt yr	50	49	100	200	78	90	2	170	30	2.25-2.75

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: 10/16/2017

Table 2--Feed and residual use of wheat and coarse grains, 10/16/2017

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)
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	36.9		
	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	7.2	22.4		
	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	24.7	0.1	0.1	0.2	25.0	-1.6	23.4		
	Q4 Jun-Aug	17.5	-0.5	0.6	0.5	18.1	5.0	23.1		
	MY Sep-Aug	138.8	3.3	1.0	1.2	144.2	2.0	146.3	95.8	1.5
2017/18	MY Sep-Aug	139.7	1.5	1.1	1.8	144.1	5.9	150.0	97.7	1.5

1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year.
Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Table 3--Cash feed grain prices, 10/16/2017

Mkt year and month 1/	Corn, No. 2 yellow, Central IL (dollars per bushel) 2015/16	2016/17	2017/18	Corn, No. 2 yellow, Gulf ports, LA (dollars per bushel) 2015/16	2016/17	2017/18	Sorghum, No. 2 yellow, Gulf ports, LA (dollars per cwt) 2015/16	2016/17
Sep	3.55	3.09	3.15	4.22	3.78	3.74	8.08	
Oct	3.67	3.27		4.36	3.88		8.23	
Nov	3.62	3.28		4.22	3.83		7.89	
Dec	3.62	3.34		4.17	3.88			
Jan	3.55	3.45		4.09	4.07			
Feb	3.56	3.51		4.06	4.14			
Mar	3.54	3.40		4.05	4.04			
Apr	3.61	3.41		4.17	3.98			
May	3.74	3.47		4.30	4.03			
Jun	3.91	3.49		4.62	4.01			7.56
Jul	3.28	3.51		4.11	4.00			
Aug	3.09	3.27		3.82	3.77			
Mkt year	3.56	3.37		4.18	3.95		8.07	7.56

	Barley, No. 2 feed, Minneapolis, MN (dollars per bushel) 2015/16	2016/17	2017/18	Barley, No. 3 malting, Minneapolis, MN (dollars per bushel) 2015/16	2016/17	2017/18	Oats, No. 2 white heavy, Minneapolis, MN (dollars per bushel) 2015/16	2016/17	2017/18
Jun	2.59	2.36	2.05			4.70	2.89	2.58	2.95
Jul	2.70	2.33	2.05			4.67	2.82	2.61	3.17
Aug	2.41	2.08	2.10			4.70	2.63	2.34	2.98
Sep	2.39	1.95	2.10	4.95		4.70	2.70	2.29	2.87
Oct	2.57	2.00		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	

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: 10/13/2017

Table 4--Selected feed and feed byproduct prices (dollars per ton), 10/16/2017

Mkt year and month 1/	Soybean meal, high protein, Central Illinois, IL			Cottonseed meal, 41% solvent, Memphis, TN			Corn gluten feed, 21% protein, Midwest			Corn gluten meal, 60% protein, Midwest		
	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17	2014/15	2015/16	2016/17
Oct	381.50	327.97	323.26	346.88	292.50	241.88	90.13	96.00	77.00	549.38	509.38	466.13
Nov	441.40	308.60	322.42	313.13	291.88	221.00	105.13	109.63	83.50	581.88	477.50	477.50
Dec	431.74	289.78	321.03	334.38	265.00	217.50	143.30	113.13	92.83	613.50	482.25	501.67
Jan	380.03	279.57	332.34	313.75	248.75	223.50	135.25	109.63	97.50	632.50	452.50	502.50
Feb	370.39	273.61	334.32	302.50	238.13	221.88	117.25	102.38	88.13	631.25	457.50	516.50
Mar	357.83	276.23	320.34	310.50	216.50	210.63	107.20	87.00	87.13	613.00	445.50	505.63
Apr	336.61	303.81	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	307.70	293.50	285.00	213.75	95.50	85.38	75.00	525.00	469.38	469.25
Mkt yr	368.48	324.56	312.22	304.43	260.98	208.61	100.29	96.32	79.99	579.48	486.71	487.06

	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO			Alfalfa hay, weighted-average farm price 2/	
	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	147.00
Sep	344.00	285.63	301.88	139.30	127.75	111.63	112.67	64.43	67.48	136.00	
Mkt yr	371.79	285.03	263.31	155.54	136.21	105.29	185.69	79.42	74.57	158.00	136.00

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), 10/16/2017

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
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	27.40	1,747.69
	Q4 Jun-Aug	126.35	97.09	61.18	1,370.17	37.15	47.60	2.10	1,741.64
	MY Sep-Aug	465.54	370.19	236.90	5,438.01	146.00	204.30	29.50	6,890.44
2017/18	MY Sep-Aug	460.00	380.00	235.00	5,475.00	149.00	206.50	29.50	6,935.00

