



Sugar and Sweeteners Outlook

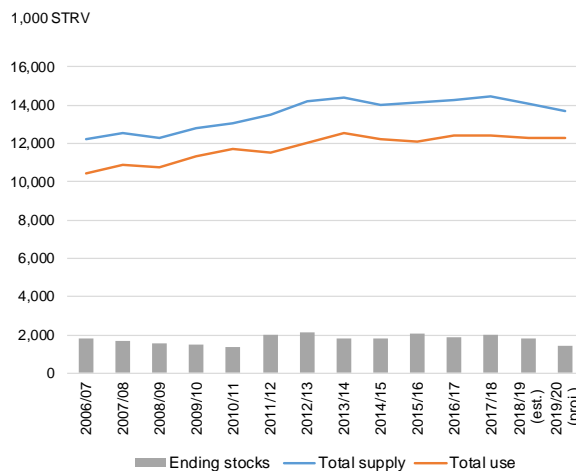
Michael McConnell, coordinator
David Olson, contributor

Higher Imports Raise Expected U.S. Sugar Stocks for 2019/20

The U.S. Department of Agriculture increased volumes of the 2019/20 World Trade Organization (WTO) raw and refined Tariff Rate Quotas (TRQs), resulting in higher supplies and ending stocks forecast for 2019/20. The projected ending stocks-to-use ratio is still expected to be historically tight, but it is significantly higher than the previous month’s forecast.

Mexico’s sugarcane had an unprecedented area harvest rate during March, but it is still experiencing low yields due to widespread drought conditions. Production for 2019/20 is raised slightly, allowing for small additional supplies to be exported to both the United States and other destinations.

U.S. sugar supply, use, and ending stocks, 2006/07 to 2019/20



Note: Short tons, raw value (STRV)
Source: USDA, World Agricultural Outlook Board.

United States Outlook

Increased Imports Under Quota Programs Raise U.S. Sugar Supplies

In the USDA's April *World Agricultural Supply and Demand Estimates* (WASDE), U.S. sugar supplies for 2019/20 are projected to total 13.699 million short tons, raw value (STRV)—a 547,000-STRV increase from the previous month's tight market projection. With no changes projected for U.S. sugar use, the stocks-to-use ratio is raised from last month's level of 7.2 percent to 11.7 percent. This is still relatively tight by historical standards but closer to the recent historical range.

Table 1: U.S. sugar: Supply and use, by fiscal year (Oct./Sept.), April 2020

Items	2017/18	2018/19	2019/20	2017/18	2018/19	2019/20
		(estimate)	(forecast)		(estimate)	(forecast)
	1,000 Short tons, raw value			1,000 Metric tons, raw value		
Beginning stocks	1,876	2,008	1,783	1,702	1,822	1,617
Total production	9,293	8,999	8,038	8,430	8,163	7,292
Beet sugar	5,279	4,939	4,298	4,789	4,480	3,899
Cane sugar	4,014	4,060	3,740	3,641	3,683	3,393
Florida	1,983	2,005	2,100	1,799	1,819	1,905
Louisiana	1,862	1,907	1,513	1,689	1,730	1,372
Texas	169	147	127	153	134	115
Hawaii	0	0	0	0	0	0
Total imports	3,277	3,070	3,879	2,973	2,785	3,519
Tariff-rate quota imports	1,663	1,541	2,180	1,509	1,398	1,978
Other program imports	326	438	350	296	397	318
Non-program imports	1,287	1,092	1,349	1,168	990	1,224
Mexico	1,223	1,000	1,199	1,110	908	1,088
High-duty	64	91	150	58	83	136
Total supply	14,445	14,077	13,699	13,105	12,770	12,428
Total exports	170	35	35	154	31	32
Miscellaneous	82	28	0	75	26	0
Deliveries for domestic use	12,185	12,231	12,230	11,054	11,096	11,095
Transfer to sugar-containing products						
for exports under re-export program	110	98	80	100	89	73
Transfer to polyhydric alcohol, feed, other alcohol	28	27	25	25	25	23
Commodity Credit Corporation (CCC) sale for ethanol, other	0	0	0	0	0	0
Deliveries for domestic food and beverage use	12,048	12,106	12,125	10,930	10,982	11,000
Total use	12,438	12,294	12,265	11,283	11,153	11,127
Ending stocks	2,008	1,783	1,434	1,822	1,617	1,301
Private	2,008	1,783	1,434	1,822	1,617	1,301
Commodity Credit Corporation (CCC)	0	0	0	0	0	0
Stocks-to-use ratio	16.14	14.50	11.70	16.14	14.50	11.70

Source: USDA, Economic Research Service, Sugar and Sweetener Outlook.

