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Sugar and Sweeteners Outlook

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In this report:

U.S. Sugar Outlook

Mexico Sugar Outlook

Special Article: Caloric

Sweetener Deliveries

Sugar Production Lowered for 2020/21; Larger Imports Boost Ending Stocks

Sugar production is lowered in 2020/21 driven by reduced cane sugar production. Early harvest in Louisiana boosts cane sugar production in 2019/20, but leads to diminished 2020/21 output. Similarly, an upward revision to estimated August-September beet sugar production results in stronger 2019/20 production. Beet sugar production in 2020/21 is raised because the reallocation effect of the early production is more than offset by a larger sugar beet crop. Imports in 2020/21 are raised based on expectations that some sugar from the 2019/20 tariff-rate quota (TRQ) will arrive in October instead of September. Total 2020/21 supplies are raised, resulting in higher ending stocks, despite stronger projected deliveries. The stocks-to-use ratio for 2019/20 and 2020/21 are estimated at 13.8 percent and 14.2 percent, respectively.

Mexico's production is unchanged from the previous estimate. Deliveries of sugar and high-fructose corn syrup (HFCS) are both forecast lower in 2019/20. Beginning stocks in 2020/21 are boosted, while exports, total deliveries, and ending stocks are also adjusted slightly higher.

United States Outlook

Production Down and Imports Up

In the USDA's October *World Agricultural Supply and Demand Estimates* (WASDE), U.S. supplies of sugar in 2020/21 totaled 14.089 million short tons, raw value (STRV), a 140,000-STRV increase from the previous month as higher expected imports more than offset reduced production and lower beginning stocks. Domestic deliveries are boosted for both 2019/20 and 2020/21. Exports for 2019/20 are boosted by 10,000 STRV to 45,000, while 2020/21 exports remain at 35,000. Ending stocks for 2020/21 are raised.

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

Items	,,	2019/20	2020/21		2019/20	2020/21
	2018/19	(estimate)	(forecast)	2018/19	(estimate)	(forecast)
	1,000	Short tons, raw	value	1,000 M	Metric tons, raw value	
Beginning stocks	2,008	1,783	1,702	1,822	1,617	1,544
Total production	8,999	8,128	9,268	8,163	7,374	8,408
Beet sugar	4,939	4,293	5,206	4,480	3,895	
Cane sugar	4,060	3,835	4,062	3,683	3,479	
Florida	2,005	2,106	2,135	1,819	1,910	,
Louisiana	1,907	1,603	1,785	1,730	1,454	
Texas	147	126	142	134	115	129
Hawaii	0	0	0	0	0	0
Total imports	3,070	4,136	3,120	2,785	3,752	2,830
Tariff-rate quota imports	1,541	2,071	1,832	1,398	1,878	1,662
Other program imports	438	432	350	397	392	318
Non-program imports	1,092	1,633	938	990	1,481	851
Mexico	1,000	1,382	888	908	1,254	806
High-duty	91	251	50	83	227	45
Total supply	14,076.75	14,047	14,089	12,770	12,743	12,782
Total exports	35	45	35	31	41	32
Miscellaneous	28	0	0	26	0	0
Deliveries for domestic use	12,231	12,300	12,305	11,096	11,158	11,163
Transfer to sugar-containing products						
for exports under re-export program	98	80	80	89	73	73
Transfer to polyhydric alcohol, feed, other alcohol	27	20	25	25	18	23
Commodity Credit Corporation (CCC) sale for ethanol, other	0	0	0	0	0	0
Deliveries for domestic food and beverage use	12,106	12,200	12,200	10,982	11,068	11,068
Total use	12,294	12,345	12,340	11,153	11,199	11,195
Ending stocks	1,783	1,702	1,749	1,617	1,544	1,587
Private	1,783	1,702	1,749	1,617	1,544	1,587
Commodity Credit Corporation (CCC)	0	0	0	0	0	
Stocks-to-use ratio	14.50	13.79	14.18	14.50	13.79	14.18

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

Cane Sugar Production for 2020/21 Lowered on Effect of Early Sugarcane Harvest in Louisiana

Cane sugar production is projected to be 4.062 million STRV in 2020/21, down 65,000 from the previous month with Louisiana accounting for the entire change. A larger-than-normal amount of Louisiana's crop was harvested and processed into sugar during September, resulting in an increase to 2019/20 production of approximately 90,000 STRV. The reduction to 2020/21 production was smaller than this quantity due to expectations of a continuation in the trend toward early harvesting.

