



# Feed Outlook

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## Additional Acres Boost Corn Crop

The June 28 *Acreage* report from USDA's National Agricultural Statistics Service indicated that corn planted acreage this month rose by 1.9 million acres and harvested acres rose by 1.2 million. With yield held at 166 bushels per acre, corn production is projected at 13,875 million bushels, 195 million higher than last month's forecast. With a 145-million-bushel increase in beginning stocks, total corn supply is raised 340 million bushels to 16,265 million.

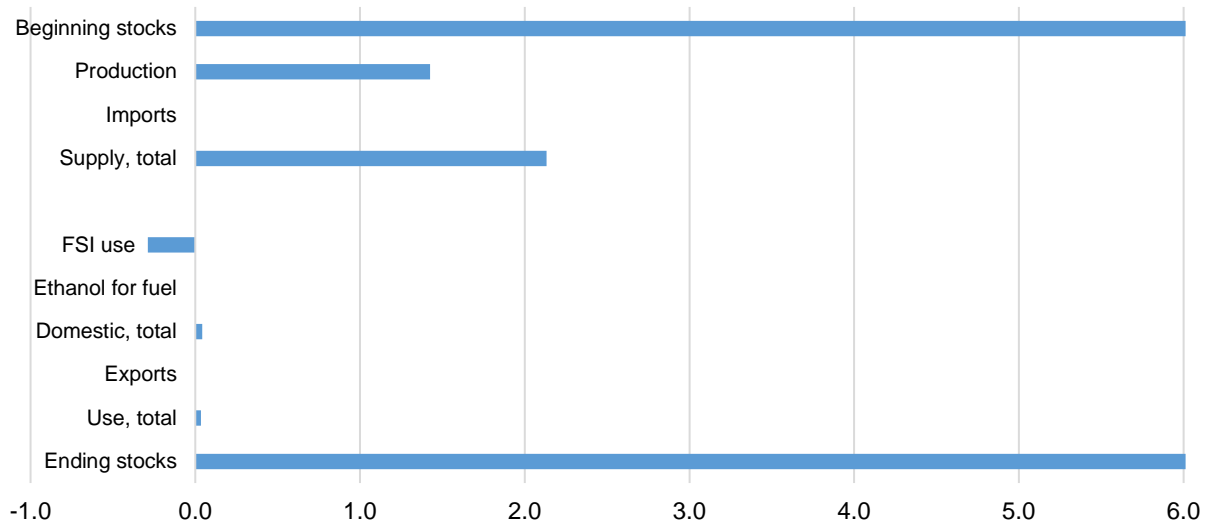
On the demand side, sweeteners and starch are lowered 20 million bushels and feed and residual use is projected 25 million bushels higher, leaving total use up 5 million bushels at 14,255 million, unchanged from 2018/19. Ending stocks are projected 335 million bushels higher at 2,010 million. The season-average price received by farmers is reduced \$0.10 per bushel this month to \$3.70 per bushel on larger stocks.

# Domestic Outlook

## U.S. Feed Grain Use Up Fractionally

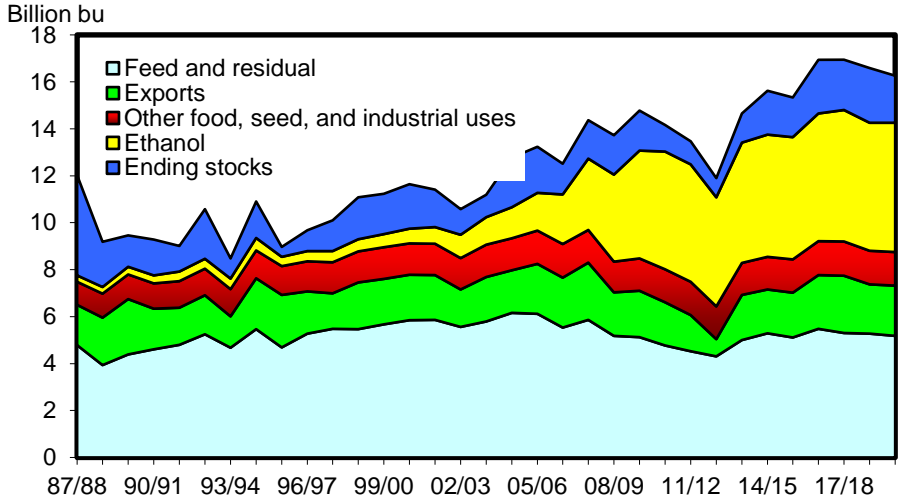
U.S. feed grain disappearance for 2019/20 is projected at 376.9 million metric tons, 0.5 million above last month's estimates and 0.2 million over the 2018/19 revised estimate of 376.7 million. Feed and residual use, projected at 136.7 million metric tons, is slightly below last month's projection, and 2.6 million below the 2018/19 estimate of 139.3 million. Food, seed, and industrial (FSI) use is lowered 0.5 million tons for both 2018/19 and 2019/20. Feed and residual is projected down 1 million tons to 136.7 million. Exports are unchanged for 2019/20 but are lowered 2.5 million this month for 2018/19 to 55.6 million on current outstanding sales and export inspection data during June, which were the lowest for the month since 2013. Total use is raised 0.5 million tons for 2019/20 and lowered 3.7 million tons for 2018/19.

Figure 1  
**Corn supply and use: percent change from last month's forecast (2019/20)**



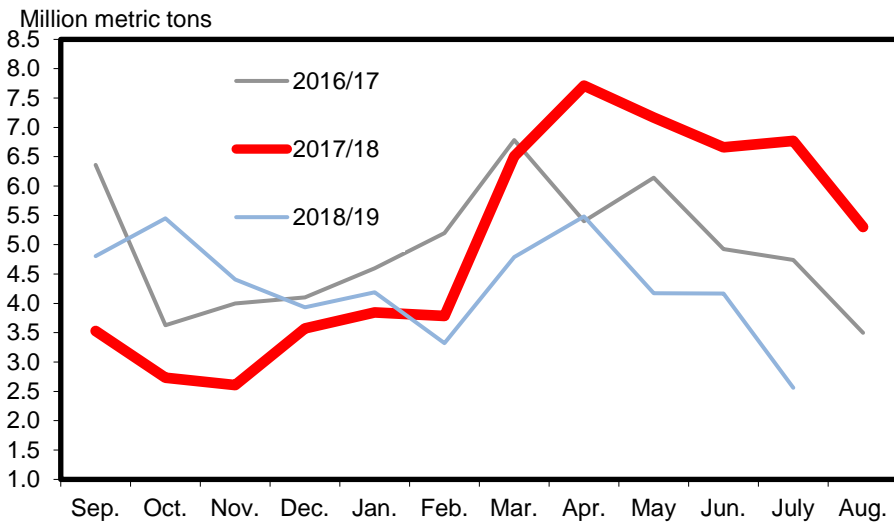
Source: USDA Economic Research Service, Feed Grains Database.

Figure 2  
**U.S. corn utilization**



Note: Marketing year 2018/19 is projected.  
 Source: USDA, World Agricultural Outlook Board, WASDE.

Figure 3  
**Monthly U.S. corn exports**



Source: USDA Economic Research Service with data from, USDC, U.S. Census Bureau, June 2019 *Grain Inspections*.

## Grain Consuming Animal Units Raised

Grain consuming animal units (GCAU) for 2019/20 are set at 102.2 million units, down from last month's projection of 101.83 million. Pullets, other beef, and hogs showed increases due to higher inventory. For 2018/19, GCAUs are projected at 100.7 million units, with increases in broilers, pullets, hogs, and other beef.

