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Feed Outlook

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Corn Production Projected Record High

The next release is August 16, 2016

Approved by the World Agricultural Outlook Board.

The June 30 National Agricultural Statistics Service *Acreage* report forecasts corn harvested acreage for 2016 at 86.6 million acres, 650,000 acres higher than projected in the June 12 *WASDE* report. The projected yield is unchanged at 168.0 bushels per acre. If realized, the crop would reach 14,540 million bushels, 110 million bushels above last month's projection and 939 million over last year's crop. Projected ending stocks for 2016/17 are raised as the larger supplies more than offset increased prospects for use. The projected 2016/17 farm price range for corn is lowered 10 cents on both ends for a midpoint of $3.40 per bushel. The 2015/16 forecast midpoint price is reduced 5 cents to $3.65 per bushel.

World coarse grain production for 2015/16 is reduced this month with a 7.5-million-ton reduction in expected corn output for Brazil. Global corn production for 2016/17 is also projected lower with reductions for Brazil and Canada more than offsetting the increase projected for the United States. World corn consumption and trade are both projected lower for 2016/17 as larger supplies of competitively priced wheat reduce global corn feeding and import demand. U.S. corn exports, however, are projected higher with reduced supplies and competition from Brazil.

Recent *Feed Outlook* Special Articles

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

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

"Animal Unit Calculations—First Projections for the 2013/14 Crop Year," pdf pages 25-30 of the May 2013 *Feed Outlook* report (http://www.ers.usda.gov/publications/fds-feed-outlook/fds-13e.aspx).

Domestic Outlook

U.S. Feed Grain Supplies Projected Slightly Higher for 2016/17

U.S. feed grain production is raised 3.0 million metric tons this month due to raised prospects for corn, sorghum, and oats production with higher forecast acreage. The June 30 *Acreage* report from USDA's National Agricultural Statistics Service (NASS) forecast combined feed grain harvest area up 0.8 million acres from the June 10 *WASDE* projection. The feed grain yield average for 2016/17 is unchanged from last month's projection, The feed grain yield average for 2016/17 is unchanged from last month's projection, reflecting trend yield projections for corn and sorghum and nearly unchanged yields for barley and oats in the July 12 *Crop Production* report, the average feed grain yield for 2016/17 is unchanged from last month's projection. Total feed grain production is expected at 385.1 million tons, compared with 366.6 million in 2015.

With lower beginning stocks, supplies for 2016/17 are up 2.7 million tons to 435.6 million. Feed grain supplies for 2015/16 are estimated at 417.1 million tons, 18.5 million below the 2016/17 projection.

Reductions in 2016/17 projected domestic feed grain use are more than offset by higher expected exports this month. Feed and residual use for 2016/17 is lowered 1.3 million tons to 144.9 million. Food, seed, and industrial (FSI) use is lowered 0.5 million tons reflecting reduced use of corn for ethanol production. With feed grain exports up 2.5 million tons to 58.0 million, total use advances 0.8 million tons to 378.8 million, 9.2 million higher than 2015/16.

Feed and Residual Use for the Four Feed Grains and Wheat Projected at 151.7 Million Metric Tons for 2016/17

Projected 2016/17 feed and residual use for the four feed grains and wheat on a September-August marketing year is raised to 151.7 million metric tons from last month's 149.0 million. The increase is a result of higher wheat feed and residual use offset partly by lower corn feed and residual use.

Grain consuming animal units (GCAUs) for 2016/17 are projected at 95.1 million units this month, down slightly from 95.3 million last month. Feed and residual use per GCAU is projected at 1.60 tons per GCAU this month, up from last month's 1.56 tons per GCAU. For 2015/16, GCAUs are revised from last month's 93.23 million to 93.80 million on higher reported cattle inventory numbers.

U.S. Corn Production Raised 110 Million Bushels for 2016/17

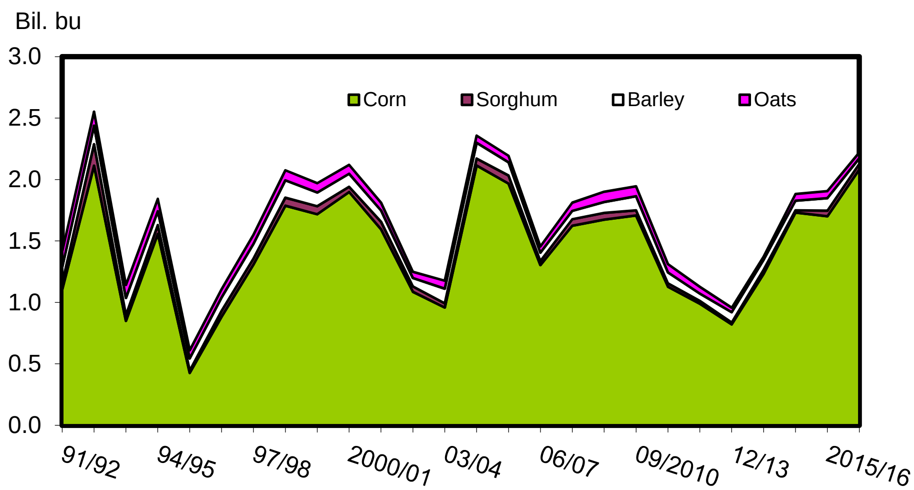
The June 30 *Acreage* report pegged corn planted area at 94.1 million acres, 547,000 higher than reported in the March 31 *Prospective Plantings* report. The *Acreage* report also forecast harvested acreage at 86.6 million acres, 650,000 acres above the June 12 *WASDE* projection, which was based on historical rates of abandonment and use for silage. Compared to the 2015 crop, total acreage harvested for grain is projected up 5.8 million acres, an increase of 7 percent. The largest increase is in the Plains, followed by the Corn Belt. No region reported a decline in expected harvested acreage.

The national average corn yield for 2016 is projected at 168.0 bushels per acre based on a weather-adjusted trend model. If realized, the crop would reach 14,540 million bushels, 110 million above last month's projection and 939 million over last year's crop, besting the record 2014 crop by 324 million bushels.