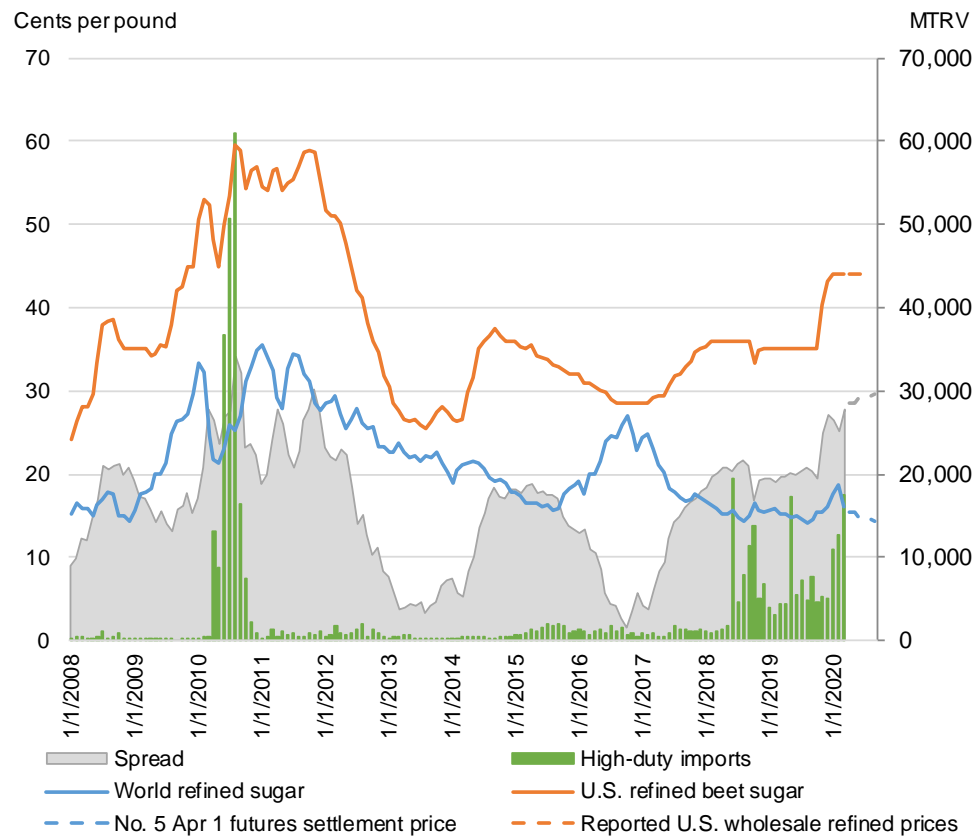
The increase in supply is primarily the result of policy actions taken by the Secretary of the U.S. Department of Agriculture (USDA) and the Office of the U.S. Trade Representative (USTR). On April 1, the USDA increased the 2019/20 WTO raw sugar TRQ by 350,000 STRV and the refined sugar TRQ by 200,000 STRV. On April 8, USTR allocated these increases, including the country allocations for the raw sugar TRQ. It allocated part of the refined TRQ to Canada (nearly 6,000 STRV) and the rest to the Global, first-come-first serve nations (194,000 STRV). It also included a schedule of tranches for entry of the Global allocation, starting on April 13, 2020, with 105,000 STRV of the additional allocation, with successively smaller tranches becoming available every 2 weeks until June 29, 2020.

These action were taken to bring additional supplies to the U.S. sugar market in 2019/20, as domestic production for 2019/20 is projected to be significantly lower due to poor weather conditions—particularly during harvest for many sugarbeet-producing regions—and to fewer imports from Mexico due to drought conditions in many of its sugarcane-producing regions.

Imports under quota programs are projected to be 2.180 million STRV in 2019/20, a 540,000-STRV increase. The shortfall of the raw sugar TRQ is projected to be 84,000 STRV, a 44,000-STRV increase from the March forecast. The increased shortfall represents some quantities of the additional TRQ allocations as well as additional shortfalls from the initial allocations. No shortfall is currently expected in the refined TRQ.