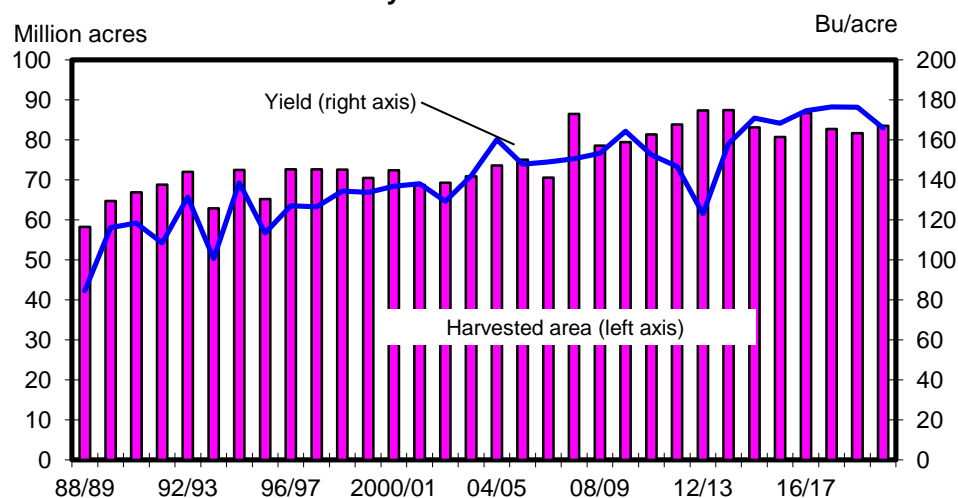
## Feed and Residual Use: Four Feed Grains and Wheat

Feed and residual use for the four feed grains (corn, sorghum, barley, and oats) and wheat on a September-August marketing year basis for 2019/20 is projected at 139.9 million tons, 1.3 million higher than last month's forecast mostly due to increases in wheat feed and residual as well as corn and oats. For 2018/19, feed and residual is raised 3.1 million to a projection of 144.2 million tons.

## Increased Corn Acreage Bumps 2019/20 Corn Crop Total by 195 Million Bushels

Projected corn production was raised 195 million bushels this month on a 1.9-million-bushel increase in planted acres and a 1.2-million-acre increase in acres harvested. Yield is unchanged at 166 bushels per acre. If realized, this would give a crop of 13,875 million bushels, 545 million below 2018/19 and the lowest since 2015/16. As reported in USDA's National Agricultural Statistics Service (NASS) *Acreage* report, planted acreage is now pegged at 91.7 million bushels and harvested acreage is projected at 83.6 million. During July, NASS plans to re-survey essentially all major corn-producing States to include acres that may have been missed due to late sowing. Resulting supply is 16,265 million bushels. Carry-in is projected up 145 million bushels to 2,340 million, and imports are unchanged at 50 million bushels.

Figure 4  
**U.S. corn harvested area and yield**

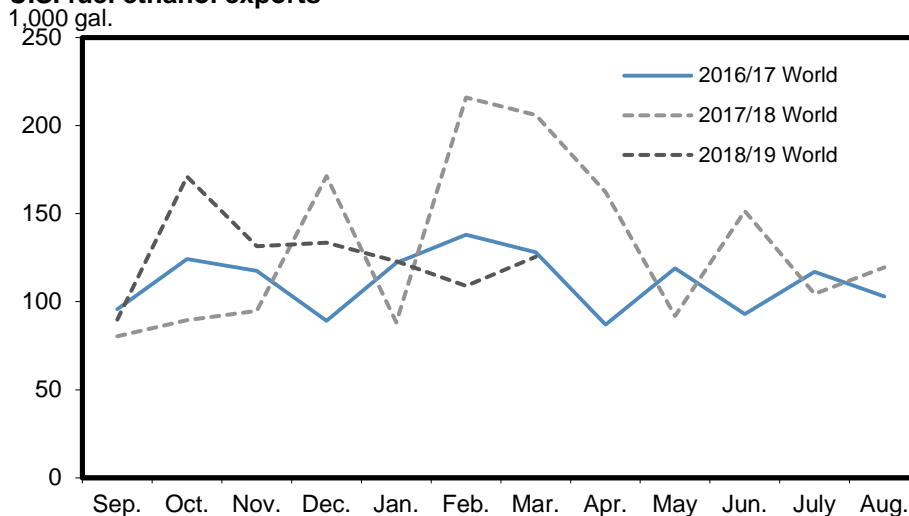


Sources: USDA Economic Research Service with data from USDA, National Agricultural Statistics Service, *QuickStats* and USDA, World Agricultural Outlook Board, *Crop Projections*, 2019.

## 2019/20 Projected Feed and Residual Raised While FSI Declines This Month

The 195-million-bushel increase in crop size is reflected in a 25-million-bushel increase in projected feed and residual for 2019/20. Livestock numbers and crop size both contribute to the gain. In addition, projections for starch, high fructose corn syrup, and glucose and dextrose were lowered a total of 20 million bushels, partially offsetting the gain in feed and residual for a total disappearance of 14,255 million, 5 million above last month's projection. Export prospects are unchanged. Resulting ending stocks are 335 million bushels higher at 2,010 million.

Figure 5  
**U.S. fuel ethanol exports**



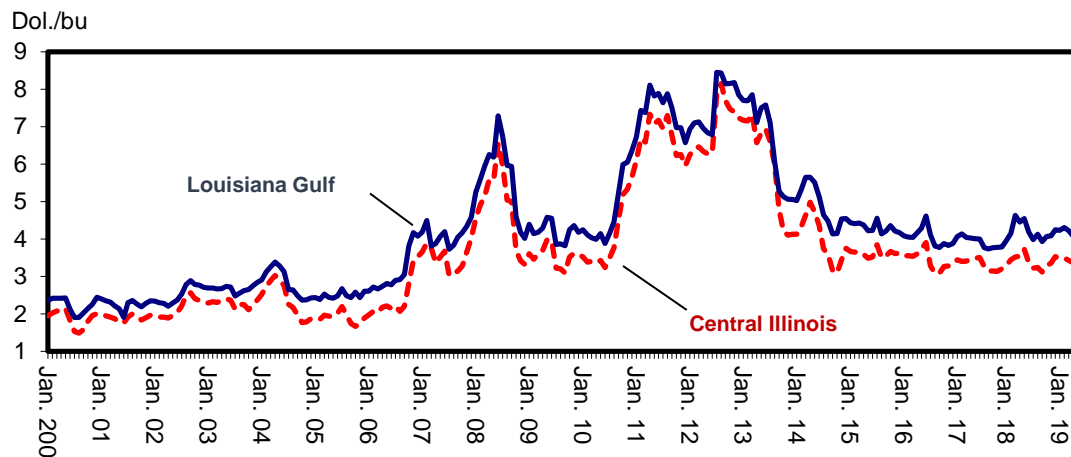
USDA, Economic Research Service with data from USDC, U.S. Census Bureau.

## 2019/20 Corn Price Slides on Increased Supplies

The projected average corn price received by farmers for 2019/20 is lower this month at \$3.70 per bushel based on the increase in stocks. The stocks-to-use ratio for 2019/20 is projected at 14.1, compared with 11.8 last month.

