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Sugar and Sweeteners Outlook

Michael McConnell, coordinator
michael.mcconnell@ers.usda.gov

Increased Domestic Production Raises Supplies and Projected Ending Stocks for 2017/18

The January *World Agricultural Supply and Demand Estimates* (WASDE) raised projected sugar supplies for 2017/18 by 72,000 short tons, raw value (STRV) compared with the previous month's projection. Domestic production is projected to be 9.312 million STRV, a 67,000-STRV increase from the December report. The 169,000-STRV increase in cane sugar production—based on reporting from processors in Florida and Louisiana—exceeded the 102,000-STRV reduction in beet sugar production, based on a reduced sugarbeet production forecast from the National Agricultural Statistics Service (NASS). Projected imports are reduced 10,000 STRV based on adjustments to trade under free trade agreements.

Projected total use is 12.655 million STRV, a 50,000-STRV increase from the previous month. Domestic deliveries remain unchanged at 12.555 million STRV, including 12.400 million STRV for food and beverage deliveries. Projected exports are increased 50,000 STRV to 100,000 STRV based on increased exports of raw and refined sugar, particularly to Mexico. Ending stocks are projected to be 1.824 million STRV, which would result in a 14.4 percent stocks-to-use ratio.

Projected sugar supplies in Mexico for 2017/18 are 7.237 million metric tons, actual value (MT), a 40,000-MT increase from the previous month. Production forecasts remain unchanged at 6.100 million MT. Imports are increased 40,000 MT to 135,000 MT based on increased projected imports from the United States due to current price disparities between the U.S. and Mexico sugar markets. Domestic deliveries remain unchanged at 4.972 million MT, including 4.582 million MT delivered for domestic consumption. Projected exports to non-U.S. destinations are raised 40,000 MT to 1.257 million MT due to the increased availability of supplies. Ending stocks remain unchanged at 1.008 million MT, resulting in a 22.0-percent stocks-to-consumption ratio, both unchanged from the December report.

Increased projected cane sugar production exceeds reductions in beet sugar production

The January *World Agricultural Supply and Demand Estimates* (WASDE) raised projected total supplies for 2017/18 by 72,000 short tons, raw value (STRV), based on higher beginning stocks and production eclipsing lower imports. Beginning stocks for 2017/18 are projected at 1.851 million STRV, due to revised inventories by processors for 2016/17 submitted to the Farm Service Agency (FSA) and published in the most recent *Sweetener Market Data* (SMD). Projected increases in sugar use offset some of the increased supplies, but ultimately higher expected supplies are projected to translate into higher ending stocks.

Table 1 -- U.S. sugar: supply and use, by fiscal year (Oct./Sept.), January 2018

Items	2015/16	2016/17 (estimate)	2017/18 (forecast)	2015/16	2016/17 (estimate)	2017/18 (forecast)
	1,000 Short tons, raw value			1,000 Metric tons, raw value		
Beginning stocks	1,815	2,054	1,851	1,647	1,863	1,679
Total production	8,989	8,969	9,312	8,155	8,137	8,448
Beet sugar	5,119	5,103	5,257	4,644	4,629	4,769
Cane sugar	3,870	3,866	4,055	3,511	3,507	3,679
Florida	2,173	2,055	2,075	1,971	1,864	1,882
Louisiana	1,428	1,628	1,820	1,296	1,477	1,651
Texas	116	140	160	106	127	145
Hawaii	152	43	0	138	39	0
Total imports	3,341	3,244	3,316	3,031	2,943	3,008
Tariff-rate quota imports	1,620	1,611	1,788	1,469	1,462	1,622
Other program imports	396	419	250	359	380	227
Non-program imports	1,325	1,213	1,278	1,202	1,101	1,160
Mexico	1,309	1,201	1,268	1,187	1,090	1,151
Total supply	14,145	14,267	14,479	12,832	12,943	13,135
Total exports	74	95	100	67	86	91
Miscellaneous	-33	38	0	-30	35	0
Deliveries for domestic use	12,051	12,283	12,555	10,932	11,143	11,390
Transfer to sugar-containing products for exports under re-export program	148	127	120	134	115	109
Transfer to polyhydric alcohol, feed, other alcohol	22	29	35	20	27	32
Commodity Credit Corporation (CCC) sale for ethanol, other	0	0	0	0	0	0
Deliveries for domestic food and beverage use	11,881	12,127	12,400	10,778	11,001	11,249
Total use	12,091	12,416	12,655	10,969	11,264	11,480
Ending stocks	2,054	1,851	1,824	1,863	1,679	1,655
Private	2,054	1,851	1,824	1,863	1,679	1,655
Commodity Credit Corporation (CCC)	0	0	0	0	0	1
Stocks-to-use ratio	16.99	14.91	14.42	16.99	14.91	14.42