Imports from Mexico are projected to total 1.199 million STRV, a 34,000-STRV increase from the previous month. The increase is due to adjustments to Mexico's production forecast. High-tier imports remain unchanged from the previous month at 150,000 STRV for 2019/20. Through March, the Foreign Agricultural Service (FAS) estimates that 62,000 STRV of high-tier imports have entered the United States.

Figure 1
U.S. and World refined sugar prices, monthly, January 2008 to September 2020



Source: USDA, Economic Research Service.

Increased Import Quotas Raise U.S. Sugar Supplies

U.S. sugar production in 2019/20 is projected to total 8.038 million STRV, a slight 7,000-STRV increase from the March report. That projection represents a 12.0 percent decrease from 2018/19, however.

Beet sugar production is lowered 20,000 STRV from the March forecast to 4.928 million STRV. While the expected sucrose extraction rate is raised slightly, shrink is also raised. The current forecast of sugar from beet slice matches the most recent forecasts provided by processors to the Farm Service Agency's (FSA) *Sweetener Market Data*.

Table 2: Beet sugar production projection calculation, 2018/19 and 2019/20

	2015/16	2016/17	2017/18	2018/19	2019/20	2019/20
					March	April
Sugarbeet production (1,000 short tons) 1/	35,371	36,881	35,325	33,282	28,600	28,600
Sugarbeet shrink	6.5%	8.3%	7.3%	5.2%	5.0%	5.7%
Sugarbeet sliced (1,000 short tons)	33,066	33,834	32,742	31,561	27,170	26,984
Sugar extraction rate from slice	14.58%	13.72%	15.18%	14.77%	14.27%	14.34%
Sugar from beets slice (1,000 STRV) 2/	4,820	4,643	4,970	4,660	3,876	3,870
Sugar from molasses (1,000 STRV) 2/	380	352	368	352	350	337
Crop-year sugar production (1,000 STRV) 2/	5,201	4,995	5,338	5,012	4,226	4,207
August-September sugar production (1,000 STRV)	688	606	715	655	582	582
August-September sugar production of subsequent crop (1,000 STRV)	606	715	655	582	633	633
Sugar from imported beets (1,000 STRV) 3/	--	--	--	--	40	40
Fiscal year sugar production (1,000 STRV)	5,119	5,103	5,279	4,939	4,317	4,298

1/ USDA, National Agricultural Statistics Service for historical data. 2/ August-July basis. 3/ Sugar from imported beets split out for projections only, included in total once full crop-year slice is recorded. Sugar from imported beets is incorporated into total production in historical data.

Source: USDA, Economic Research Service and World Agricultural Outlook Board.

Cane sugar production is projected to total 3.740 million STRV, a 26,000-STRV increase from the previous month—more than offsetting the decline in expected beet sugar production. The increase is due to a 31,000-STRV increase in projected production from Florida, totaling 2.100 million STRV. This increase is based on processors' reporting to SMD. The increase in Florida is offset slightly by a 4,000-STRV reduction in expected production in Texas. Production in Louisiana remains unchanged at 1.513 million STRV for 2019/20.

Table 3: U.S. sugarcane and cane sugar production, by State, 2015/16 to 2019/20

	2015/16	2016/17	2017/18	2018/19	2019/20	Annual change Percent
Florida						
Sugarcane harvested for sugar (1,000 acres)	398	392	397	397	397	0.0
Sugarcane yield (short tons per acre)	42.5	40.3	40.9	41.7	42.8	2.6
Sugarcane production (1,000 short tons)	16,915	16,120	16,237	16,555	16,992	2.6
Recovery rate (percent)	12.8	12.7	12.2	12.1	12.4	2.0
Sugar production (1,000 STRV)	2,173	2,055	1,983	2,005	2,100	4.7
Louisiana						
Sugarcane harvested for sugar (1,000 acres)	385	400	414	425	442	4.0
Sugarcane yield (short tons per acre)	29.6	28.8	32.5	35.3	27.7	-21.5
Sugarcane production (1,000 short tons)	11,396	11,520	13,455	15,003	12,243	-18.4
Recovery rate (percent)	12.5	14.2	13.8	12.5	12.4	-1.1
Sugar production (1,000 STRV)	1,428	1,632	1,862	1,875	1,513	-19.3
Texas						
Sugarcane harvested for sugar (1,000 acres)	35	38	41	38	31	-16.8
Sugarcane yield (short tons per acre)	31.4	37.0	36.8	36.6	33.6	-8.2
Sugarcane production (1,000 short tons)	1,105	1,395	1,490	1,376	1,052	-23.6
Recovery rate (percent)	10.5	9.9	11.3	10.7	12.1	12.8
Sugar production (1,000 STRV)	116	138	169	148	127	-13.8

Source: USDA, Farm Service Agency; USDA, National Agricultural Statistics Service.