Figure 6

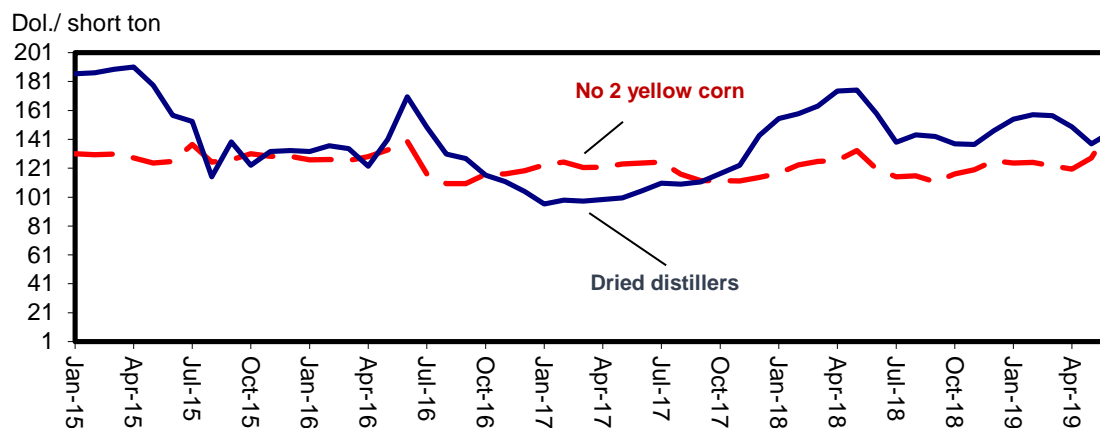
**Monthly prices for Central Illinois corn (yellow #2) and corn distillers dried grain**



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

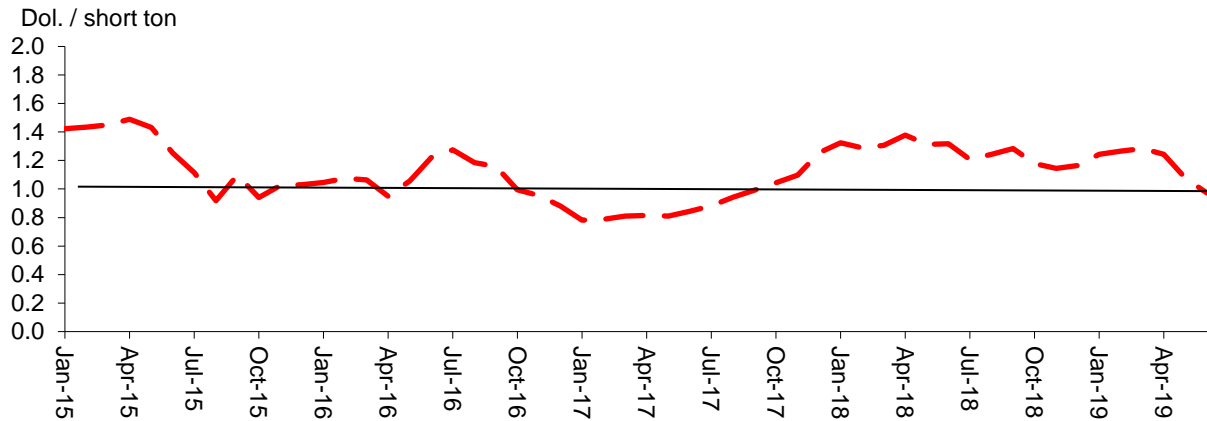
Figure 7

**Monthly and prices for corn, Central Illinois corn (yellow #2) and distillers dried grain**



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

Figure 8  
**Monthly price ratio: Central Illinois distillers dried grain and corn**

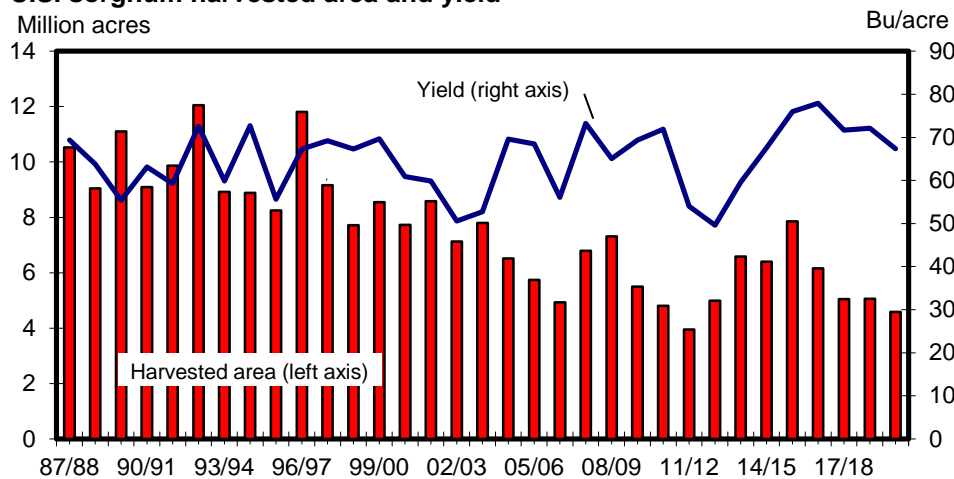


Sources: USDA, Economic Research Service, *Feed Grains Database* and USDA, Agricultural Marketing Service, <http://marketnews.usda.gov/portal/lg>.

## Sorghum Production Reduced due to Fewer Acres Planted in 2019/20

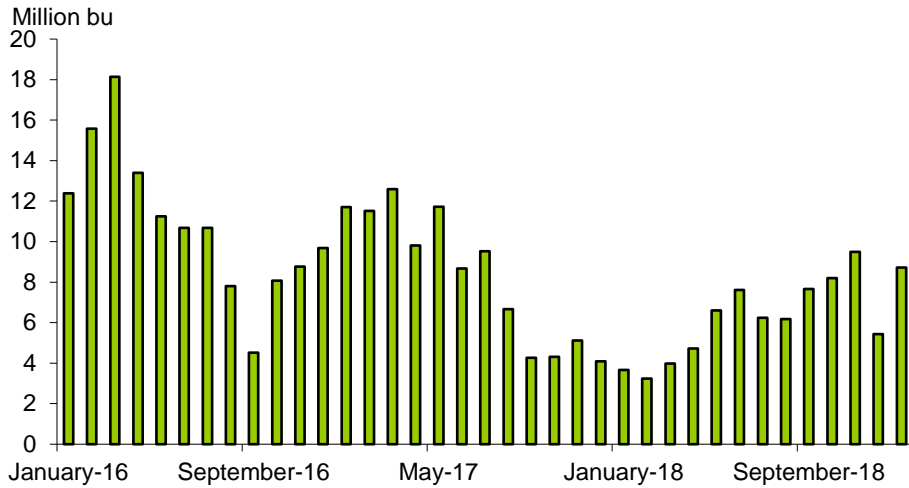
U.S. sorghum area is revised fractionally down on both the planted and anticipated harvested acres by 0.01 and 0.02 million acres, respectively. This is a marginal change of less than 1.0 percent; however, it does reduce total supply by 1.0 million bushels. Production is now expected to be 309.0 million bushels, down from 310.0 million. Likewise, total sorghum supply is projected down by the same 1.0 million bushels, from 369.9 million to 368.9 million.

Figure 9  
**U.S. sorghum harvested area and yield**



USDA, Economic Research Service with data from USDA, National Agricultural Statistics Service, *QuickStats* and USDA, World Agricultural Outlook Board, *WASDE*.

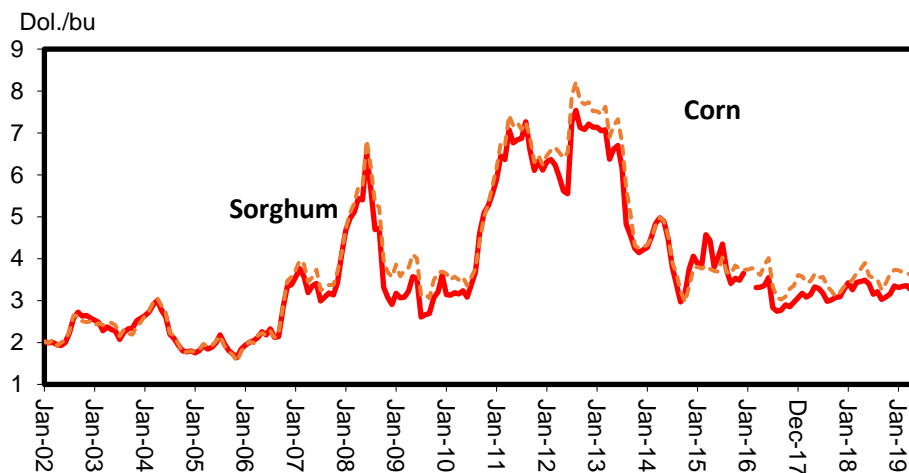
Figure 10  
**U.S. sorghum for ethanol use by month**



Note: Months for which data were withheld to avoid disclosure are shown as null.  
 USDA, Economic Research Service with data from USDA, National Agricultural Statistics Service, *Grain Crushings and Co-Products Production*.