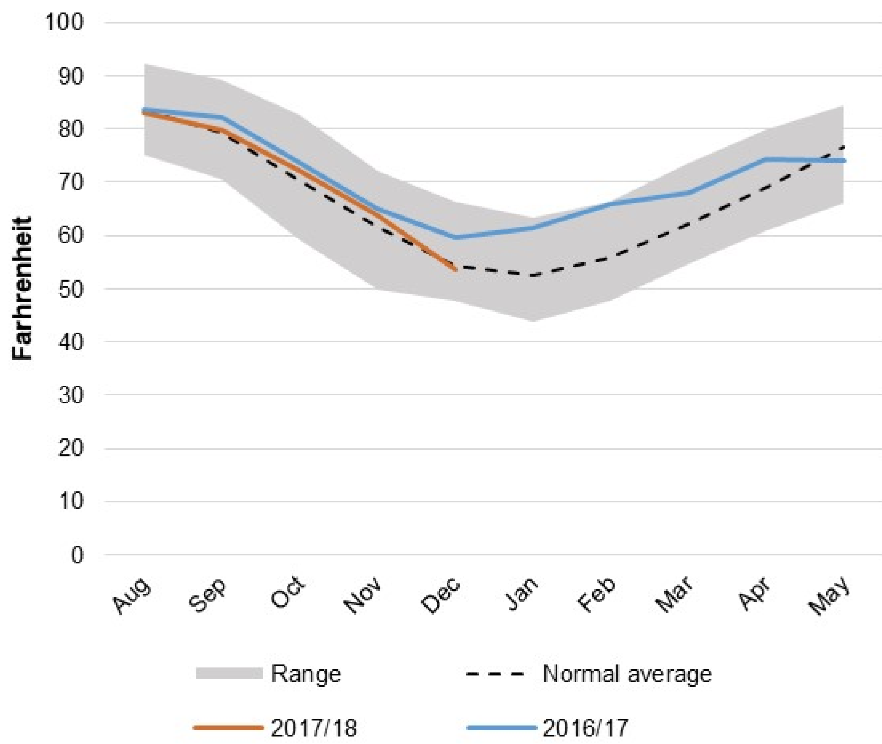
Source: U.S. Dept. of Agriculture, Economic Research Service, Sugar and Sweetener Outlook.

Total domestic sugar production is projected to be 9.312 million STRV in 2017/18, a 67,000-STRV increase from the December WASDE. An increase in cane sugar production more than offsets the decline in projected beet sugar production.

Strong sugarcane crops in both Florida and Louisiana seem to be coming to fruition as their harvest seasons continue, raising the outlook for sugar production in both States. Cane sugar production in 2017/18 is projected to be 5.257 million STRV, a 169,000-STRV increase from the previous month. The increase is due to a 39,000-STRV production increase in Florida and a 130,000-STRV increase in Louisiana.

The current projection of 1.820 million STRV of cane sugar production in Louisiana would be a record, eclipsing the previous production record in 2012/13 by 7.9 percent. Despite some unseasonably cold winter weather and uncharacteristic snow occurring in the region in December, average monthly temperatures and precipitation levels have remained in line with historical norms and haven't impeded the progress of the harvest. The National Agricultural Statistics Service (NASS) forecasts sugarcane production for sugar in Louisiana at 13.031 million short tons, which would be the largest crop since 2002/03 when recovery rates were substantially lower than current levels. The larger crop has also pushed the harvest campaign later into the month, as several processors in the State are expected to continue harvesting and crushing cane at least through mid-January, several weeks longer than typical.

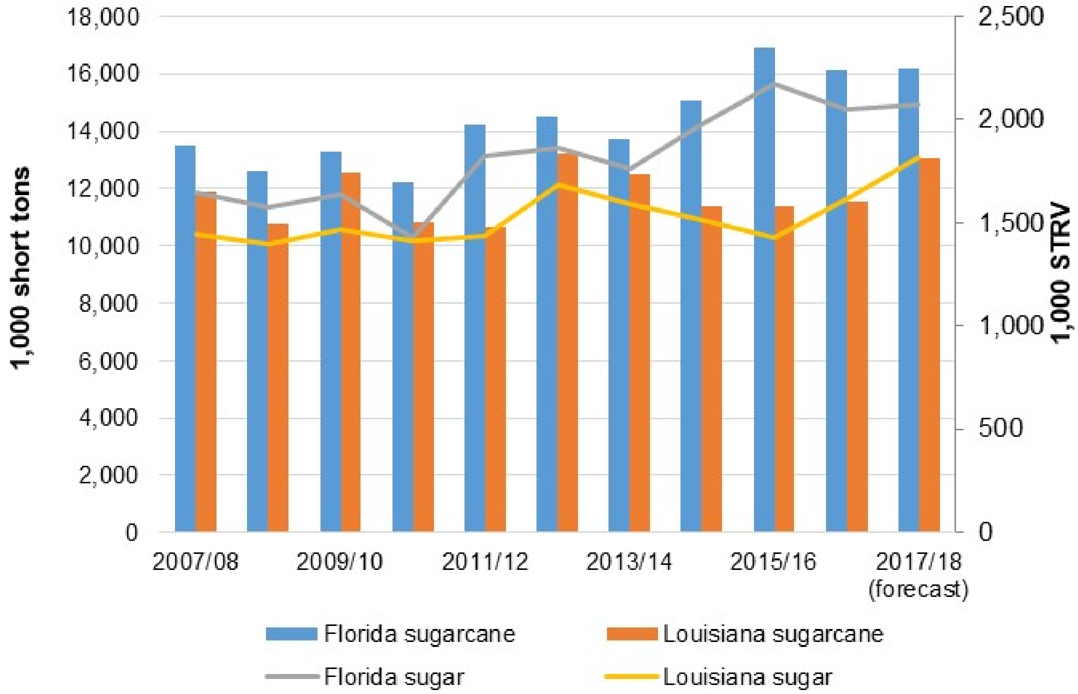
Figure 1
Lafayette, LA temperatures, monthly averages, 2015/16-2016/17 and normal



Source: U.S. Department of Agriculture, Office of the Chief Economist.