Table 2: U.S. sugarcane and cane sugar production, by State, 2015/16 to 2020/21

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Annual change
							Percent
Florida							
Sugarcane harvested for sugar (1,000 acres)	398	392	397	397	397	399	0.6
Sugarcane yield (short tons per acre)	42.5	40.3	40.9	41.7	42.8	43.9	2.6
Sugarcane production (1,000 short tons)	16,915	16,120	16,237	16,555	16,992	17,526	3.1
Recovery rate (percent)	12.8	12.7	12.2	12.1	12.4	12.2	-1.7
Sugar production (1,000 STRV)	2,173	2,055	1,983	2,005	2,106	2,135	1.4
Louisiana							
Sugarcane harvested for sugar (1,000 acres)	385	400	414	425	441	455	3.2
Sugarcane yield (short tons per acre)	29.6	28.8	32.5	35.3	27.8	30.5	9.8
Sugarcane production (1,000 short tons)	11,396	11,520	13,455	15,003	12,243	13,868	13.3
Recovery rate (percent)	12.5	14.2	13.8	12.5	13.1	12.9	-1.7
Sugar production (1,000 STRV)	1,428	1,632	1,862	1,875	1,603	1,785	11.3
Texas							
Sugarcane harvested for sugar (1,000 acres)	35	38	41	38	31	33	6.4
Sugarcane yield (short tons per acre)	31.4	37.0	36.8	36.6	33.6	33.7	0.3
Sugarcane production (1,000 short tons)	1,105	1,395	1,490	1,376	1,052	1,122	6.7
Recovery rate (percent)	10.5	9.9	11.3	10.7	12.0	12.7	5.4
Sugar production (1,000 STRV)	116	138	169	148	126	142	12.5

Note: STRV = short tons, raw value.

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

Beet Sugar Production Higher on Raised Beet Area

U.S. 2020/21 sugar production from beets was raised this month by 41,000 STRV to 5.206 million. USDA's National Agricultural Statistics Service (NASS) revised harvested area higher, with the Upper Midwest and the Northwest regions accounting for the vast majority of the increase. Yields were mostly steady. The boost in 2020/21 beet sugar production is partially offset by a 50,000 STRV upward revision to August-September 2020 estimated sugar production, which reallocated more sugar production into 2019/20.

U.S. 2019/20 beet sugar production was raised 50,000 STRV to 4.293 million based on the upward revision to August-September 2020 sugar production. The latest Sweetener Market Data (SMD) published by USDA's Farm Service Agency showed sugar production in August at more than 190,000 STRV, the largest for that month in more than a decade. Furthermore, the

sugar beet harvest is proceeding at a relatively rapid rate in key producing states Minnesota, North Dakota, and Michigan. Another reason for the boost to August-September production is the observation that 2019/20 sugar has been priced at a premium to new-crop sugar, which is likely to provide an incentive to produce sugar quickly to take advantage of higher short-term pricing.

Table 3: U.S. sugar beet area harvested, yield, and production, by region

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Area harvested by region (1,000 Acres)					September	October	Monthly
	2016/17	2017/18	2018/19	2019/20	2020/21	2020/21	change
Great Lakes (MI)	149.0	143.0	147.0	145.0	152.0	154.0	1.3%
Upper Midwest (MN, ND)	620.0	621.0	607.0	506.0	631.0	644.0	2.1%
Great Plains (CO, MT, NE, WY)	150.1	148.5	142.7	127.0	142.6	143.3	0.5%
NW (ID, OR, WA)	182.1	176.9	174.1	176.8	176.8	183.3	3.7%
California	25.2	24.7	24.6	24.5	24.4	23.9	-2.0%
US	1,126.4	1,114.1	1,095.4	979.3	1,126.8	1,148.5	1.9%
Yield by region (short tons per acre)							
Great Lakes (MI)	30.80	25.20	29.30	28.60	29.40	29.20	-0.7%
Upper Midwest (MN, ND)	30.26	30.53	26.72	25.34	28.40	28.40	0.0%
Great Plains (CO, MT, NE, WY)	32.48	32.05	31.56	28.74	31.77	31.84	0.2%
NW (ID, OR, WA)	41.50	39.16	40.52	39.04	40.26	40.27	0.0%
California	45.12	43.16	48.78	44.08	45.29	45.31	0.1%
US	32.78	31.70	30.38	29.20	31.19	31.18	0.0%
Production by region (1,000 short tons)							
Great Lakes (MI)	4,589.0	3,604.0	4,307.0	4,147.0	4,469.0	4,497.0	0.6%
Upper Midwest (MN, ND)	18,762.0	18,960.0	16,217.0	12,820.0	17,920.0	18,290.0	2.1%
Great Plains (CO, MT, NE, WY)	4,875.0	4,759.0	4,503.0	3,650.0	4,531.0	4,563.0	0.7%
NW (ID, OR, WA)	7,557.0	6,928.0	7,055.0	6,903.0	7,118.0	7,382.0	3.7%
California	1,137.0	1,066.0	1,200.0	1,080.0	1,105.0	1,083.0	-2.0%
US	36,920.0	35,317.0	33,282.0	28,600.0	35,143.0	35,815.0	1.9%

Source: USDA, National Agricultural Statistics Service.