June 1 Corn Stocks Higher Than Anticipated

The NASS June 30 *Grain Stocks* report pegged June 1 corn stocks at 4,722 million bushels, about 200 million bushels higher than pre-report trade expectations. Corn feed and residual use is projected 50 million bushels lower for 2015/17, reflecting the lower-than-expected March-May disappearance indicated by the stocks estimate. FSI use is also lowered, with reduced use expected for ethanol production. More than offsetting these usage reductions is a 75-million-bushel increase in projected exports. Total use for 2015/16 is projected at 13,692 million bushels, 56 million below 2014/15. The resulting projected carryout for 2015/16 is 1,701 million bushels, 7 million lower than last month's projection.
For 2016/17, total disappearance is projected at 14,200 million bushels, 30 million higher than last month. A 50-million-bushel reduction in projected feed and residual use combined with a 20-million-bushel reduction in expected FSI use lowers domestic use by 70 million bushels. A 25-million-bushel decline in projected corn use for ethanol is partly offset by an increase in corn used for seed. Exports are projected 100 million bushels higher than last month at 2,050 million, raising total use by 30 million.

Figure 1
U.S. feed grain ending stocks



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

Feed and residual for the first three quarters (September-May) of 2015/16 is reported at 4,550 million bushels, 5 percent below last season's level and 87 percent of the projected year-end total of 5,200 million. In 2014/15, the September-May period accounted for 90 percent of feed and residual use and the 5-year average for 2010/11 through 2014/15 was 92 percent of the marketing year total. Feed and residual use during the final quarter (June-August) of 2015/16 is expected to be similar to the final quarter of 2008/09, when 13 percent of total marketing year feed and residual use occurred.

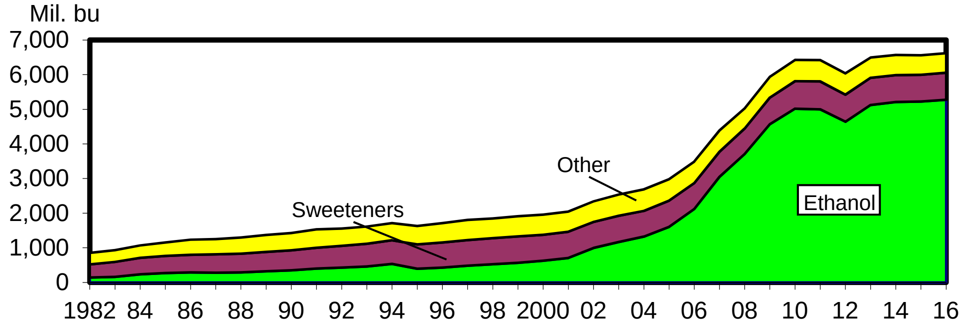
Total corn use for September-May of 2015/16 is estimated at 10,661 million bushels, down from 11,015 million in 2014/15. The feed and residual share of total use for the first three quarters was unchanged on the year at 43 percent.

Projected Food, Seed, and Industrial Use Lowered

Projected 2015/16 corn used for ethanol is reduced 25 million bushels this month to 5,225 million, reflecting the latest data from the *Grain Crushings and Co-Products Production* report. A partly offsetting increase in corn used for seed results in total FSI use of 6,592 million bushels, down 18 million from last month. For 2016/17, projected FSI use is reduced 20 million bushels to 6,650 million, with lower projected corn use for ethanol also partly offset by higher expected seed use.

Figure 2

U.S. food, seed, and industrial use of corn



Note: Marketing years. Other includes starch, beverage alcohol, cereals and other products, and seed.

Source: USDA, Economic Research Service, *Feed Grains Database.*

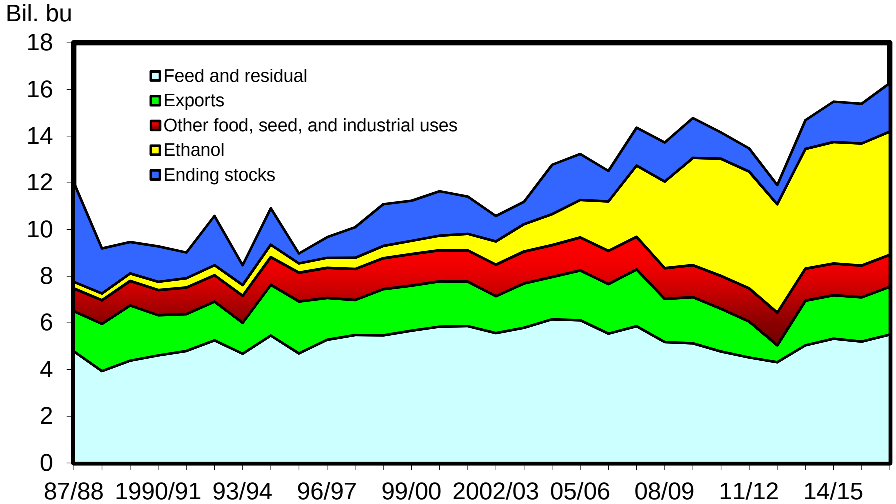
Historical Seed Use Revised Higher

Seed use calculations have been revised beginning with the 1996 crop, which is reflected in usage starting with the 1995/96 marketing year. The new seed use estimates are based on plant populations provided by the NASS objective yield survey and more accurately reflect seed use then the seeding rate, which has not been updated in recent years due to the lack of survey-based seed use data. The new seed use estimates can be accessed through ERS's Feed Grains Database at http://www.ers.usda.gov/data-products/feed-grains-database.aspx.