The current NASS forecast for sugarcane production for sugar in Florida is 16.156 million short tons, a slight 0.2-percent increase from the previous year. The full impacts of September's Hurricane Irma in the region are still being realized as the harvest campaign continues through the winter. Forecast harvested area is not significantly different than expectations before the storm, and sugarcane yields are slightly higher than the previous year, although below the record level in 2015/16. The raised production forecast is primarily due to a higher recovery rate, in line with processors' expectations. This year's crop appears to have recovered somewhat from the strong winds that knocked over sugarcane plants in many fields, which can have a detrimental impact on the quality and sugar content of the crop.

Figure 2
Harvested area and yields, sugarcane, Florida and Louisiana, 2007/08 to 2017/18



Source: U.S. Department of Agriculture, National Agricultural Statistics Service.

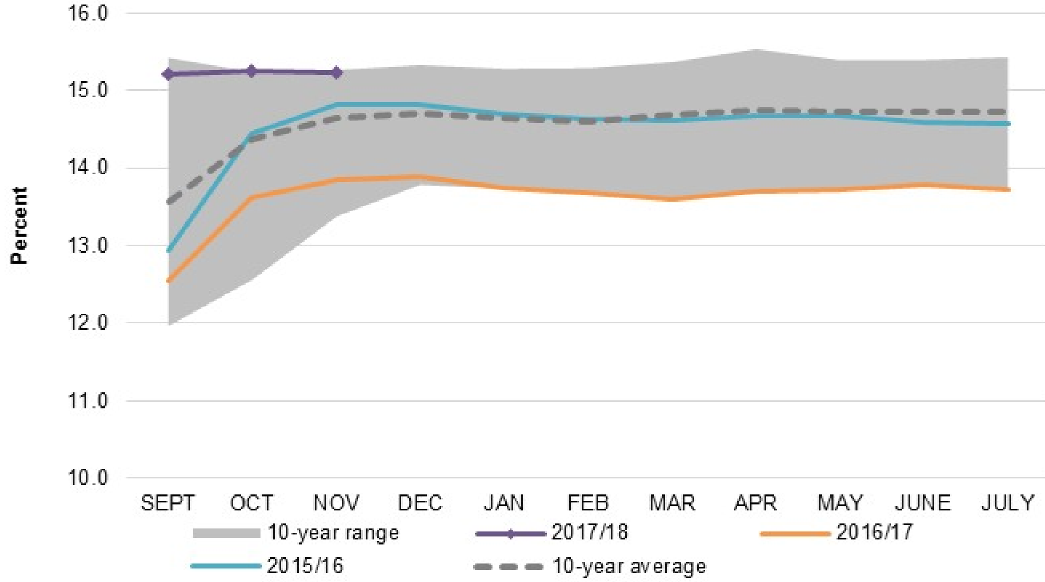
Beet sugar is projected to be 5.257 million STRV, a 102,000-STRV reduction from the previous month. The reduction is due to lower forecasts of the sugarbeet crop. NASS sugarbeet production is forecast at 35.325 million STRV, a 2.0-percent reduction from the previous forecast based primarily on lower yields. According to processors' reporting to the SMD through November, the sucrose extraction rate from sliced beets remains on track to reach historical highs. Temperatures in sugarbeet regions have been in line with normal conditions for December, setting the stage for good storage conditions for piled sugarbeets heading into the winter portion of the slicing campaign.

Table 2. Beet sugar production projection calculation, 2017/18

	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18 December	2017/18 January
Sugarbeet production (1,000 short tons) 1/	29,783	32,034	28,896	35,224	32,789	31,285	35,371	36,881	36,037	35,325
Sugarbeet shrink 2/	5.7%	5.9%	5.9%	4.8%	6.8%	5.4%	6.5%	8.3%	6.4%	6.4%
Sugarbeet sliced (1,000 short tons)	28,097	30,137	27,184	33,532	30,545	29,595	33,066	33,834	33,743	33,076
Sugar extraction rate from slice	14.3%	15.4%	15.0%	15.3%	14.3%	14.6%	14.6%	13.7%	15.4%	15.4%
Sugar from beets slice (1,000 STRV)	4,023	4,631	4,086	5,142	4,325	4,325	4,820	4,643	5,185	5,083
Sugar from molasses (1,000 STRV) 2/	325	357	401	327	324	341	380	352	345	345
Crop year sugar production (1,000 STRV) 3/	4,348	4,987	4,487	5,469	4,648	4,667	5,201	4,995	5,530	5,428
August-September sugar production (1,000 STRV)	396	623	294	708	315	461	688	606	715	715
August-September sugar production forecast (1,000 STRV) 4/	623	294	708	315	461	688	606	715	504	504
Sugar from imported beets (1,000 STRV) 5/	--	--	--	--	--	--	--	--	40	40
Fiscal year sugar production (1,000 STRV)	4,575	4,659	4,900	5,076	4,794	4,893	5,119	5,103	5,359	5,257