Deliveries for 2019/20 Remain Unchanged Despite COVID-19 Supply Chain Adjustments

U.S. sugar use is projected to total 12.230 million STRV for 2019/20, unchanged from the previous month. Domestic deliveries for food and beverage use are projected at 12.125 million STRV, also unchanged from the previous month.

There was a substantial dislocation in normal operations for stakeholders in the U.S. sugar market beginning in March, with widespread social and consumption behavior changes due to the COVID-19 pandemic. Stay-at-home orders, social distancing, and other executive actions and guidelines from Federal, State, and municipal governments altered the landscape of economic activity in the United States. Most notably, anecdotal information suggests that there has been a sudden and severe shift in food-buying patterns, as more consumers avoid eating out at restaurants or participating in large social gatherings. Instead, most food consumption is now occurring at home. For the U.S. sugar industry, reports of temporary shortages and tight supplies at the retail level for sugar and sugar-containing products—particularly after an initial surge in consumer purchases of food items and basic essentials—were countered by reports of less demand from restaurants, hotels, and institutional food providers. The data and measurement of this impact will not be available until sugar market and broader economic data are released for March 2020 and the subsequent months. Supply chains and business operations, however, have had to adjust to the sudden changes in consumer behavior.

The WASDE's forecast for domestic deliveries is unchanged from the previous month, largely on the basis that demand for sugar is typically inelastic to changes in price or income—as observed during past occurrences of sudden, detrimental economic events. Overall demand for sugar is not expected to be impacted by the effects of the COVID-19 pandemic and subsequent public and private actions. The marketing and logistical channels through which sugar is brought to consumers are expected to change substantially, however.

Deliveries could be detrimentally impacted if supply chains are disrupted in a broad, systematic way. At the time of the March WASDE's release, businesses have reported substantial adjustments to operations to accommodate the new demands and constraints, but there have not been any significant reports of additional systematic disruption in delivering sugar in the form and packaging currently required. This will be continually monitored going forward, and the outlook adjusted based on new information or data.

Through February, domestic deliveries for food and beverage use are 0.8-percent above last year. Larger deliveries from cane refiners more than offset the decline in deliveries from beet processors. This is to be expected, as lower sugarbeet production in the United States in 2019 resulted in more of the market being shifted to the cane sector. Deliveries from non-reporters are essentially unchanged from a year ago.

Table 4: Food and beverage deliveries, 2014/15 to 2019/20, October through February