There are no changes to use, with total use forecast at 325.0 million bushels. Projected ending stocks are also reduced by the same 1.0 million bushels due to the production cuts at 43.9 million bushels, down from 44.9 million. The season-average forecast price is reduced by \$0.10 per bushel at \$3.40 per bushel.

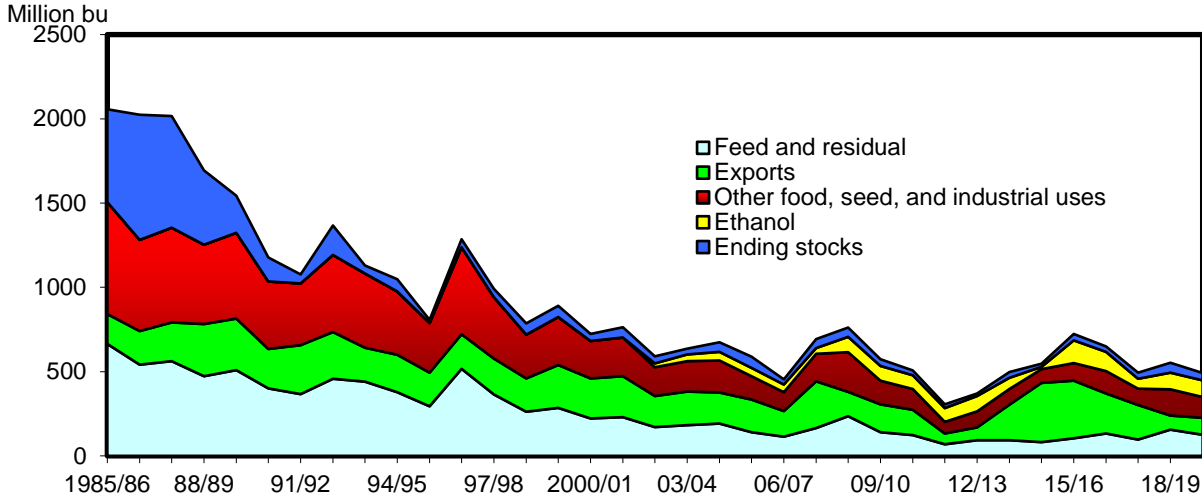
Figure 11  
**Monthly yellow #2 grain sorghum and corn prices for Kansas City**



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



Figure 12  
**U.S. sorghum utilization**



Note: Marketing year 2019/20 is projected.  
 Source: USDA, World Agricultural Outlook Board, WASDE.

There are several small revisions in the previous seasons based on 13<sup>th</sup> month trade data revisions from the U.S. Census Bureau that can be inspected in detail through the yearbook tables.

## Oat Use in 2018/19 Down, While Supplies Are Revised Upward

U.S. oat imports in 2018/19 are revised up 1.6 million bushels, from 85.0 million to 86.6 million. This change flows through to the total supply of oats in 2018/19, resulting in a total supply of 183.8 million bushels for 2018/19.

With stocks on June 1 known, oat feed and residual is reduced by 1.9 million bushels, from 70.0 million to 68.12 million. Additionally, exports are marginally reduced by 0.3 million bushels from 2.0 million to 1.7 million. These changes result in the total use projection for 2018/19 at 46.8 million bushels, down 2.2 million from last month's estimate of 49.0 million.

Ending stocks as reported in NASS's June 28 *Grain Stocks* report are estimated at 36.9 million bushels. The season-average price is also revised up by \$0.03 per bushel to \$2.68.

## Oat Supply and Use Both Projected Up in 2019/20

U.S. oat planted area is projected down fractionally, while area harvested is expected to be marginally higher. Area harvested is expected to be 0.9 million acres, up 0.009 million. Likewise, yield is projected higher by 1.1 bushels per acre to 67.8 bushels per acre, up from 66.7 bushels per acre last month. These changes add 1.7 million bushels to production. Production is revised to 61.6 million bushels, up from 60.0 million projected previously. Additionally, imports are expected to be 110.0 million bushels, up 10.0 million, driven by expectations of increased imports from Canada. These changes roll up to an increase in total supply of 15.4 million bushels over last month's estimate, to 208.6 million.

With larger supplies, feed and residual is revised up by 10.0 million bushels to 90.0 million in 2019/20. Export expectations remain flat month over month at 2.0 million bushels. Total use is revised up by 10.0 million bushels to 170.0 million in 2019/20.

Oat ending stocks are projected higher by 5.4 million bushels to 38.56 million. The season-average price remains unchanged at \$2.90 per bushel.

## Barley Ending Stocks Down and Price Is Revised Up in 2018/19

Production in 2018/19 remains unchanged at 153.1 million bushels. Imports are reduced fractionally by 0.13 million bushels to 5.87 million. This 0.13-million-bushel reduction flows through to total supply, with total supply now expected to be 253.4 million bushels.

With stocks on June 1 known, feed and residual use in 2018/19 is revised up 1.9 million bushels to 6.9 million. Exports are reduced by 0.1 million bushels to 4.9 million, which results in a total use increase of 1.9 million. Total use in 2018/19 is estimated at 166.9 million bushels.

As reported in NASS's June 28 *Grain Stocks* report, ending stocks are reduced by 1.9 million bushels to 86.6 million. The 2018/19 season-average price is revised up \$0.03 per bushel to \$4.63 per bushel.

## Area Increases Offset Yield Decrease in 2019/20 to Result in Higher Supplies

Area planted and harvested are both revised up to 2.9 million acres and 2.3 million acres, respectively. The yield projection is reduced by 1.5 bushels per acre to 73.3 bushels per acre, resulting in a total production of 170.9 million bushels, up 13.9 million over last month's forecast. Total supply is revised up by 11.9 million bushels.

Feed and residual for 2019/20 is doubled to 20.0 million bushels. This increases total use by 10.0 million bushels to 176.0 million.

Ending stocks are forecast at 91.4 million bushels, a 1.9-million-bushel increase over last month's projection. The season-average price is projected to be \$4.55 per bushel, down \$0.10 from last month.

## Hay Acreage Lowest in More Than a Century

The NASS *Acreage* report projects U.S. hay harvested acreage at 52.8 million acres in 2019. This is down only slightly from the 2018 harvested acreage but is the lowest harvested acreage since 1908. Prices for hay continue to rise on limited supply combined with strong domestic and export demand, with NASS reporting \$152 per ton for hay excluding alfalfa, and \$204 per ton for alfalfa in May. These are the highest monthly prices since 2014 for both types. Record-low hay production is expected in California, Illinois, Maine, Michigan, New York, Ohio, Pennsylvania, Vermont, Washington, and West Virginia. The wet spring and cool June has impacted hay as well as other feed crops. USDA's Risk Management Agency will allow producers who planted cover crops on prevented planting acres to hay or graze those fields after September 1, which is a change from the previous requirement to leave cover crops standing until November 1. U.S. exports of both alfalfa and other hay continued to rise in May, indicating continued strong export demand for high quality animal fodder. The largest importers of U.S. hay in 2019 are China, Japan, and Saudi Arabia for alfalfa hay, and Japan, South Korea, and Taiwan for other hay.

# International Outlook

## Coarse Grain Production Up for Both 2019/20 and 2018/19

World coarse grain production is projected to reach 1,395.5 million tons in 2019/20, an increase of 6.0 million from last month's forecast. Almost 90 percent of the increase is for the **United States**, while foreign production is forecast up slightly, the largest rise being higher corn output projected for **Ukraine**. For the 2018/19 projection, coarse grain production is forecast up 1.1 million tons due to an increase in **Argentina**. For more information and a display of this month's output changes, see table A1 and A2 below.