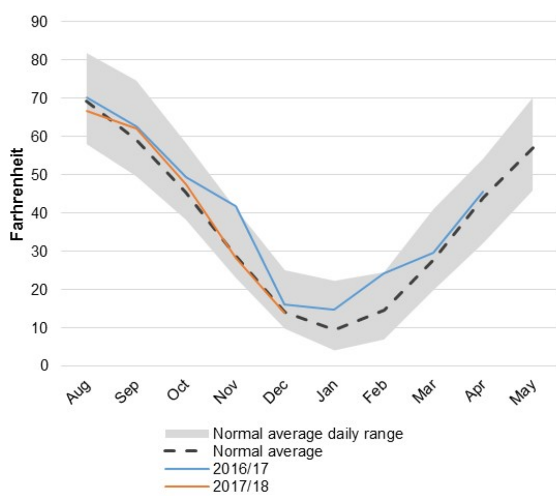
Notes: 1/ National Agricultural Statistics Service, U.S. Dept. of Agriculture. 2/Projections based on processor forecasts published by U.S. Dept. of Agriculture, Farm Service Agency. 3/ August-July basis. 4/ 2017/18 based on 10-year historical average. 5/ Sugar from imported beets split out for projections only, included in total once full crop year slice is recorded. They are incorporated into total production in historical data.
Source: U.S. Dept. of Agriculture, Economic Research Service and World Agricultural Outlook Board.

Figure 3
Cumulative sugar extraction rate, beet sugar produced per sugarbeet sliced, crop year



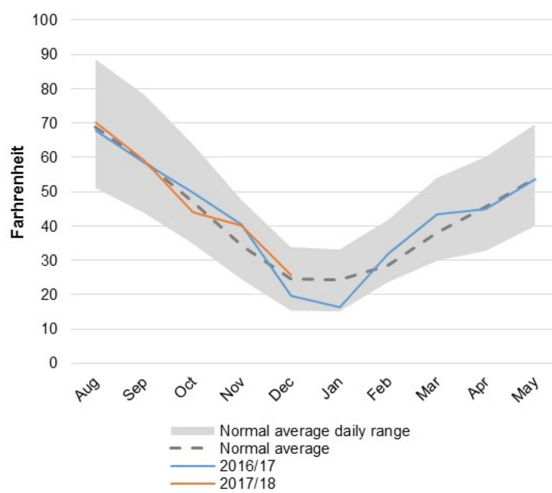
Source: U.S. Dept. of Agriculture, Economic Research Service and Farm Service Agency.

Figure 4
Fargo, ND temperatures, monthly averages, 2015/16-2016/17 and normal



Source: U.S. Department of Agriculture, Office of the Chief Economist.

Figure 5
Pocatello, ID temperatures, monthly averages, 2015/16-2016/17 and normal



Source: U.S. Department of Agriculture, Office of the Chief Economist.

Projected imports reduced slightly due to adjustments to shipments from free trade agreements

Total U.S. imports in 2017/18 are projected to be 3.316 million STRV, a 10,000-STRV reduction from the previous month. Imports under quota programs are reduced 10,000 STRV to 1.788 million STRV. The reduction is due to adjustments in imports from free trade agreements, such as imports from CAFTA-DR and Panama under 2017 calendar year quotas that were not filled during the period October-December 2017 and specialty sugar imports from Panama and Peru under 2018 calendar year quotas that are not expected to be shipped during the period January-September 2018. Projected imports under the 2017/18 WTO raw sugar TRQ remain unchanged at 1.231 million STRV, incorporating a 99,000-STRV shortfall. Imports from Mexico are unchanged from the previous month's projection, totaling 1.268 million STRV.

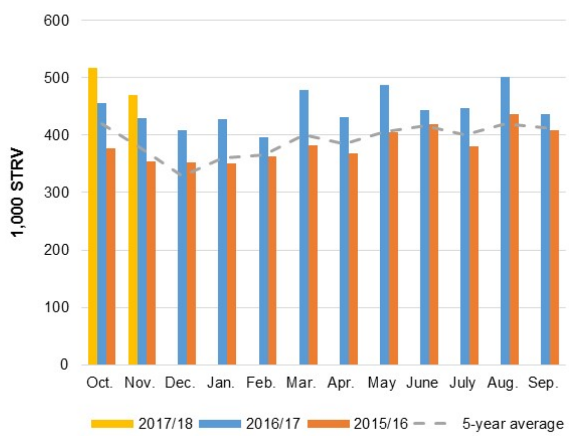
Projected total use raised in 2017/18 due to increased exports

Total sugar use for 2017/18 is projected to be 12.655 million STRV, a 50,000-STRV increase from the December projection. The change reflects a 50,000-STRV increase in projected exports, raised to 100,000 STRV for the year. The increase is based on reported shipments and reports of future shipments of sugar to foreign markets—both refined and raw sugar.

Historically, U.S. sugar exports have primarily been part of the re-export program. The program allows for participating refineries to gain access to world market raw sugar for import, so long as sugar or sugar-containing products are exported in accordance with regulations of the program. Exports in 2017/18, however, are expected to occur even without the benefits of the re-export program. In the first 2 months of the 2017/18 fiscal year, exports of raw and refined sugar to Mexico have increased substantially from the previous year. This has occurred despite changes to regulations Mexico's IMMEX program initiated in 2016 that disqualifed U.S. sugar benefiting from the U.S. re-export program for IMMEX program benefits. High prices in Mexico, however, may be offering trading opportunities for both raw and refined U.S. sugar. In addition to exports to Mexico, exports to other destinations are also expected under the re-export program to maintain program balances.