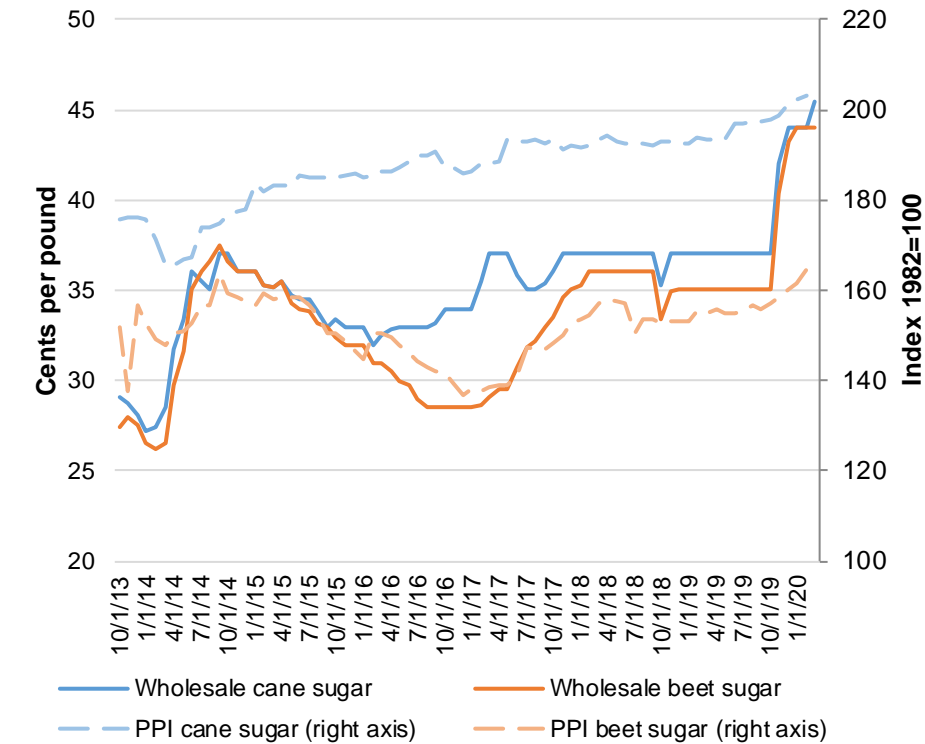
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Annual change
	<i>1,000 STRV</i>						<i>Percent</i>
Beet sugar processors	1,937	1,797	2,121	2,195	2,005	1,993	-0.6
Cane sugar refiners	2,492	2,616	2,472	2,424	2,578	2,626	1.9
Total reporters	4,429	4,412	4,593	4,619	4,583	4,619	0.8
Nonreporter, direct consumption	162	269	287	225	323	324	0.3
Total deliveries	4,591	4,682	4,879	4,844	4,906	4,944	0.8
Final fiscal year deliveries 1/	11,921	11,881	12,102	12,048	12,106	12,125	0.2

1/ Latest WASDE estimate for 2019/20.

Source: USDA, Farm Service Agency.

U.S. refined sugar prices, already well above average due to lower-than-usual production within the U.S.-Mexico sweetener market complex, have remained elevated thus far during the COVID-19 pandemic's impact on U.S. social and economic activity. The Milling and Baking wholesale refined beet sugar price has remained at 44 cents per pound, and the wholesale refined cane sugar price rose 2 cents to 46 cents per pound, compared with 35 and 37 cents per pound, respectively, a year ago. The Bureau of Labor Statistic's Producer Price Index (PPI) for refined cane and beet sugar has seen increases in recent months, likely driven by the lower availability of domestically produced sugar, which impacted the market beginning in November 2019. The February 2020 indices were 4.7 percent higher for refined cane sugar and 6.1 percent higher for refined beet sugar compared with February 2019. While the PPI data does not yet capture the dramatic market changes that occurred in March, the recent price movements do not suggest a drop in sugar demand.

Figure 2
Refined sugar prices, wholesale and Producer Price Indexes, monthly



Source: USDA, Economic Research Service.

Ending Stocks Projections Substantially Higher Than March Forecast but Still Historically Tight

U.S. sugar ending stocks are projected to be 1.434 million STRV in 2019/20, a 547,000-STRV increase from the previous month. This raises the stocks-to-use ratio from 7.2 percent in March to 11.7 percent in the latest projection. The lowest stock-to-use ratio in recent history is 11.8 percent in 2010/11. The current projection still shows a historically tight market, but one that is closer to the historical range.

Mexico Outlook

Mills Report Record Weekly Harvested Area, but Low Yields Limit the Pace of Sugar Production

Mexico total sugar supplies in 2019/20 are projected to be 6.493 million metric tons, actual value (MT), a 35,000-MT increase from the previous month's report. The increase is due to slightly more domestic production forecast.