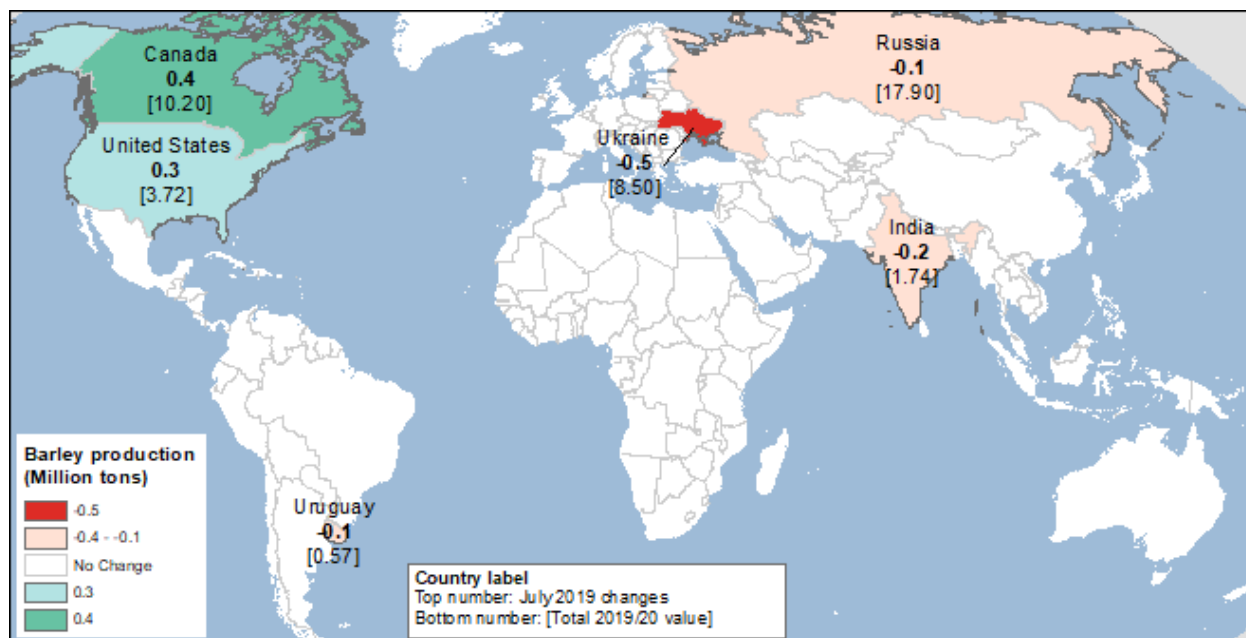
Table A1 - World and U.S. coarse grain production at a glance (2019/20), July 2019					
	Region or country	Production	Change from previous month <sup>1</sup>	YoY Change <sup>2</sup>	Comments
<i>Million tons</i>					
<b>Coarse grain production (total)</b>					
↑	World	1,395.5	+6.0	-0.3	
↑	Foreign	1,030.4	+0.8	+14.5	Changes are made for several countries and commodities. See table A2.
↑	United States	365.1	+5.2	-14.8	See section on U.S. domestic output.
<b>World production of coarse grains by type of grain</b>					
<b>CORN</b>					
↑	World	1,105.1	+6.0	-17.6	
↑	Foreign	752.7	+1.0	-3.7	Higher corn area and production are projected for Ukraine. See table A2.
↑	United States	352.4	+5.0	-13.8	See section on U.S. domestic output.
<b>BARLEY</b>					
↓	World	151.9	-0.2	+12.4	
↓	Foreign	148.1	-0.5	+12.0	Changes are made for a number of countries. See table A2.
↑	United States	3.7	+0.3	+0.4	See section on U.S. domestic output.
<b>SORGHUM</b>					
↑	World	58.3	Small change	-1.0	
↓	Foreign	50.5	-0.1	+0.4	A small reduction in Uruguay. See table A2.
↓	United States	7.8	-0.1	-1.4	See section on U.S. domestic output.
<b>OATS</b>					
↑	World	24.7	+0.4	+2.9	
↑	Foreign	23.9	+0.4	+2.8	Higher oats output is projected for Canada, partly offset by a small decline in Australia (area changes). See table A2.
↓	United States	0.9	Small change	+0.1	See section on U.S. domestic output.
<sup>1</sup> Changes from previous month. Fractional changes are made for rye and millet; no production changes are made for mixed grains this month.					
<sup>2</sup> YoY: year over year changes. <b>For changes and notes for foreign countries, by country, see table A2.</b>					
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.					

**Table A2 - Coarse grain production by country at a glance, July 2019**

	Type of crop	Crop year	Production	Change in forecast <sup>1</sup>	YoY <sup>2</sup> change	Comments
<b>UKRAINE</b>						
↑	Corn	Oct-Sep	34.0	+1.0	-1.8	Higher officially reported planted corn area boosts output.
↓	Barley	Jul-Jun	8.5	-0.5	+0.9	Winter crop conditions deteriorated in June, especially in the south of the country (Odessa and Nikolayev regions) that holds about 50 percent of barley production.
<b>CANADA</b>						
↑	Barley	Aug-July	10.2	+0.4	+1.8	Revised barley area is based on the June Field Crop Survey published by Statistics Canada.
↑	Oats	Aug-July	4.4	+0.5	+0.9	Revised oats area is based on the June Field Crop Survey published by Statistics Canada.
<b>INDIA</b>						
↓	Barley	Apr-Mar	1.7	-0.2	Smaller than 0.1 million tons	Higher estimated area based on the Government 3rd Advanced estimate.
<b>RUSSIA</b>						
↓	Barley	Jul-Jun	17.9	-0.1	+1.2	Winter crop conditions deteriorated in June, but there is only 10 percent of winter barley in the Russian barley mix.
<b>AUSTRALIA</b>						
↓	Oats	Dec-Nov	1.3	-0.1	+0.4	Projected area is slightly down in line with new estimates from Australian Bureau of Agricultural and Resource Economics.
<b>Coarse grain production by country and by type of grain (2018/19)</b>						
<b>ARGENTINA</b>						
↑	Corn	Mar-Feb	51.0	+2.0	+19.0	The increase moves production to a new record high, almost 60 percent larger than the previous (2017/18) crop. Harvesting of the 2018/19 crop is on the way, with almost 50 percent completed, and harvest reports indicate record-high yields, suggesting an increase in projected corn area and yield.
<b>BELARUS</b>						
↓	Barley	Jul-Jun	0.9	-0.8	-0.5	Final official results.
↓	Oats	Jul-Jun	0.3	-0.1	-0.2	Final official results.
↓	Rye	Jul-Jun	0.5	-0.1	-0.2	Final official results.
<sup>1</sup> Changes from previous month. Smaller changes for coarse grain output are made for several countries, see map A for changes in <b>barley</b> .						
<sup>2</sup> YoY: year over year changes.						
Source: USDA, Foreign Agricultural Service, Production, Supply and Distribution online database.						

For a visual display of production changes in barley, see map A below.

Map A – Barley production changes for 2019/20, July 2019



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

The production change and other revisions to 2018/19 supply and demand boost 2019/20 coarse grain beginning stocks (also mainly in the United States) by 3.2 million tons, augmenting supplies.

## Foreign 2019/20 Coarse Grain Use Nearly Unchanged

Despite increased supplies, projected world coarse grain use in 2019/20 is up only marginally by 0.9 million tons to a record 1,422.3 million, with more than half of the increase coming from the **United States**. Projected foreign use is up 0.5 million tons while feed use is down 0.7 million tons. Stronger consumption in **Thailand** (malting barley for beer production, with an increase made for both 2018/19 and 2019/20) and **Zimbabwe** (larger amounts of imported corn making up for inadequate output this year), is partly offset by a reduction in barley feed use for **Ukraine** (lower projected barley output this month). Other revisions in feed use this month reflect changes in production and trade for specific countries and are minute.