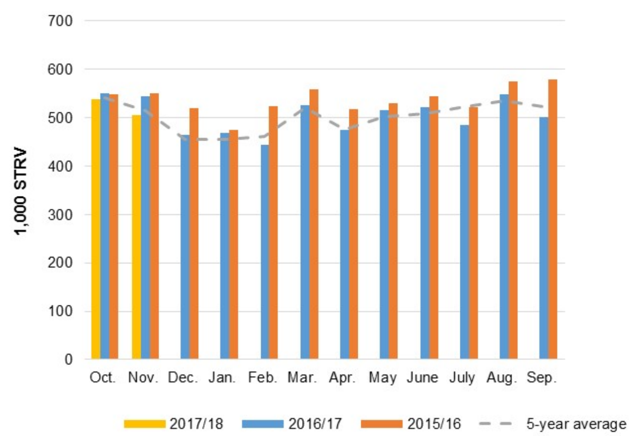
Domestic deliveries remain unchanged from the December projection at 12.555 million STRV, including 12.400 million STRV projected for food and beverage use. This represents a 2.3-percent increase from the revised 2016/17 total. Through the first 2 months of 2016/17, total domestic deliveries for food and beverage are unchanged from the previous year. Deliveries from beet processors were 11.5 percent higher than the previous year, continuing the strong growth in the previous year and likely buoyed by strong production levels in the early portions of the 2017/18 sugarbeet processing campaign. Deliveries by cane refiners were 4.6 percent lower than the same period the previous year, also continuing trends from 2016/17.

Figure 6
Beet sugar deliveries, monthly, 2015/16 through 2017/18



Source: U.S. Department of Agriculture, Farm Service Agency.

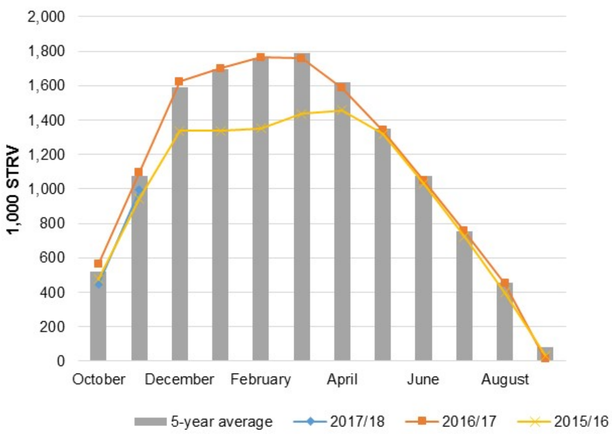
Figure 7
Cane sugar deliveries, monthly, 2015/16 through 2017/18



Source: U.S. Department of Agriculture, Farm Service Agency.

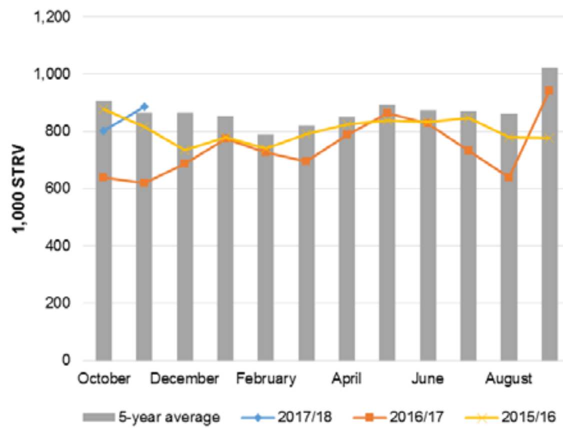
One distinction between current market conditions compared with the previous year, however, is inventory levels in the cane sector. Inventories reported by cane processors and refiners in November are 9.5 percent higher than the previous year; primarily due to higher imports from USDA actions in July 2017. Along with relatively large domestic cane sugar production that is still coming to the market, the cane sector does not have the same supply constraints that it faced a year ago.

Figure 8
Sugarcane processors inventories, monthly, 2010/11 to 2016/17



Source: U.S. Department of Agriculture, Farm Service Agency.

Figure 9
Sugarcane refiners' total sugar inventories, monthly, 2010/11 to 2016/17



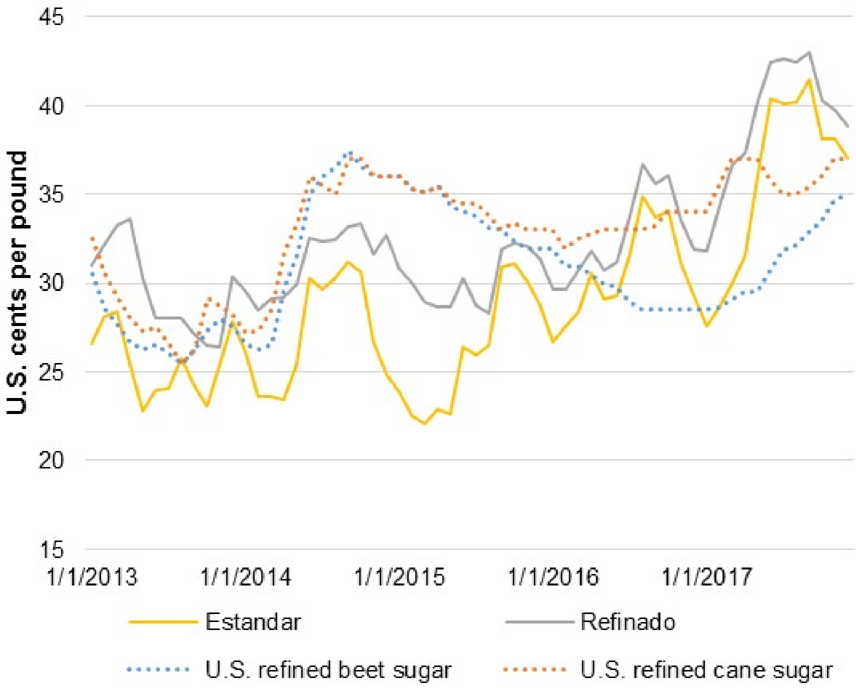
Source: U.S. Department of Agriculture, Farm Service Agency.