Corn Exports Raised

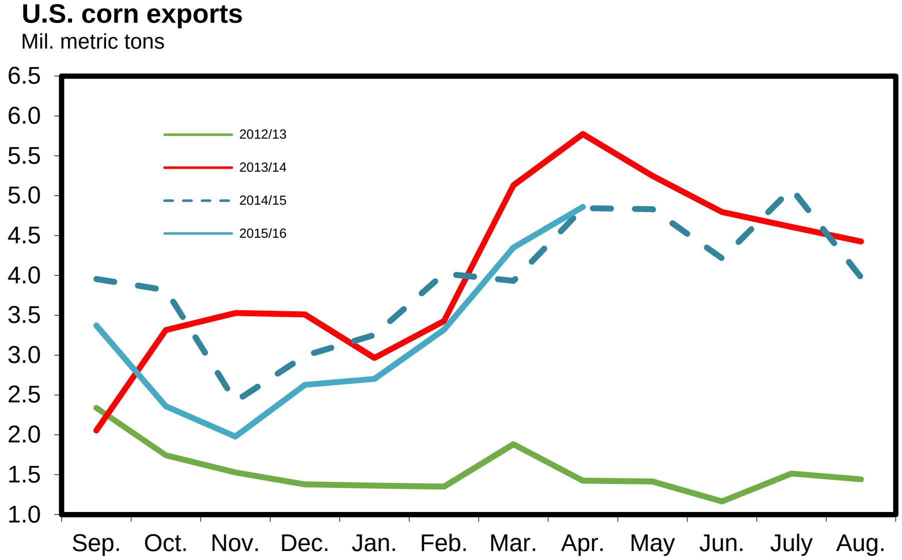
Projected corn exports are raised 75 million bushels to 1,900 million for 2015/16. Competitiveness of U.S. corn on the world market has been enhanced by reduced crop prospects and tightening supplies in Brazil. For 2016/17, exports are raised 100 million bushels to 2,050 million. If realized, this would be the highest export level since 2007, when exports totaled 2,437 million bushels.

Figure 3
U.S. corn utilization



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

Figure 4
U.S. corn exports



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

Projected Prices Lowered

The forecast farm price for 2015/16 is lowered 10 cents on the high end of the range, giving a midpoint price of $3.65 per bushel. The projected farm price range for 2016/17 is lowered by 10 cents per bushel on both the high and low ends for a midpoint price of $3.40 per bushel, reflecting increased supplies due to the higher expected production and the increased carryout projection.

Sorghum Production Outlook Raised, Prices Projected Lower With Corn

The *Acreage* report set 2016 sorghum planted acreage slightly higher than the March intentions at 7.2 million acres. Harvested area was pegged at 6.5 million acres, 196,000 greater than the June *WASDE* projection, which was based on historical harvested-to-planted ratios.

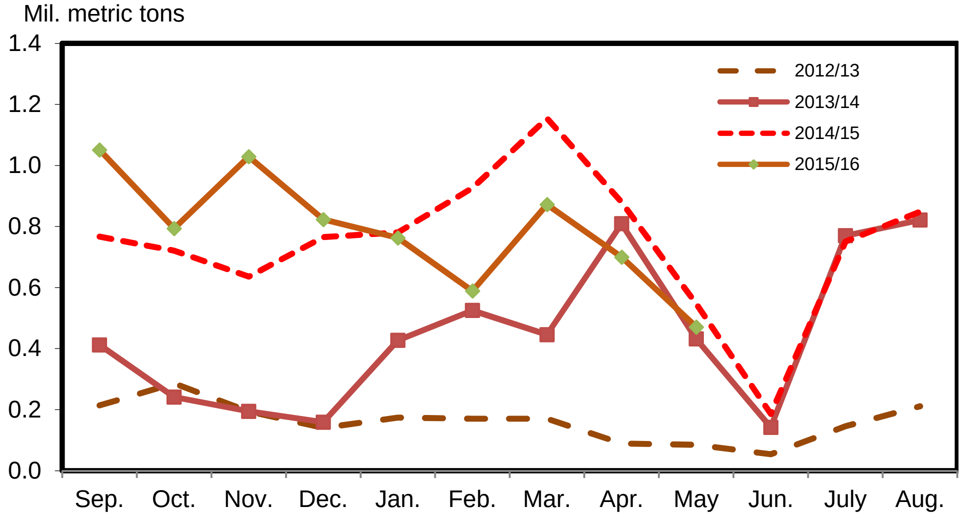
For 2015/16, projected sorghum feed and residual use is raised 10 million bushels to 110 million, based on indicated March-May usage from the June 1 stocks estimate. Total use is projected at 575 million bushels, reducing expected carryout 10 million bushels to 45 million.

Supplies for 2016/17 are raised 3 million bushels as lower carryin is more than offset by higher production resulting from the larger harvested area projection. Sorghum production is projected at 420 million bushels. With a projected 1 million bushels of imports, total supply is expected at 466 million.

The June 30 *Grain Stocks* report provides a survey-based estimate of sorghum stocks, both on- and off-farms, as of June 1, 2016. A total of 88.3 million bushels were held in all positions on June 1. This compares to the 34.3 million bushels held on the same date a year earlier. The large 2015 crop combined with slowing demand from China has resulted in the stocks buildup.

Figure 5

U.S. sorghum exports



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

The farm price range for sorghum in 2015/16 is narrowed 5 cents on each end to $3.25 to $3.35 per bushel for an unchanged midpoint of $3.30 per bushel. For 2016/17, the high and low ends of the range are each lowered 10 cents to $2.85 to $3.45 per bushel for a midpoint of $3.15 per bushel. The lowered price outlook reflects the general trend in feed grain prices driven by larger expected supplies of corn.

Barley Acreage and Yield Lowered

The *Acreage* report lowered planted area for barley from producer intentions reported in March. Planted area was lowered 173,000 acres, and harvest area was forecast 142,000 acres lower than in the June *WASDE*, at 2.6 million. Harvested area was 3.1 million acres in 2015/16. Lower area combined with a 0.1-bushel-per-acre decline in yield in the July 12 *Crop Production* report put forecast barley production for 2016/17 at 183 million bushels, 10 million below last month's projection and 32 million below 2015/16.