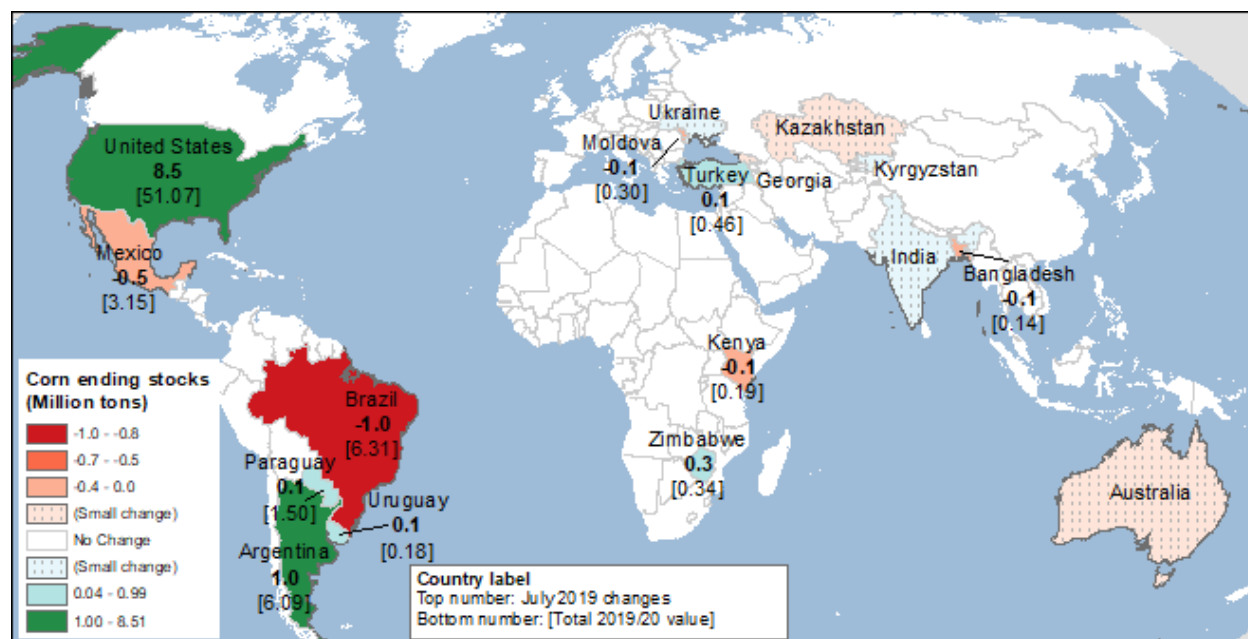
## Global Ending Stocks Projected Higher

Increased 2019/20 coarse grain supplies combine with nearly unchanged use to boost projected world ending stocks 8.3 million tons to 328.1 million, though still the lowest in 5 years. Corn stocks are up 8.4 million tons to 298.9 million, with much smaller changes in other coarse

grains. Expansion in U.S. stocks exceeds the global increase, while foreign stocks are forecast to decline marginally to 247.9 million tons. The largest changes in foreign ending corn stocks this month are two offsetting adjustments for **Argentina** and **Brazil**. Corn stocks in Argentina are projected 1.0 million tons higher from a boost to its 2018/19 corn production, and despite larger projected exports. Stocks in Brazil are projected 1.0 million tons lower this month, with increased 2018/19 local (March-February) year exports. Other smaller changes are made for a number of countries.

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

**Map B – Corn ending stocks changes for 2017/18, July 2017**



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

## World Corn Trade for 2019/20 Unchanged, U.S. 2018/19 Exports Reduced

Global corn trade for the October-September international trade year 2019/20 is unchanged at 171.2 million, with a few fully offsetting changes. **Ukrainian** 2019/20 trade year exports are projected 1.0 million tons higher and are fully offset by a decrease in Brazil, reflecting expectations of larger shipments for the last few months of the 2018/19 trade year.

While the forecast for **Brazilian** corn exports for the **2019/20** October-September trade year is down, Brazil's **2018/19** exports are boosted by an equal amount of 1.0 million tons this month to

a record of 35.0 million. Brazilian exports in May and June were record-high for those months, as the 2018/19 season record Brazilian corn crop is currently being harvested, and the country is expected to become stuffed with corn in the near future.

With higher projected **2018/19** corn output, **Argentine** exports for that year are raised 1.0 million tons to 33.5 million. The pace of corn exports out of Argentina has been brisk in the last 2 months, enhancing competition in the global corn market.

**Ukrainian** corn exports are projected 1.0 million tons higher this month to 28.0 million. The country's corn output is expected to increase, and the pace of corn exports out of Ukraine has been brisk. Ukraine continues to expand its export reach far and wide—to China, Egypt, Algeria, the European Union (Spain, Netherlands, Italy, Germany, and Netherlands), and many other countries—apparently replacing other major exporters as a supplier in the world corn market.

**U.S.** corn exports in **2019/20** are projected to reach 55.0 million tons, unchanged from last month. While U.S. supply prospects are increased and the U.S. price projection is reduced this month, competitors' supplies are mounting and the United States is not price competitive with Argentina, Brazil, or Ukraine. The 2018/19 corn harvests and exports from the Southern Hemisphere (Argentina and Brazil), coupled with the large Ukrainian harvest, will generate intense competition for corn exports in late 2018/19 and into 2019/20.

**U.S. 2018/19** corn exports for the October-September international trade year are reduced this month by 1.5 million tons to 53.5 million tons. A projection for the September-August 2018/19 local marketing year is reduced by 100 million bushels to 2,100 million. U.S. corn exports started to slow down abruptly in June, suggesting lower-than-expected exports in the last quarter of the marketing year, just as competitors—corn producers in the Southern Hemisphere—enter the market with escalating exports.



## Suggested Citation

Capehart, Tom, Liefert, Olga, Olson, David W., *Feed Outlook*, FDS-19g, U.S. Department of Agriculture, Economic Research Service, July 15, 2019.

Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 7/15/2019

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	2016/17	Sep-Nov	1,737	15,148	14	16,899	1,689	2,279	548	4,516	12,383	3.26	
		Dec-Feb	12,383		12	12,395	1,711	1,523	539	3,773	8,622	3.39	
		Mar-May	8,622		17	8,639	1,741	982	687	3,410	5,229	3.46	
		Jun-Aug	5,229		14	5,243	1,743	686	520	2,949	2,293	3.40	
		Mkt yr	1,737	15,148	57	16,942	6,885	5,470	2,294	14,649	2,293	3.36	
	2017/18	Sep-Nov	2,293	14,609	11	16,914	1,743	2,256	349	4,347	12,567	3.21	
		Dec-Feb	12,567		8	12,575	1,739	1,497	447	3,683	8,892	3.30	
		Mar-May	8,892		8	8,900	1,782	951	862	3,595	5,305	3.58	
		Jun-Aug	5,305		9	5,314	1,794	600	780	3,174	2,140	3.46	
		Mkt yr	2,293	14,609	36	16,939	7,057	5,304	2,438	14,798	2,140	3.36	
	2018/19	Sep-Nov	2,140	14,420	6	16,567	1,712	2,286	632	4,630	11,937	3.41	
		Dec-Feb	11,937		9	11,945	1,640	1,195	498	3,333	8,613	3.56	
		Mar-May	8,613		6	8,619	1,714	1,113	589	3,417	5,202		
		Mkt yr	2,140	14,420	35	16,595	6,880	5,275	2,100	14,255	2,340	3.60	
	2019/20	Mkt yr	2,340	13,875	50	16,265	6,930	5,175	2,150	14,255	2,010	3.70	
	Sorghum	2016/17	Sep-Nov	36.63	480.26	0.00	516.90	21.65	144.36	41.81	207.82	309.08	2.62
			Dec-Feb	309.08		0.00	309.08	33.06	5.97	89.32	128.34	180.75	2.69
			Mar-May	180.75		0.00	180.75	34.62	2.41	59.02	96.04	84.71	2.79
			Jun-Aug	84.71		1.73	86.44	25.30	-19.97	47.65	52.98	33.46	3.53
			Mkt yr	36.63	480.26	1.74	518.63	114.61	132.76	237.80	485.18	33.46	2.79
2017/18		Sep-Nov	33.46	361.87	1.91	397.24	13.92	110.30	45.54	169.75	227.49	3.05	
		Dec-Feb	227.49		0.05	227.55	10.24	3.38	73.67	87.29	140.26	3.18	
		Mar-May	140.26		0.01	140.27	15.81	-7.18	66.30	74.93	65.33	3.40	
		Jun-Aug	65.33		0.04	65.38	20.44	-4.76	14.84	30.52	34.85	3.78	
		Mkt yr	33.46	361.87	2.02	397.35	60.40	101.74	200.35	362.49	34.85	3.22	
2018/19		Sep-Nov	34.85	364.99	0.00	399.84	25.56	99.13	16.37	141.06	258.78	3.18	
		Dec-Feb	258.78		0.00	258.78	23.36	19.94	22.76	66.06	192.73	3.20	
		Mar-May	192.73		0.01	192.73	27.01	28.92	22.16	78.09	114.64		
		Mkt yr	34.85	364.99	0.04	399.88	100.00	155.00	85.00	340.00	59.88	3.20	
2019/20		Mkt yr	59.88	309.00		368.88	100.00	125.00	100.00	325.00	43.88	3.40	