Ending stocks are projected to be 1.824 million STRV, a 22,000-STRV increase from the December projection, as the increase in supplies exceed the increase in use. The stocks-to-use ratio is projected to be 14.4 percent, also an increase from the previous month, but below the 2016/17 level of 14.9 percent.

Larger imports for Mexico in 2017/18 raise total supplies

Mexico sugar supplies are projected to be 7.237 million metric tons, actual value (MT), a 40,000-MT increase from the previous month's figure. The increase in supplies is due to an increase in projected imports—a rise of 40,000 MT from the previous month to 135,000 MT. The larger imports reflect the increase in shipments of both raw and refined sugar from the United States, as reported by U.S. Census, as well as the expectation of additional shipments during the year. Sugar prices in Mexico have remained high relative to the United States. Since the spring of 2017, prices for both estandar and refined sugar in the Mexico City wholesale market, converted into U.S. currency, have been higher than U.S. refined sugar prices, allowing for trade opportunities.

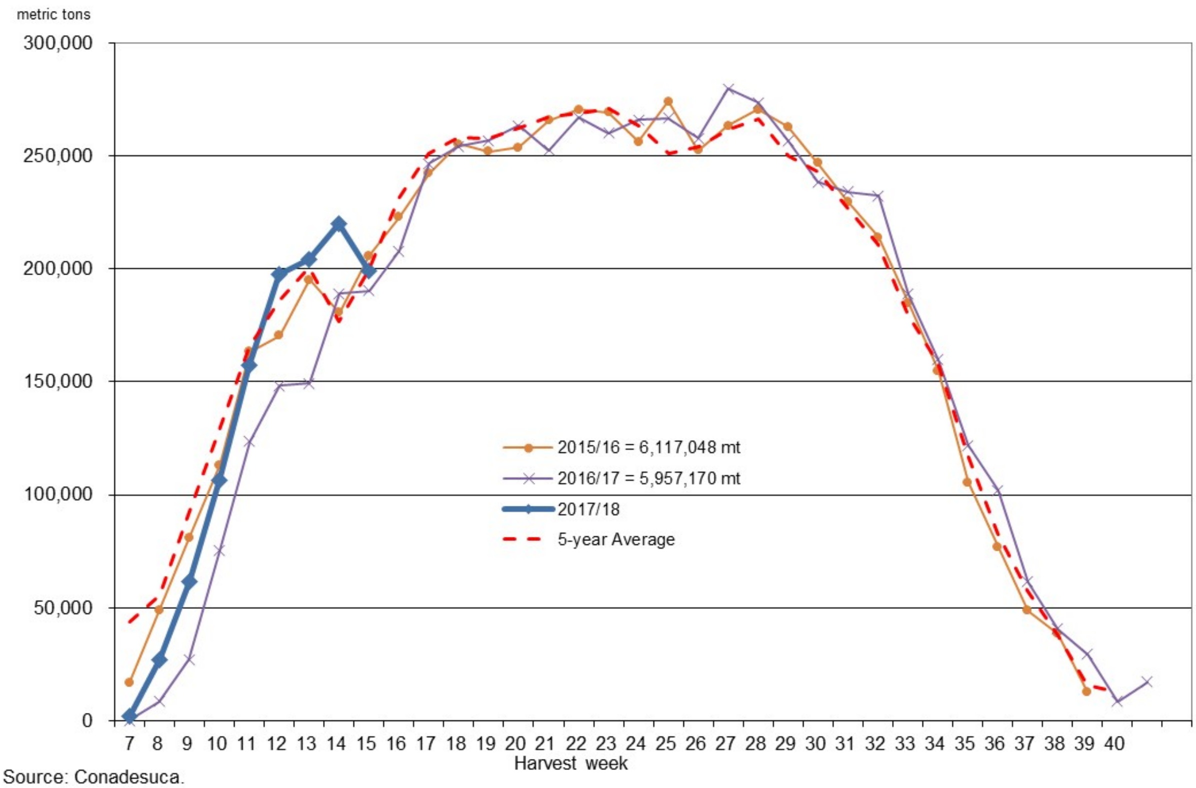
Figure 10
Mexico Estandar and Refinado sugar prices, monthly, January 2013 to December 2017



Source: U.S. Department of Agriculture, Economic Research Service.