The June 30 *Grain Stocks* report provides a survey-based estimate of barley stocks, both on- and off-farms, as of June 1, 2016. A total of 102 million bushels were held in all positions on June 1, compared with 79 million at this point last year.

Moderated by higher beginning stocks, 2016/17 supply is lowered 7 million bushels to 305 million, 6 million below 2015/16. The decline in supply is carried through the balance sheet to carryout, which is projected at 87 million bushels.

For 2015/16, lower estimated imports reduce supply by 1 million bushels to 311 million. On the demand side, lower feed and residual use, seed use, and exports dampen total use by 5 million bushels to 209 million.

The 2016/17 farm price forecast for barley is lowered 10 cents on both the low and high ends of the range to $4.30 and $5.10 per bushel, respectively. The resultant midpoint is $4.70 per bushel. For 2015/16, the barley price is estimated at $5.52 per bushel, 2 cents lower than the previous month's forecast.

Oats Supply Projected Higher on Production Increase

The June 30 *Acreage* report raised oats planted and harvested acreage for 2016/17. Planted area was reported 276,000 acres higher than March intentions. Harvested area was forecast 135,000 acres higher than in the June *WASDE*, at 1.2 million. With a 0.2-bushel-per-acre reduction in yield forecast in the July 12 *Crop Production* report, oats production is expected up 9 million bushels, boosting supply 7 million bushels to 228 million. With no changes on the demand side for 2016/17, total use is projected the same as last month, at 170 million bushels.

The June 30 *Grain Stocks* report provides a survey-based estimate of oats stocks, both on- and off-farms, as of June 1, 2016. A total of 57 million bushels were held in all positions on June 1, compared with 54 million at this point last year.

The 2016/17 farm price forecast for oats is lowered 5 cents on both the low and high ends of the range to $1.75 and $2.15 per bushel, respectively, putting the midpoint of the projected range at $1.95 per bushel. For 2015/16, the oats price is estimated at $2.12 per bushel, 3 cents lower than the previous month's forecast.

All Hay Harvested Area Recovers in 2016

The June *Acreage* report indicates that producers intend to harvest more hay in 2016 than in 2015 and more than was indicated in the March *Prospective Plantings* report. Across all hay varieties, U.S. producers plan to harvest 56.1 million acres of hay, up from 54.4 million in 2015. Increases in the harvested area for both alfalfa (alfalfa and alfalfa mixtures) and other hay are projected. In California, hay harvest area recovers from drought conditions. Other major States such as Missouri, Montana, Texas, and Oklahoma also saw increased acreage projections.

International Outlook

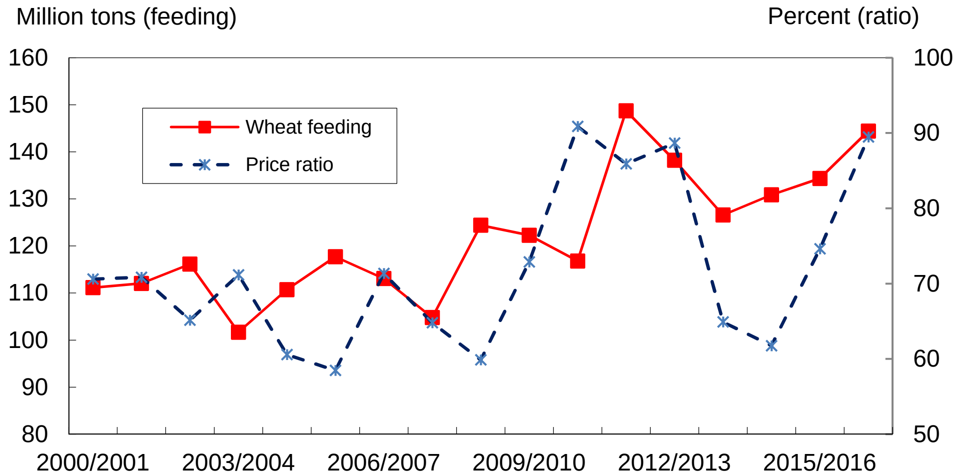
Expected World Coarse Grain Production and Consumption Reduced

USDA's projection for 2015/16 world coarse grain production is reduced from the month before, down 0.5 percent to 1,248 million tons, and production is now forecast at 4.4 percent below its 2014/15 level. For 2016/17, a rebound is expected, to 1,302 million tons, but the forecasts for output in Brazil, Canada, the European Union (EU), and Turkey are reduced by a total of 4.7 million tons from their levels in June. Most of this is offset by a 3.1-million-ton increase in the expected crop in the United States, now forecast at 385 million tons.

Driven in part by rebounding global output, world coarse grain consumption in 2016/17 is expected to increase by 52 million tons from the year before, to 1,303 million tons. The largest year-to-year increase is expected in the United States, forecast up 8.5 million tons to 321 million. But July's largest decline in USDA's 2016/17 consumption forecasts is also in the United States, a 1.7-million-ton drop despite the larger corn crop, reflecting implications of lower-than-expected corn disappearance as indicated in the June 30 *Grain Stocks* report. In addition, expected 2016/17 consumption is also reduced in several countries with reduced expectations for domestic output—Brazil, Canada, and Turkey. Consumption is lowered in China as larger supplies of lower quality wheat that fail to meet quality specifications for the minimum price program are expected to end up in feed channels, partially displacing corn feeding in regions such as the North China Plain.

The month-to-month reductions in expected 2016/17 consumption in some cases have roots in changes in the 2015/16 outlook. The 710,000-ton reduction in Brazil's projected consumption is significantly smaller than the 2.9-million-ton reduction in its 2015/16 use, which was driven in part by a 7.9-million-ton month-to-month reduction in that year's forecast for coarse grain output there. A Companhia Nacional de Abastecimento (CONAB) report released on July 7 confirmed the impact of an early end to the rainy season in central Brazil. A 1-million-ton reduction in expected 2016/17 coarse grain consumption in the EU is in part an extension of the expected increase in wheat feeding there that is driving a 300,000-ton decline in USDA's estimate of the EU's 2015/16 coarse grain consumption. Shifting relative prices and large projected stocks of wheat in the major exporting countries, as well as Russia and Ukraine, are helping drive an increase in wheat feeding around the world.