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 7/15/2019

Commodity, market year, and quarter 1/		Beginning stocks	Production	Imports	Total supply	Food, seed, and industrial use	Feed and residual use	Exports	Total disappearance	Ending stocks	2/ (dollars per bushel)		
Barley	2016/17	Jun-Aug	102	200	2	304	41	32	1	74	230	4.99	
		Sep-Nov	230		2	232	39	-0	1	40	193	4.78	
		Dec-Feb	193		2	195	37	12	1	50	145	5.04	
		Mar-May	145		3	148	45	-6	2	41	106	4.96	
		Mkt yr	102	200	10	312	162	39	4	205	106	4.96	
	2017/18	Jun-Aug	106	143	2	252	41	30	2	72	180		
		Sep-Nov	180		2	182	38	-17	2	23	159		
		Dec-Feb	159		2	161	35	-6	1	31	130		
		Mar-May	130		3	133	43	-5	1	38	94		
		Mkt yr	106	143	9	259	157	2	5	164	94	4.47	
	2018/19	Jun-Aug	94	153	1	249	40	33	1	74	175		
		Sep-Nov	175		1	176	38	-16	1	23	153		
		Dec-Feb	153		2	154	36	-5	1	33	121		
		Mar-May	121		2	123	40	-5	1	37	87		
		Mkt yr	94	153	6	253	155	7	5	167	87	4.63	
	2019/20	Mkt yr	87	171	10	267	153	20	3	176	91	4.55	
	Oats	2016/17	Jun-Aug	57	65	21	142	19	44	1	63	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	161	50	2.06	
2017/18		Jun-Aug	50	50	19	119	19	27	1	47	72	2.35	
		Sep-Nov	72		30	102	18	17	1	36	66	2.58	
		Dec-Feb	66		20	86	18	13	1	31	55	3.03	
		Mar-May	55		20	75	22	11	1	34	41	2.94	
		Mkt yr	50	50	89	189	77	68	2	148	41	2.59	
2018/19		Jun-Aug	41	56	20	117	19	23	0	42	75	2.55	
		Sep-Nov	75		28	103	18	17	0	36	67	2.65	
		Dec-Feb	67		18	85	18	17	0	35	50	2.77	
		Mar-May	50		21	71	22	12	0	34	37		
		Mkt yr	41	56	87	184	77	68	2	147	37	2.68	
2019/20		Mkt yr	37	62	110	209	78	90	2	170	39	2.90	

Data run: 7/15/2019

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.

Table 2--Feed and residual use of wheat and coarse grains, 7/15/2019

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)
2017/18 Q1 Sep-Nov	57.3	2.8	-0.4	0.3	60.0	-1.5	58.6		
Q2 Dec-Feb	38.0	0.1	-0.1	0.2	38.2	-0.5	37.7		
Q3 Mar-May	24.2	-0.2	-0.1	0.2	24.1	-1.2	22.9		
Q4 Jun-Aug	15.2	-0.1	0.7	0.4	16.2	5.1	21.4		
MY Sep-Aug	134.7	2.6	0.1	1.2	138.6	1.9	140.5	99.0	1.4
2018/19 Q1 Sep-Nov	58.1	2.5	-0.4	0.3	60.6	-2.0	58.5		
Q2 Dec-Feb	30.3	0.5	-0.1	0.3	31.0	-0.8	30.2		
Q3 Mar-May	28.3	0.7	-0.1	0.2	29.1	0.2	29.3		
MY Sep-Aug	134.0	3.9	1.2	1.5	140.6	3.6	144.2	100.7	1.4
2019/20 MY Sep-Aug	131.5	3.2	0.1	1.5	136.3	3.6	139.9	102.2	1.4

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, 7/15/2019

Mkt year and month 1/	Corn, No. 2 yellow, Central IL (dollars per bushel)			Corn, No. 2 yellow, Gulf ports, LA (dollars per bushel)			Sorghum, No. 2 yellow, Gulf ports, LA (dollars per cwt)
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17
Sep	3.09	3.15	3.12	3.78	3.74	3.93	
Oct	3.27	3.15	3.28	3.88	3.77	4.07	
Nov	3.28	3.14	3.36	3.83	3.78	4.09	
Dec	3.34	3.21	3.53	3.88	3.79	4.25	
Jan	3.45	3.29	3.53	4.07	3.96	4.24	
Feb	3.51	3.45	3.50	4.14	4.15	4.31	
Mar	3.40	3.52	3.43	4.04	4.36	4.23	
Apr	3.41	3.54	3.37	3.98	4.46	4.11	
May	3.47	3.73	3.59	4.03	4.55	4.36	
Jun	3.49	3.38	4.21	4.01	4.19	4.96	7.56
Jul	3.51	3.22		4.00	3.98		
Aug	3.27	3.24		3.77	4.13		
Mkt year	3.44	3.34		4.00	4.07		7.56
				Barley, No. 3 malting, Minneapolis, MN (dollars per bushel)			
				Oats, No. 2 white heavy, Minneapolis, MN (dollars per bushel)			
				2017/18	2017/18	2018/19	2019/20
Jun	2.05	2.85	3.25	4.70	2.95	2.88	3.15
Jul	2.05	2.85		4.67	3.17	2.84	
Aug	2.10	2.78		4.70	2.98	2.91	
Sep	2.10	2.60		4.70	2.87	2.91	
Oct	2.10	2.60		4.70	2.97	3.18	
Nov	2.36	2.60			2.94	3.22	
Dec	2.61	2.60		4.85	2.73	3.31	
Jan	2.65	2.60		4.85	2.90	3.28	
Feb	2.81	2.60		4.85	2.96	3.23	
Mar	2.85	2.60		4.50	2.79	3.18	
Apr	2.85	2.97			2.72	3.25	
May	2.85	3.25			2.89	3.25	
Mkt year	2.45	2.74		4.72	2.90	3.12	