Mexico sugar production is projected to be 6.100 million MT, unchanged from the previous month. According to Mexico's *Comité Nacional para el Desarrollo Sustentable de la Caña de Azúcar* (Conadesuca), the Mexican sugarcane harvest is ahead of the previous year through January 6, 2018. While the harvest season is still in its early stages, with the peak of the production season typically coming after the Christmas and New Year holiday period, harvested area is 23.1 percent higher than the same period the previous year. With strong recovery rates thus far, sugar production is also 28.9 percent higher than the same period in 2016/17, totaling 1.175 million MT.

Figure 11
Mexico sugar production, by week of harvest, 2015/16-2017/18



Source: Conadesuca.

Through January 6, 2018, 112,000 MT of production has been raw sugar with a polarity less than 99.2. This portion of production is most likely to be exported to the United States, fulfilling the portion of the Export Limit that requires that product is specified as having less than 99.2 polarity, as well as that it be free-flowing (not packaged) and transported on a bulk vessel. According to Conadesuca's reporting, the mills that have been producing this specification are primarily located near the Gulf of Mexico, and several have been producing exclusively low polarity sugar thus far. For mills in the Gulf region of the country, low polarity sugar has accounted for about 20 percent of the region's total sugar production. While this specification has not been reported in previous years' reports for comparison, it is likely that this is more production than usual that would be dedicated for export and unlikely to enter domestic marketing channels. Based on the Export Limit from the December WASDE, the raw sugar portion of the Export Limit would be 760,000 MT. Current production accounts for about 15 percent of the current raw sugar portion of the Export Limit.

Domestic deliveries in Mexico are projected to be 4.972 million MT in 2017/18, unchanged from the previous month. Deliveries for domestic consumption are projected to be 4.582 million MT, or 1.5 percent larger than the previous year. Through the first 2 months of 2017/18, Conadesuca-reported sugar deliveries have been 8.6 percent lower than the previous year, although historically month-to-month deliveries can be volatile. Even with 3.7 percent higher high-fructose corn syrup (HFCS) deliveries, total sweetener deliveries are 5.5 percent lower than the same period in 2016/17. Inventory levels in November were 18.5 percent larger than in 2016/17, and the largest volumes since 2013/14. Relatively large inventories—but reduced deliveries—could be indicative of the larger production of low polarity sugar likely destined for U.S. markets early in the production season.

The increased supplies projected for 2017/18 are ultimately expected to translate into higher exports. Exports for 2017/18 are projected to be 1.257 million MT, a 40,000-MT increase from the previous month. Exports to the United States are unchanged at 1.085 million MT. Exports to other countries account for the 40,000-MT increase and are projected to be 171,000 MT.

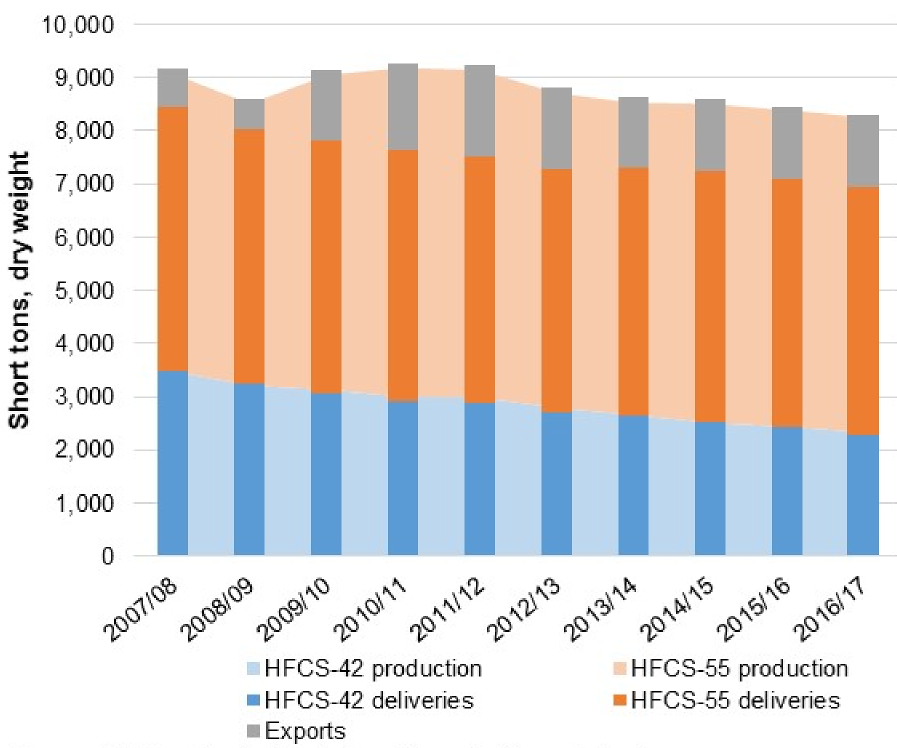
Ending stocks are projected at 1.008 million MT, unchanged from December. This results in a 22.0-percent stocks-to-consumption ratio, which is comparable to the previous year's total of 22.2 percent and in line with historical levels. Inventory levels larger than this are expected to stimulate additional exports.

Special Article: U.S. HFCS Market Continues To Experience Contracting Domestic Market

Domestic deliveries of high-fructose corn syrup (HFCS) continued to decline in 2016/17, with exports accounting for a larger portion of total supplies. This continues trends that have been prevalent in the HFCS market since 2009/10. Consumption patterns for caloric sweeteners in the United States since 2008 have been characterized by more per capita consumption of refined sugar and less of HFCS. There are three main market factors associated with these trends: higher corn prices and an increased ethanol production accounting for a larger proportion of the U.S. corn crop; increased sugar imports from Mexico, with the sweetener market provisions of NAFTA going into effect in 2008; and increased food manufacturer formulation and labeling away from corn sweeteners, in response to perceived customer preferences.