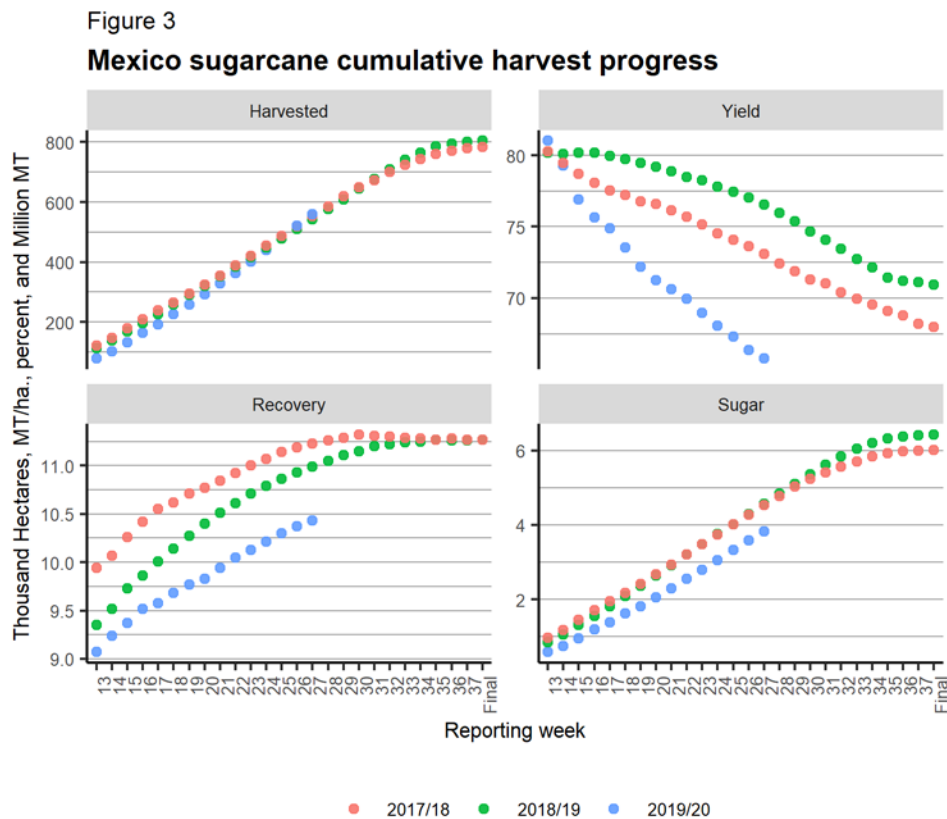
Table 5: Mexico sugar supply and use, 2017/18 - 2018/19 and projected 2019/20, April 2020

Items	2017/18	2018/19 (estimate)	2019/20 (forecast)
1,000 metric tons, actual weight			
Beginning stocks	1,002	1,395	1,169
Production	6,010	6,426	5,235
Imports	220	85	89
Imports for consumption	132	22	24
Imports for sugar-containing product exports, IMMEX 1/, other	88	63	65
Total supply	7,232	7,905	6,493
Disappearance			
Human consumption	4,228	4,092	4,057
For sugar-containing product exports (IMMEX)	482	460	435
Other deliveries and end-of-year statistical adjustment	29	-20	0
Total	4,739	4,532	4,492
Exports	1,099	2,204	1,065
Exports to the United States & Puerto Rico	1,047	856	1,026
Exports to other countries	52	1,348	39
Total use	5,838	6,737	5,557
Ending stocks	1,395	1,169	936
1,000 metric tons, raw value			
Beginning stocks	1,062	1,478	1,239
Production	6,370	6,811	5,549
Imports	234	90	94
Imports for consumption	140	23	25
Imports for sugar-containing product exports (IMMEX)	93	67	69
Total supply	7,666	8,380	6,882
Disappearance			
Human consumption	4,482	4,337	4,300
For sugar-containing product exports (IMMEX)	510	488	461
Other deliveries and end-of-year statistical adjustment	31	-21	0
Total	5,023	4,804	4,761
Exports	1,165	2,337	1,129
Exports to the United States & Puerto Rico	1,110	908	1,088
Exports to other countries	55	1,429	42
Total use	6,188	7,141	5,890
Ending stocks	1,478	1,239	992
Stocks-to-human consumption (percent)	33.0	28.6	23.1
Stocks-to-use (percent)	23.9	17.3	16.8
High-fructose corn syrup (HFCS) consumption (dry weight)	1,593	1,528	1,520

1/ IMMEX = Industria Manufacturera, Maquiladora y de Servicios de Exportación.

Source: USDA, *World Agricultural Supply and Demand Estimates* and Economic Research Service, *Sugar and Sweeteners Outlook*; Conadesuca.

Through April 4, Mexican mills reported harvesting nearly 559,000 hectares of sugarcane. This is a substantial increase from a month earlier. Through the beginning of March, wet weather conditions in many sugarcane-producing regions slowed the pace of the early stages of the harvest. Despite this, during March the Mexican industry reported record levels of harvested area. The result is that the current harvest is at its highest level on record for this point in the year. However, sugarcane yields and factory recovery rates have continued to be well below historical levels, which has constrained sugar production. Production in Mexico is projected to total 5.235 million MT for 2019/20, a 35,000-MT increase from the previous month but still an 18.5-percent decline from 2018/19 production.