Figure 6
World wheat feeding and U.S. corn/wheat farm price ratio



Source: ERS calcullations based on data from WASDE-555 and PS&D Online..

Partly driven by increase in expected wheat feeding in a number of countries, USDA's forecast of global coarse grain consumption in 2015/16 is reduced in July by 5.7 million tons from its level of one month earlier, to 1,272 million tons. Compared with the previous year, the outlook is now for a decline of 21.2 million tons or 1.7 percent.

World coarse grain trade on an October-September year is expected to fall 4.0 percent from the year before in 2016/17. The 7.1-million-ton year-over-year decline to 170 million tons is in part a result of lower corn imports by the EU—where supplies of competitively priced corn alternatives are expected to be larger—and China, where consumption is falling and ending stocks are expected to decline for the first time in 6 years. Despite lower world trade, the United States is expected to see slightly higher exports than the year before in 2016/17—up 2.2 percent to 57.8 million tons—as Brazil's reduced corn crop leads to a 11.1-million-ton year-to-year decline in its expected corn exports. Brazil's production problems are also boosting U.S. 2015/16 corn exports, and compared with June, July's USDA forecasts for U.S. corn exports for both years are raised a combined 5 million tons.

Global coarse grain ending stocks in 2016/17 are forecast about unchanged from the year before in absolute terms—at 242 million tons—but are expected to decline relative to consumption compared with the year before. At the equivalent of 18.6 percent of world consumption, 2016/17 ending stocks are lower than the 19.4 percent expected for 2015/16, but larger than in any other year during 2003/04 through 2013/14. USDA's July projection of 2016/17 global coarse grain stocks is 1 percent higher than June, with increases in expected ending stocks in China (2.1 million tons) and the United States (1.9 million tons) helping offset a 1.3-million reduction in expected EU year-end stocks.

Contacts and Links

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Data

Feed Grains Database (http://ers.usda.gov/data-products/feed-grains-database.aspx) is a queryable database that contains monthly, quarterly, and annual data on prices, supply, and use of corn and other feed grains. This includes data published in the monthly Feed Outlook and the annual Feed Yearbook reports.

Related Websites

Feed Outlook
(http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1273
WASDE)
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Table 1--Feed grains: U.S. quarterly supply and disappearance (million bushels), 7/14/2016

Commodity, market year, and quarter 1/			Beginning stocks	Production	Imports	Total supply	Food, seed, and industrial use	Feed and residual use	Exports	Total disappear-ance	Ending stocks	Farm price 2/ (dollars per bushel)
Corn	2013/14	Sep-Nov	821	13,829	15	14,665	1,550	2,312	350	4,212	10,453	4.66
		Dec-Feb	10,453		7	10,459	1,602	1,459	390	3,451	7,008	4.40
		Mar-May	7,008		9	7,017	1,671	858	636	3,165	3,852	4.63
		Jun-Aug	3,852		6	3,858	1,677	404	544	2,626	1,232	4.06
		Mkt yr	821	13,829	36	14,686	6,500	5,033	1,920	13,454	1,232	4.46
	2014/15	Sep-Nov	1,232	14,216	5	15,452	1,615	2,225	401	4,241	11,211	3.57
		Dec-Feb	11,211		6	11,217	1,622	1,441	404	3,467	7,750	3.80
		Mar-May	7,750		10	7,760	1,662	1,109	536	3,307	4,453	3.75
		Jun-Aug	4,453		11	4,464	1,668	541	523	2,733	1,731	3.69
		Mkt yr	1,232	14,216	32	15,479	6,567	5,316	1,864	13,748	1,731	3.70
	2015/16	Sep-Nov	1,731	13,601	13	15,345	1,631	2,172	303	4,107	11,238	3.65
		Dec-Feb	11,238		18	11,256	1,645	1,451	340	3,437	7,819	3.64
		Mar-May	7,819		20	7,838	1,630	926	561	3,116	4,722	3.60
		Mkt yr	1,731	13,601	60	15,392	6,592	5,200	1,900	13,692	1,701	3.60-3.70
	2016/17	Mkt yr	1,701	14,540	40	16,281	6,650	5,500	2,050	14,200	2,081	3.10-3.70
Sorghum	2013/14	Sep-Nov	15.15	392.33	0.01	407.49	45.00	97.71	33.39	176.10	231.39	4.28
		Dec-Feb	231.39		0.01	231.40	10.00	4.19	41.48	55.67	175.73	4.22
		Mar-May	175.73		0.01	175.74	12.01	2.58	68.72	83.32	92.42	4.68
		Jun-Aug	92.42		0.07	92.49	2.88	-11.92	67.51	58.46	34.03	4.11
		Mkt yr	15.15	392.33	0.09	407.57	69.89	92.56	211.10	373.54	34.03	4.28
	2014/15	Sep-Nov	34.03	432.58	0.21	466.82	10.60	149.98	83.64	244.23	222.59	3.63
		Dec-Feb	222.59		0.12	222.71	1.80	3.70	97.36	102.86	119.86	4.17
		Mar-May	119.86		0.00	119.86	1.43	-17.49	101.63	85.57	34.29	4.41
		Jun-Aug	34.29		0.04	34.33	1.18	-55.56	70.30	15.92	18.41	
		Mkt yr	34.03	432.58	0.38	466.98	15.01	80.64	352.93	448.57	18.41	4.03
	2015/16	Sep-Nov	18.41	596.75	3.60	618.76	22.00	161.41	113.14	296.54	322.22	3.49
		Dec-Feb	322.22		0.98	323.20	47.05	-10.94	85.67	121.78	201.42	3.16
		Mar-May	201.42		0.01	201.42	37.13	2.56	73.47	113.16	88.27	3.11
		Mkt yr	18.41	596.75	5.00	620.16	135.00	110.00	330.00	575.00	45.16	3.25-3.35
	2016/17	Mkt yr	45.16	420.00	1.00	466.16	100.00	100.00	220.00	420.00	46.16	2.85-3.45