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: 7/12/2019

Table 4--Selected feed and feed byproduct prices (dollars per ton), 7/15/2019

Mkt year and month	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		
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2016/17	2017/18	
Oct	323.26	319.24	319.15	241.88	229.00	249.00	77.00	80.70	466.13	469.30	
Nov	322.42	313.52	310.62	221.00	228.75	240.00	83.50	93.00	477.50	487.24	
Dec	321.03	327.17	311.70	217.50	232.50	243.50	92.83	96.25	501.67	482.88	
Jan	332.34	322.60	314.93	223.50	259.00	247.50	97.50	98.80	502.50	477.60	
Feb	334.32	362.85	290.12	221.88	303.13	235.00	88.13	106.25	516.50	483.13	
Mar	320.34	379.85	306.38	210.63	323.13	226.25	87.13	105.50	505.63	524.75	
Apr	305.67	385.85	304.26	195.00	263.13	216.50	75.00		501.13		
May	293.68	393.55	297.52	179.50	262.50	215.00	71.00		485.30		
Jun	258.75	355.71	324.75	179.38	257.50	215.63	68.38		475.75		
Jul	326.04	341.08		200.84	253.13		71.35		467.88		
Aug	301.05	332.50		198.50	260.00		73.10		475.50		
Sep	307.70	318.33		213.75	258.75		75.00		469.25		
Mkt yr	308.88	346.02		202.55	260.88		78.51	96.75	488.83	487.48	
	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO		Alfalfa hay, weighted-average farm price 2/		
	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2016/17	2017/18	2018/19	2017/18	2018/19
Oct	237.50	228.00	267.50	116.25	117.30	137.50	79.43	70.36	80.00	153.00	178.00
Nov	229.00	219.38	257.50	111.70	123.13	137.50	85.53	86.85	105.00	150.00	175.00
Dec	211.67	221.67	257.50	104.84	143.75	147.00	101.62	107.88	148.00	149.00	180.00
Jan	255.60	220.00	259.50	96.30	155.50	154.80	98.25	123.68	108.10	153.00	181.00
Feb	285.00	225.84	260.00	98.88	158.88	158.13	84.66	114.61	98.88	155.00	180.00
Mar	284.38	275.00	263.33	98.25	164.13	157.38	80.76	99.69	101.50	165.00	184.00
Apr	266.25	316.25		99.25	174.38	149.70	58.03	100.22	76.90	183.00	199.00
May	245.50	293.00	265.00	100.50	174.90	137.90	48.41	98.90	66.63	189.00	204.00
Jun	248.13	288.75		105.25	158.50	145.75	60.39	89.50	69.00	181.00	
Jul	276.25	283.75		110.63	139.30		67.10	64.50		179.00	
Aug	318.50	265.63		110.00	144.00		63.15	83.50		177.00	
Sep	301.88	266.25		111.63	142.50		67.48	84.00		180.00	
Mkt yr	275.72	258.63		103.41	149.69		69.80	93.64		154.00	181.00

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](http://www.nass.usda.gov/Data_and_Statistics/Quick_Stats/index.asp).

Table 5--Corn: Food, seed, and industrial use (million bushels), 7/15/2019

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
2017/18	Q1 Sep-Nov	111.69	93.51	59.42	1,391.29	36.46	50.38	0.00	1,742.74
	Q2 Dec-Feb	105.21	87.91	56.87	1,397.46	38.23	52.82	0.00	1,738.50
	Q3 Mar-May	117.97	94.42	58.56	1,388.64	38.50	55.27	28.15	1,781.52
	Q4 Jun-Aug	124.13	95.51	60.88	1,427.43	35.83	48.23	1.48	1,793.48
	MY Sep-Aug	459.22	371.35	235.74	5,604.83	149.00	206.70	29.64	7,056.48
2018/19	Q1 Sep-Nov	108.19	89.41	59.40	1,365.70	37.00	52.00	0.00	3,423.34
	Q2 Dec-Feb	100.08	85.61	55.75	1,308.55	38.00	52.00	0.00	3,280.00
	Q3 Mar-May	114.79	88.86	62.18	1,340.17	40.00	53.00	19.70	3,439.20
	MY Sep-Aug	445.00	360.00	235.00	5,450.00	150.00	209.20	30.80	6,880.00
2019/20	MY Sep-Aug	440.00	360.00	235.00	5,500.00	151.00	214.00	30.00	6,930.00

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

Source: Calculated by USDA, Economic Research Service.

Table 6--Wholesale corn milling product and byproduct prices, 7/15/2019

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)
	2017/18	2018/19	2017/18	2018/19	2017/18	2018/19	2017/18	2018/19	2017/18
	Sep	16.01	14.97	17.68	16.64	12.40	12.34	39.00	39.25
Oct	15.94	15.24	17.61	16.91	11.86	11.68	39.00	39.25	28.25
Nov	15.78	15.09	17.45	16.76	11.89	12.13	39.00	39.25	28.25
Dec	15.69	15.17	17.35	16.90	11.74	12.37	39.00	39.25	28.25
Jan	15.75	15.14	17.42	16.81	11.80	12.58	39.25	40.00	28.25
Feb	16.09	17.49	17.76	16.66	12.07	12.73	39.25	40.00	
Mar	16.13	14.51	17.80	16.18	12.52	12.94	39.25	40.00	
Apr	16.23	14.57	17.90	16.24	12.64	12.79	39.25	40.00	
May	16.41	14.85	18.08	16.52	12.43	12.79	39.25	40.00	
Jun	15.64	16.26	17.31	17.93	12.76		39.25	40.00	
Jul	15.28		16.95		12.19		39.25		
Aug	15.35		17.02		11.77		39.25		
Mkt year 2/	15.86		17.53		12.17		39.17		

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: 7/12/2019

Table 7--U.S. feed grain imports by selected sources (1,000 metric tons) 1/, 7/15/2019

Import and country/region	----- 2016/17 -----		----- 2017/18 -----		----- 2018/19 -----		
	Mkt year	Jun-May	Mkt year	Jun-May	Mkt year	Jun-May	
Oats	Canada	1,507	1,507	1,480	1,480	1,448	1,448
	Sweden	27	27	41	41	27	27
	Finland	21	21	16	16	18	18
	All other	0	0	0	0	0	0
	Total 2/	1,556	1,556	1,537	1,537	1,493	1,493
Malting barley	Canada	102	102	88	88	67	67
	All other	17	17	1	1	0	0
	Total 2/	119	119	88	88	67	67
Other barley 3/	Canada	89	89	110	110	60	60
	All other	2	2	1	1	0	0
	Total 2/	90	90	111	111	61	61

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: 7/12/2019

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 7/15/2019

Export and country/region		----- 2016/17 -----		----- 2017/18 -----		2018/19
		Mkt year	Sep-May	Mkt year	Sep-May	Sep-May
Corn	Mexico	13,932	9,992	15,715	10,891	12,586
	Japan	13,559	10,256	13,210	8,559	10,919
	South Korea	5,601	4,787	5,732	3,604	3,673
	Colombia	4,752	3,851	5,085	4,171	4,266
	Peru	2,989	2,291	3,238	2,376	1,987
	China (Taiwan)	2,961	2,636	2,461	1,400	1,861
	Saudi Arabia	2,163	2,019	1,495	951	665
	Guatemala	994	716	864	597	946
	Morocco	871	852	747	579	164
	European Union-27	843	387	1,904	1,488	33
	Costa Rica	819	598	836	614	625
	Dominican Republic	807	674	631	326	584
	China (Mainland)	807	155	307	305	71
	Canada	704	551	1,663	1,100	1,815
	Sub-Saharan Africa	605	543	137	36	20
	El Salvador	592	397	457	281	581
	Chile	543	543	15	0.573	15
	Honduras	506	381	618	392	414
	Panama	485	376	502	369	364
	Venezuela	419	226	435	375	150
	Indonesia	351	339	147	74	8
	Cuba	337	279	117	117	58
	Nicaragua	329	235	280	192	246
	Malaysia	327	320	68	51	41
	Egypt	323	277	1,335	693	531
All other countries	1,652	1,385	3,920	2,563	1,046	
Total 2/	58,270	45,065	61,916	42,104	43,669	
Sorghum	China (Mainland)	4,740	3,754	4,151	4,092	120
	Mexico	585	464	93	66	341
	Sub-Saharan Africa	467	389	363	230	254
	Japan	223	199	328	232	221
	All other countries	25	23	155	93	621
	Total 2/	6,040	4,830	5,089	4,712	1,557
		----- 2017/18 -----		----- 2018/19 -----		
		Mkt year	Jun-May	Mkt year	Jun-May	
Barley	Canada	69	69	46	46	
	Japan	31	31	45	45	
	China (Taiwan)	5	5	8	8	
	South Korea	3	3	5	5	
	All other countries	3	3	3	3	
	Total 2/	111	111	107	107	

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: 7/12/2019