Total deliveries of HFCS were 6.950 million short tons in 2016/17, a 2.2-percent decline from 2015/16. There has been a consistent decline in deliveries for both HFCS-55, which is used primarily for beverages, and HFCS-42, also used in beverages but more commonly in food items such as bakery and confectionary products, condiments, and preservatives, Compared with the previous year, 2016/17 HFCS-42 deliveries fell 5.4 percent. Deliveries of HFCS-55, which still constitute the majority of the domestic market, also declined, but at a lower rate of 0.6 percent. Both of these declines are consistent with the 10-year trend, which also shows declines for both, but at a higher rate for HFCS-42.

Figure 12
United States high fructose corn syrup production, fiscal year, 2006/07 to 2016/17



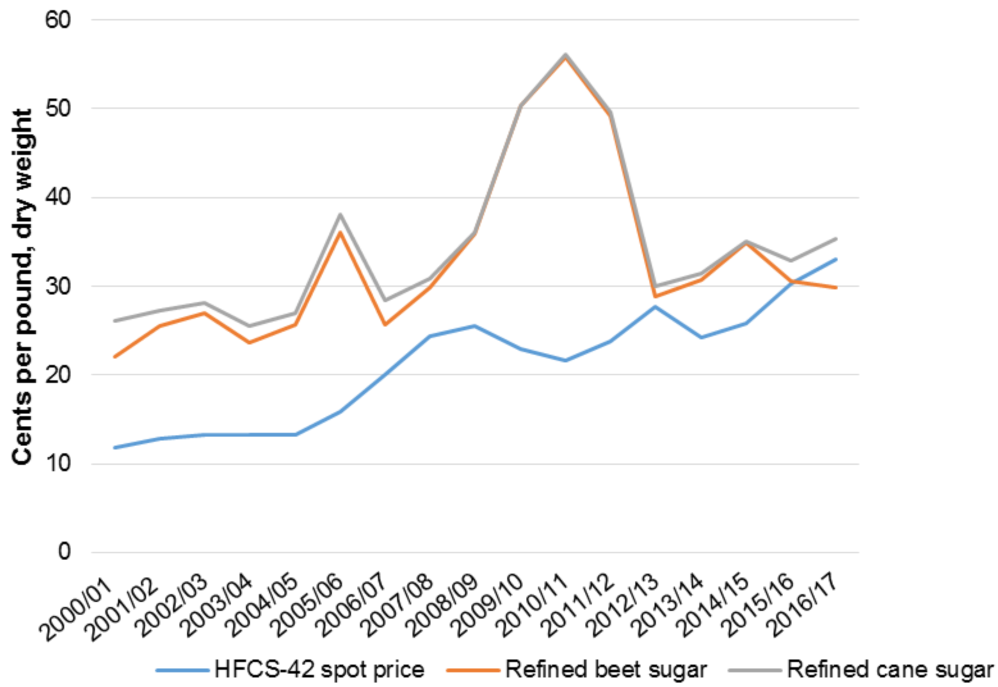
Source: U.S. Department of Agriculture, Economic Research Service.

Total HFCS production in 2016/17 was 8.254 short tons, dry weight, a 1.6-percent decline from the previous year. Production of HFCS-42 declined 4.4 percent from the previous year, compared with a 0.5-percent decline in HFCS-55 production. This is in line with trends seen over the last 10 years. Since 2007/08, HFCS-42 production has declined by an average annual rate of 4.4 percent, while HFCS-55 production has actually increased slightly.

Exports have become an increasingly important component of the HFCS for corn millers, particularly for HFCS-55 sales. Domestic markets have been declining more quickly than production, even with industrial reorganization among corn wet mill facilities in recent years to reduce capacity and increase utilization rates. As a result, foreign sales have grown over the past 10 years, with the great majority of exports destined for Mexico. Similar to increased imports of sugar from Mexico, HFCS producers also benefited from the implementation of NAFTA for sweetener markets, using the increased market access to grow trade with Mexico. Exports peaked in 2011/12, however, as several years of relatively large sugar supplies and lower prices in Mexico made HFCS less competitive. While exports remain significantly higher than their pre-NAFTA levels, they have remained relatively unchanged for the past several years.

Domestically, the price competitiveness of HFCS compared with refined sugar has waned as well. For the second-consecutive year, the average annual spot price for refined beet sugar was less than the dry weight equivalent price for HFCS-42. While the estimated net cost of corn sweetener for corn millers is lower than it was from 2011/12 to 2012/13, when corn prices were between $6.50 and $7.00 per bushel (compared with an average price of $3.38 per bushel in the Central Illinois market in 2016/17), HFCS production continues to account for a relatively smaller part of the U.S. corn crop and as a component of its value to the sector.

Figure 13
United States high fructose corn syrup and refined sugar prices, fiscal year, 2000/01 to 2016/17



Source: U.S. Department of Agriculture, Economic Research Service.

Contacts and Links

Contact Information
Michael McConnell, (202) 694-5184, michael.mcconnell@ers.usda.gov (coordinator)

Verna Daniels, (202) 694-5301, vblake@ers.usda.gov (web publishing)

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