Table 1--Feed grains: U.S. quarterly supply and disappearance, cont. (million bushels), 7/14/2016

Commodity, market year, and quarter 1/			Beginning stocks	Production	Imports	Total supply	Food, seed, and industrial use	Feed and residual use	Exports	Total disappear-ance	Ending stocks	Farm price 2/ (dollars per bushel)
Barley	2013/14	Jun-Aug	80	217	2	299	40	61	3	103	196	6.22
		Sep-Nov	196		5	201	39	-11	3	31	169	5.98
		Dec-Feb	169		4	173	37	10	4	52	122	6.03
		Mar-May	122		8	129	37	6	4	47	82	5.93
		Mkt yr	80	217	19	316	153	66	14	234	82	6.06
	2014/15	Jun-Aug	82	182	7	271	39	48	4	91	180	5.69
		Sep-Nov	180		4	184	38	-14	4	28	156	5.25
		Dec-Feb	156		6	163	37	5	3	44	118	5.07
		Mar-May	118		6	124	37	4	4	45	79	4.86
		Mkt yr	82	182	24	287	151	43	14	209	79	5.30
	2015/16	Jun-Aug	79	214	4	297	40	35	3	78	219	5.39
		Sep-Nov	219		4	223	38	0	4	42	181	5.52
		Dec-Feb	181		7	188	37	10	3	50	138	5.66
		Mar-May	138		4	141	38	0	1	39	102	5.43
		Mkt yr	79	214	19	311	153	46	11	209	102	5.52
	2016/17	Mkt yr	102	183	20	305	153	50	15	218	87	4.30-5.10
Oats	2013/14	Jun-Aug	36	65	17	118	17	37	0	55	63	3.72
		Sep-Nov	63		28	91	18	25	1	43	48	3.56
		Dec-Feb	48		20	68	16	16	0	33	35	3.71
		Mar-May	35		32	67	22	20	0	43	25	4.03
		Mkt yr	36	65	97	198	73	98	2	173	25	3.75
	2014/15	Jun-Aug	25	70	27	122	18	30	1	48	74	3.34
		Sep-Nov	74		24	99	18	13	0	32	67	3.16
		Dec-Feb	67		32	99	17	22	0	39	59	3.08
		Mar-May	59		24	84	24	5	0	30	54	2.89
		Mkt yr	25	70	107	202	77	70	2	149	54	3.21
	2015/16	Jun-Aug	54	90	19	162	18	50	0	68	94	2.15
		Sep-Nov	94		26	120	18	18	1	37	83	2.08
		Dec-Feb	83		25	108	17	15	0	33	75	2.09
		Mar-May	75		16	91	24	10	1	34	57	2.11
		Mkt yr	54	90	86	230	77	94	2	173	57	2.12
	2016/17	Mkt yr	57	77	95	228	78	90	2	170	58	1.75-2.15

Latest market year is projected; previous market year is estimated. Totals may not add due to rounding.
1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year.
2/ Average price received by farmers based on monthly price weighted by monthly marketings. For the latest market year, quarterly prices are calculated by using the current monthly prices weighted by the monthly marketings for those months for the previous 5 years divided by the sum of marketings for those months.
Source: USDA, World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates and supporting materials.

Data run: 7/14/2016

Table 2--Feed and residual use of wheat and coarse grains, 7/14/2016

Market year and quarter 1/		Corn (million metric tons)	Sorghum (million metric tons)	Barley (million metric tons)	Oats (million metric tons)	Feed grains (million metric tons)	Wheat (million metric tons)	Energy feeds (million metric tons)	Grain consuming animal units (millions)	Energy feeds per grain consuming animal unit (tons)
2014/15	Q1 Sep-Nov	56.5	3.8	-0.3	0.3	60.3	-2.5	57.8		
	Q2 Dec-Feb	36.6	0.1	0.1	0.4	37.2	0.2	37.4		
	Q3 Mar-May	28.2	-0.4	0.1	0.1	28.0	-1.3	26.6		
	Q4 Jun-Aug	13.8	-1.4	0.8	0.8	13.9	7.9	21.8		
	MY Sep-Aug	135.0	2.0	0.6	1.6	139.3	4.3	143.6	92.3	1.6
2015/16	Q1 Sep-Nov	55.2	4.1	0.0	0.3	59.6	-3.0	56.6		
	Q2 Dec-Feb	36.9	-0.3	0.2	0.3	37.1	-0.0	37.1		
	Q3 Mar-May	23.5	0.1	0.0	0.2	23.8	-1.2	22.5		
	MY Sep-Aug	132.1	2.8	1.1	1.5	137.5	6.3	143.8	93.8	1.5
2016/17	MY Sep-Aug	139.7	2.5	1.1	1.6	144.9	6.7	151.7	95.1	1.6

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

Table 3--Cash feed grain prices, 7/14/2016

Mkt year and month 1/	Corn, No. 2 yellow, Central IL (dollars per bushel)			Corn, No. 2 yellow, Gulf ports, LA (dollars per bushel)			Sorghum, No. 2 yellow, Gulf ports, LA (dollars per cwt)		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Sep	4.78	3.16	3.55	5.27	4.14	4.22	9.84	7.91	8.08
Oct	4.20	3.09	3.67	5.13	4.15	4.36	9.31	8.52	8.23
Nov	4.10	3.45	3.62	5.06	4.54	4.22	8.86	9.04	7.89
Dec	4.13	3.75	3.62	5.06	4.55	4.17	9.34	9.85	
Jan	4.13	3.67	3.55	5.03	4.44	4.09	9.77	10.41	
Feb	4.33	3.65	3.56	5.32	4.41	4.06	10.16	10.70	
Mar	4.64	3.66	3.54	5.65	4.43	4.05	10.57		
Apr	4.98	3.59	3.61	5.65	4.38	4.17		9.97	
May	4.72	3.49	3.74	5.51	4.23	4.30		7.44	
Jun	4.37	3.52	3.91	5.14	4.24	4.60			
Jul	3.74	3.85		4.64	4.56				
Aug	3.59	3.51		4.48	4.14		8.41	8.09	
Mkt year	4.31	3.53		5.16	4.35		9.53	9.10	