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

Date run: 10/13/2017

Table 6--Wholesale corn milling product and byproduct prices, 10/16/2017

Mkt year and month 1/	Corn meal, yellow, Chicago, IL (dollars per cwt) 2016/17	2017/18	Corn meal, yellow, New York, NY (dollars per cwt) 2016/17	2017/18	Corn starch, Midwest 3/ (dollars per cwt) 2016/17	2017/18	Dextrose, Midwest (cents per pound) 2016/17	2017/18	High-fructose corn syrup (42%), Midwest (cents per pound) 2016/17	2017/18
Sep	16.71	16.01	18.38	17.68	13.21	14.41	39.00	39.00	26.75	28.25
Oct	17.06		18.73		13.39		39.00		26.75	
Nov	16.89		18.56		13.87		39.00		26.75	
Dec	16.84		18.51		14.23		39.00		26.75	
Jan	17.07		18.74		14.05		39.00		28.25	
Feb	17.13		18.80		14.20		39.00		28.25	
Mar	17.06		18.40		14.41		39.00		28.25	
Apr	16.99		18.58		14.29		39.00		28.25	
May	16.91		18.58		14.38		39.00		28.25	
Jun	16.89		18.56		14.74		39.00		28.25	
Jul	16.89		18.56		15.04		39.00		28.25	
Aug	16.25		17.92		14.98		39.00		28.25	
Mkt year 2/	16.89		18.53		14.23		39.00		27.75	

1/ September-August. Latest month is preliminary.
2/ Simple average of monthly prices for the marketing year.
3/ Bulk-industrial, unmodified.
Source: Milling and Baking News, except for corn starch which is from private industry.

Date run: 10/13/2017

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 10/16/2017

Import and country/region		---------- 2015/16 ---------- Mkt year	Jun-Aug	---------- 2016/17 ---------- Mkt year	Jun-Aug	2017/18 Jun-Aug
Oats	Canada	1,378	294	1,508	344	82
	Sweden	62		27		
	Finland	34	18	21	10	
	All other countries	0	0	0	0	0
	Total 2/	1,475	312	1,556	355	82
Malting barley	Canada	285	54	103	17	26
	All other countries	0	0	17	17	0
	Total 2/	285	54	119	34	26
Other barley 3/	Canada	116	33	89	17	27
	All other countries	4	1	2	1	0
	Total 2/	119	34	90	17	27

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: 10/13/2017

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 10/16/2017

Export and country/region		---------- 2015/16 ---------- Mkt year	Sep-Aug	---------- 2016/17 ---------- Mkt year	Sep-Aug
Corn	Mexico	13,337	13,337	13,916	13,916
	Japan	10,439	10,439	13,527	13,527
	Colombia	4,548	4,548	4,730	4,730
	South Korea	2,964	2,964	5,601	5,601
	Peru	2,383	2,383	2,986	2,986
	China (Taiwan)	2,038	2,038	2,966	2,966
	Saudi Arabia	1,389	1,389	2,138	2,138
	Venezuela	1,155	1,155	419	419
	Canada	1,014	1,014	704	704
	Guatemala	906	906	993	993
	Egypt	852	852	323	323
	Algeria	663	663	91	91
	El Salvador	631	631	593	593
	Costa Rica	552	552	819	819
	Honduras	550	550	505	505
	Morocco	450	450	871	871
	European Union-27	413	413	843	843
	Vietnam	413	413	200	200
	Panama	392	392	504	504
	Israel	388	388	83	83
	Chile	353	353	543	543
	China (Mainland)	321	321	807	807
	Jamaica	283	283	275	275
	Nicaragua	258	258	329	329
	Dominican Republic	253	253	807	807
	All other countries	1,342	1,342	2,670	2,670
	Total 2/	48,288	48,288	58,242	58,242
Sorghum	China (Mainland)	7,034	7,034	4,801	4,801
	Mexico	625	625	585	585
	Sub-Saharan Africa	593	593	475	475
	Pakistan	205	205	0.466	0.466
	All other countries	170	170	250	250
	Total 2/	8,626	8,626	6,111	6,111

		---------- 2015/16 ---------- Mkt year	Jun-Aug	---------- 2016/17 ---------- Mkt year	Jun-Aug	2017/18 Jun-Aug
Barley	Mexico	142	25	2	0.007	
	Canada	52	28	63	11	25
	Morocco	14	14			
	China (Taiwan)	7	2	4	1	0.837
	All other countries	21	6	26	4	10
	Total 2/	235	76	95	16	36

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: 10/13/2017