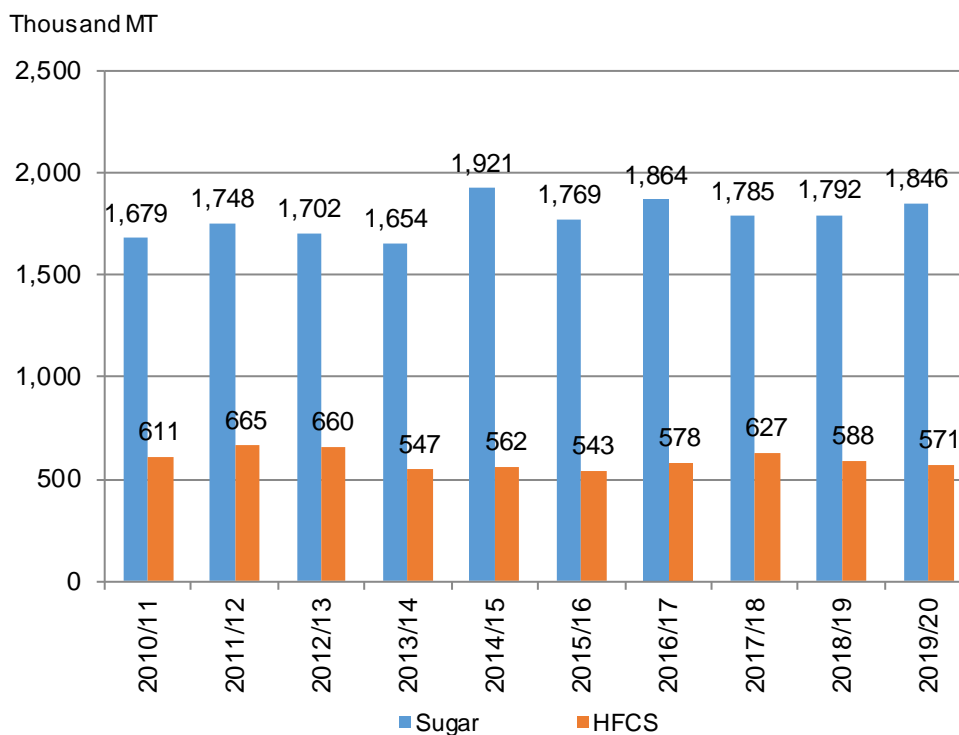
Source: Conadesuca; USDA, Economic Research Service.

Domestic Deliveries Remain Ahead of 2018/19 Pace

Domestic deliveries in Mexico remain unchanged from the previous month, forecast at 4.492 million MT—a slight 0.9-percent decrease from the previous year. Domestic deliveries for human consumption are also unchanged, accounting for 4.057 million MT of projected deliveries, with the remainder expected to be used for the country’s IMMEX program.

Through February, deliveries of sugar for human consumption totaled 1.846 million MT, a 3.1-percent increase from the previous year. There has been a relatively flat trend in sugar deliveries in Mexico over the past several years, however, with monthly volatility making it difficult to gauge annual deliveries based on pace. High-fructose corn syrup (HFCS) deliveries through February are down 2.9 percent.

Figure 4
Mexican sweetener consumption October to February, 2010/11 to 2019/20



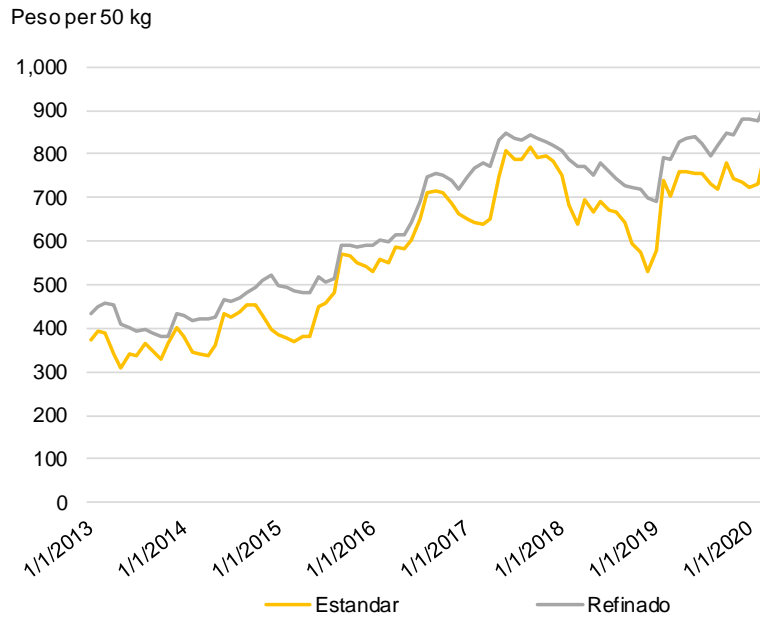
Source: Conadesuca.