	Barley, No. 2 feed, Minneapolis, MN (dollars per bushel)			malting, Minneapolis, MN (dollars per bushel)		Oats, No. 2 white heavy, Minneapolis, MN (dollars per bushel)		
	2014/15	2015/16	2016/17	2014/15	2015/16	2014/15	2015/16	2016/17
Jun	3.49	2.59	2.36	5.71		3.88	2.89	2.58
Jul	3.01	2.70		5.62		3.85	2.82	
Aug	2.58	2.41		5.79		3.83	2.63	
Sep	2.30	2.39		5.98	4.95	3.86	2.70	
Oct	2.44	2.57		7.28	4.95	3.68	2.58	
Nov	2.48	2.60		7.35		3.53	2.67	
Dec	2.68	2.60		7.35		3.49	2.64	
Jan	2.79	2.58		7.10		3.26	2.60	
Feb	2.73	2.50		6.75		3.11	2.60	
Mar	2.75	2.46				3.14	2.43	
Apr	2.81	2.45		6.35		2.94	2.49	
May	2.76	2.44		6.23		2.75	2.49	
Mkt year	2.74	2.52		6.50		3.44	2.63	

1/ Corn and sorghum, September 1-August 31 marketing year; Barley and oats, June 1-May 31 marketing year. Simple average of monthly prices for the marketing year.
Source: USDA, Agricultural Marketing Service, http://marketnews.usda.gov/portal/lg.

Data run: 7/13/2016

Table 4--Selected feed and feed byproduct prices (dollars per ton), 7/14/2016

Mkt year and month 1/	Soybean meal, high protein, Central Illinois, IL			Cottonseed meal, 41% solvent, Memphis, TN			Corn gluten feed, 21% protein, Midwest			Corn gluten meal, 60% protein, Midwest		
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16
Oct	443.63	381.50	327.97	355.00	346.88	292.50	157.50	90.13	96.00	601.25	549.38	509.38
Nov	451.13	441.40	308.60	345.00	313.13	291.88	158.38	105.13	109.63	631.25	581.88	477.50
Dec	498.31	431.74	289.78	401.88	334.38	265.00	168.00	143.30	113.13	638.13	613.50	482.25
Jan	479.54	380.03	279.57	378.34	313.75	248.75	165.00	135.25	109.63	625.00	632.50	452.50
Feb	509.25	370.39	273.61	388.75	302.50	238.13	167.50	117.25	102.38	668.13	631.25	457.50
Mar	497.82	357.83	276.23	401.25	310.50	216.50	177.63	107.20	87.00	744.38	613.00	445.50
Apr	514.01	336.61	303.81	405.50	288.13	207.50	166.60	83.13	73.25	784.00	575.63	434.00
May	519.38	320.23	376.36	416.88	274.38	242.50	157.00	72.25	87.00	761.25	549.38	464.10
Jun	501.72	335.03	400.44	412.50	281.00	284.00	131.88	74.40	107.13	694.50	571.60	568.13
Jul	450.79	375.48		359.50	299.38		113.70	91.25		574.00	560.00	
Aug	490.33	357.85		310.00	295.63		109.25	88.75		572.88	550.63	
Sep	525.72	333.63		360.63	293.50		98.70	95.50		587.50	525.00	
Mkt yr	490.13	368.48		377.93	304.43		147.59	100.29		656.86	579.48	

	Meat and bone meal, Central US			Distillers dried grains, Central Illinois, IL			Wheat middlings, Kansas City, MO			Alfalfa hay, weighted-average farm price 2/	
	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2013/14	2014/15	2015/16	2014/15	2015/16
Oct	385.53	385.00	291.88	216.50	96.00	123.13	153.37	111.48	105.93	193.00	156.00
Nov	410.95	383.79	266.25	217.13	113.13	132.63	138.69	106.87	106.53	182.00	150.00
Dec	459.57	424.22	221.67	220.50	159.30	133.13	198.00	135.83	99.55	180.00	150.00
Jan	456.88	382.49	200.13	200.00	186.50	132.50	151.62	140.93	104.16	170.00	147.00
Feb	438.75	370.63	193.75	214.38	187.13	136.63	150.24	124.85	97.89	167.00	142.00
Mar	501.25	376.00	261.00	245.00	189.50	134.50	156.62	1,118.55	68.64	169.00	144.00
Apr	560.00	390.63	316.25	243.50	191.00	122.38	133.38	81.93	65.12	183.00	153.00
May	516.25	368.75	310.10	222.75	178.50	141.10	131.07	64.25	60.72	192.00	147.00
Jun	506.88	313.50	295.00	184.50	157.50	170.50	102.43	60.27	57.94	178.00	
Jul	489.83	333.75		148.00	153.50		70.36	77.96		169.00	
Aug	464.37	388.75		116.88	115.13		81.24	92.72		159.00	
Sep	435.00	344.00		123.00	139.30		106.62	112.67		157.00	
Mkt yr	468.77	371.79		196.01	155.54		131.14	185.69		196.00	163.00

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), 7/14/2016

Mkt year and qtr 1/		High-fructose corn syrup (HFCS)	Glucose and dextrose	Starch	Alcohol for fuel	Alcohol for beverages and manufacturing	Cereals and other products	Seed	Total food, seed, and industrial use
2014/15	Q1 Sep-Nov	116.78	74.64	62.41	1,276.24	34.52	50.11	0.00	1,614.69
	Q2 Dec-Feb	110.32	71.95	59.76	1,293.93	36.18	49.95	0.00	1,622.10
	Q3 Mar-May	123.73	77.29	50.18	1,294.53	37.85	50.47	27.72	1,661.77
	Q4 Jun-Aug	128.08	75.96	43.19	1,335.39	33.64	50.68	1.54	1,668.46
	MY Sep-Aug	478.91	299.83	215.53	5,200.09	142.19	201.21	29.26	6,567.02
2015/16	Q1 Sep-Nov	110.81	72.34	62.30	1,300.20	34.89	50.62	0.00	1,631.16
	Q2 Dec-Feb	115.06	70.21	59.91	1,313.32	36.58	50.43	0.00	1,645.49
	Q3 Mar-May	124.73	77.13	59.70	1,251.02	38.27	50.92	27.93	1,629.70
	MY Sep-Aug	470.00	300.00	220.00	5,225.00	143.00	203.10	30.56	6,591.66
2016/17	MY Sep-Aug	470.00	310.00	220.00	5,275.00	144.00	202.10	28.90	6,650.00

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

Source: Calculated by USDA, Economic Research Service.

Date run: 7/13/2016

Table 6--Wholesale corn milling product and byproduct prices, 7/14/2016

Mkt year and month 1/	Corn meal, yellow, Chicago, IL (dollars per cwt)		Corn meal, yellow, New York, NY (dollars per cwt)		Corn starch, Midwest 3/ (dollars per cwt)		Dextrose, Midwest (cents per pound)		High-fructose corn syrup (42%), Midwest (cents per pound)	
	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16
Sep	17.32	17.80	18.99	19.47	14.14	14.20	34.50	37.00	21.25	23.25
Oct	17.44	17.96	19.11	19.63	13.30	14.29	34.50	37.00	21.25	23.25
Nov	18.44	17.53	20.14	19.20	12.91	14.95	34.50	37.00	21.25	23.25
Dec	18.89	17.50	20.56	19.17	13.90	14.80	34.50	37.00	21.25	23.25
Jan	18.94	17.42	20.61	19.09	14.11	14.62	37.00	39.00	23.25	26.75
Feb	18.71	17.44	20.39	19.11	13.93	14.35	37.00	39.00	23.25	26.75
Mar	18.51	17.13	20.06	18.92	13.90	14.71	37.00	39.00	23.25	26.75
Apr	17.90	17.70	19.57	19.37	14.08	14.71	37.00	39.00	23.25	26.75
May	17.62	18.21	19.29	19.88	14.50	15.10	37.00	39.00	23.25	26.75
Jun	17.81	18.27	19.48	19.94	14.50	15.40	37.00	39.00	23.25	26.75
Jul	18.40		20.07		14.41		37.00		23.25	
Aug	17.65		19.32		15.37		37.00		23.25	
Mkt year 2/	18.14		19.80		14.09		36.17		22.58	

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

Date run: 7/13/2016

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

Import and country/region		---------- 2013/14 ----------		---------- 2014/15 ----------		---------- 2015/16 ----------	
		Mkt year	Jun-May	Mkt year	Jun-May	Mkt year	Jun-May
Oats	Canada	1,503	1,503	1,707	1,707	1,395	1,395
	Sweden	99	99	72	72	62	62
	Finland	66	66	62	62	34	34
	All other countries	6	6	12	12	0	0
	Total 2/	1,674	1,674	1,852	1,852	1,491	1,491
Malting barley	Canada	242	242	334	334	283	283
	All other countries			28	28	0	0
	Total 2/	242	242	362	362	284	284
Other barley 3/	Canada	162	162	147	147	116	116
	All other countries	4	4	4	4	4	4
	Total 2/	166	166	151	151	119	119

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: 7/13/2016

Table 8--U.S. feed grain exports by selected destinations (1,000 metric tons) 1/, 7/14/2016

Export and country/region		---------- 2013/14 ---------- Mkt year	Sep-May	---------- 2014/15 ---------- Mkt year	Sep-May	2015/16 Sep-May
Corn	Japan	11,939	8,322	12,081	8,563	6,483
	Mexico	10,490	7,663	11,289	8,107	9,821
	South Korea	4,961	2,843	3,944	2,714	1,223
	Colombia	3,562	3,058	4,340	3,641	4,040
	China (Mainland)	2,732	2,702	612	292	262
	Egypt	2,644	1,741	1,235	679	300
	China (Taiwan)	1,780	1,348	1,850	1,342	976
	European Union-27	1,263	513	361	151	73
	Peru	1,246	987	2,555	1,985	1,653
	Venezuela	1,128	868	710	485	553
	Saudi Arabia	1,031	735	1,185	790	689
	Guatemala	753	567	852	545	632
	Dominican Republic	596	406	607	456	134
	Costa Rica	593	421	774	559	346
	Vietnam	509	431	8	8	
	Canada	479	268	1,489	1,137	741
	Israel	469	226	27	27	6
	El Salvador	409	291	542	406	498
	Honduras	375	272	428	298	402
	Panama	333	238	450	313	272
	Jamaica	283	178	287	225	197
	Morocco	202	82	298	289	209
	Cuba	137	137	26	26	59
	Nicaragua	121	63	191	141	154
	Indonesia	116	105	47	46	117
	All other countries	631	490	1,170	856	760
	Total 2/	48,783	34,953	47,359	34,081	30,599
Sorghum	China (Mainland)	4,263	2,674	8,371	6,704	5,684
	Sub-Saharan Africa	444	418	484	385	474
	Japan	293	281	72	62	60
	Mexico	251	238	21	16	432
	All other countries	112	36	17	13	267
	Total 2/	5,362	3,647	8,965	7,179	6,916
		---------- 2014/15 ---------- Mkt year	Jun-May	---------- 2015/16 ---------- Mkt year	Jun-May	
Barley	Mexico	100	100	142	142	
	Japan	90	90	5	5	
	Canada	52	52	52	52	
	China (Taiwan)	32	32	7	7	
	All other countries	38	38	30	30	
	Total 2/	312	312	235	235	

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: 7/13/2016