Higher production and unchanged domestic deliveries mean additional supplies will be available for export, particularly to the United States. Exports to the United States are raised 29,000 MT, totaling 1.026 million MT. Exports to other countries are also forecast 6,000-MT higher from the previous month, totaling 39,000 MT, based on the current pace of shipments through February.

Mexico's domestic sugar market has seen prices steadily increase since the drought conditions became evident in the early part of 2019. Mexico's domestic price for high-polarity, *refinado* sugar has been particularly strong in recent months, as some of the key producing regions of this specification have been the most impacted by the drought. One of the market impacts of the COVID-19 pandemic, however, has been a sudden depreciation of the Mexican peso against the U.S. dollar. As a result, Mexican sugar is now relatively less expensive in the U.S. and world futures markets, which are conducted in U.S. dollars. The impacts of this market development

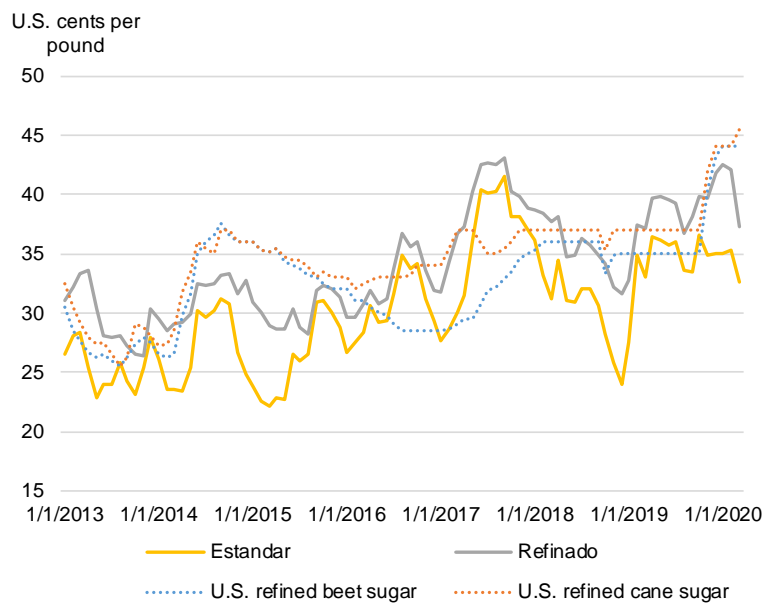
are still unclear. Exchange rates will be an increasingly important factor in the competitiveness of Mexico's sugar in export markets, however.

Figure 5
**Mexico Estandar and Refinado sugar prices, monthly,
 January 2013 to March 2020**



Source: USDA, Economic Research Service.

Figure 6
**Mexico Estandar and Refinado sugar prices, monthly, January 2013 to
 March 2020**



Source: USDA, Economic Research Service.

Ending stocks in Mexico are projected to be 936,000 MT, unchanged from the previous month. This amount equates to 2 ½ months of domestic deliveries, which is the target amount for policy makers to ensure that there are enough supplies available to carry the market from the end of the fiscal year to the beginning of the subsequent harvest in late-November and December.

Suggested Citation

McConnel, Michael J., *Sugar and Sweeteners Outlook*, SSS-M-380, U.S. Department of Agriculture, Economic Research Service, April 15, 2020.

Use of commercial and trade names does not imply approval or constitute endorsement by USDA.

To ensure the quality of its research reports and satisfy governmentwide standards, ERS requires that all research reports with substantively new material be reviewed by qualified technical research peers. This technical peer review process, coordinated by ERS' Peer Review Coordinating Council, allows experts who possess the technical background, perspective, and expertise to provide an objective and meaningful assessment of the output's substantive content and clarity of communication during the publication's review.

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.