Figure 1
Sugarbeet harvested area and yields, 2007/08 to 2020/21

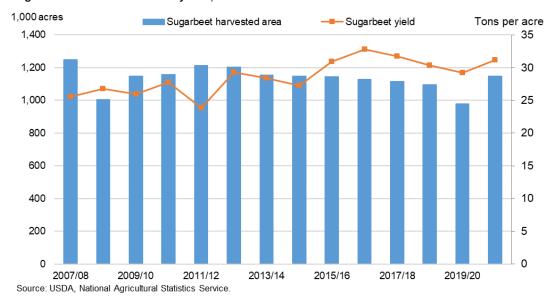


Table 4: Beet sugar production projection calculation, 2019/20 and 2020/21

	2015/16	2016/17	2017/18	2018/19	2019/20	2019/20	2020/21	2020/21
					September	October	September	October
Sugarbeet production (1,000 short tons) 1/	35,371	36,881	35,325	33,282	28,600	28,600	35,143	35,815
Sugarbeet shrink	6.5%	8.3%	7.3%	5.2%	5.3%	5.3%	6.6%	6.6%
Sugarbeet sliced (1,000 short tons)	33,066	33,834	32,742	31,561	27,072	27,072	32,830	33,457
Sugar extraction rate from slice	14.58%	13.72%	15.18%	14.77%	14.22%	14.22%	14.51%	14.51%
Sugar from beets slice (1,000 STRV) 2/	4,820	4,643	4,970	4,660	3,851	3,851	4,764	4,855
Sugar from molasses (1,000 STRV) 2/	380	352	368	352	342	342	360	360
Crop-year sugar production (1,000 STRV) 2/	5,201	4,995	5,338	5,012	4,192	4,192	5,124	5,215
August-September sugar production (1,000 STRV)	688	606	715	655	582	582	633	683
August-September sugar production of subsequent crop (1,000 STRV)	606	715	655	582	633	683	638	638
Sugar from imported beets (1,000 STRV) 3/							36	36
Fiscal year sugar production (1,000 STRV)	5,119	5,103	5,279	4,939	4,243	4,293	5,165	5,206

^{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

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

U.S. Food and Beverage Deliveries Projected Higher on Stronger Pace

Food and beverage deliveries in the United States are estimated at 12.200 million STRV for 2019/20, up 50,000 from the previous forecast based on a strong pace of deliveries and up 0.8 percent from 2018/19. The 2020/21 deliveries are also projected at 12.200 million STRV, up 50,000 from the previous forecast with expectations of continuation in the current trends.

Through August 2020, food and beverage deliveries in 2019/20 are 0.9 percent higher than the previous year. As has been expected, due to the reduction in beet sugar production, deliveries from beet processors are down 13.4 percent, and deliveries from cane refiners are 6.1 percent higher than a year ago.

Table 5: Food and beverage deliveries, 2014/15 to 2019/20, October through August

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	Annual change		
_	1,000 short tons, raw value								
Beet sugar processors	4,332	4,189	4,911	4,847	4,612	3,992	-13.4		
Cane sugar refiners	5,694	5,864	5,542	5,619	5,729	6,079	6.1		
Total reporters	10,026	10,053	10,453	10,466	10,340	10,071	-2.6		
Non-reporter, direct consumption	828	762	690	571	699	1,062	51.9		
Total deliveries	10,855	10,816	11,143	11,037	11,040	11,134	0.9		
Final fiscal year deliveries 1/	11,921	11,881	12,102	12,048	12,106	12,200	0.8		

^{1/} Latest World Agricultural Supply and Demand Estimates estimate for 2019/20.

Deliveries from non-reporters are 51.9 percent higher than the year prior, more than compensating for the reduced deliveries from reporting companies. One major driver of this fast pace is the growth of high-tier imports due to price differentials between the world futures markets and the U.S. wholesale market. Furthermore, a higher proportion of sugar entering

total once full crop-year slice is recorded. Sugar from imported beets is incorporated into total production in historical data

Note: STRV = short tons, raw value.

Source: USDA, Farm Service Agency.

under Free Trade Agreements this year has been higher polarity sugar that doesn't require additional refining.

Lower TRQ Imports for FY 2020 and Higher for FY 2021 with Quota Extension

On September 10, 2020, USDA increased the FY 2020 U.S. WTO raw sugar TRQ by 100,000 STRV and extended the quota period by 1 month, to October 31, 2020. Along with the April 2020 increase of 350,000 STRV, this action brought the total TRQ to 1.681 million STRV. On September 22, 2020, the United States Trade Representative announced that the 100,000 STRV increase to the quota would be allocated entirely to Brazil (roughly 88,000) and Australia (about 12,000).

The extension of the quota has implications for the expected timing of trade. TRQ imports for FY 2020 are now estimated at 2.071 million STRV, down 186,000 from the previous month as some of the TRQ is not expected to be imported until October. Total FY 2021 imports are projected at 4.136 million tons, down 128,000; the drop in total imports is mitigated by larger high-tier imports (discussed in next section) as well as a slight increase in imports for re-export and polyhydric ethanol production.

FY 2021 TRQ imports are projected up 207,000 STRV to 1.832 million based on the expectation that some FY 2020 TRQ shipments will arrive in October and will be accounted for in FY 2021. Total imports are adjusted upward by the same amount to 3.120 million STRV.

Massive High-Tier Tariff Imports in July and August

High-tier imports jumped to nearly 70,000 STRV in July and slightly above 70,000 in August, representing the largest individual months in more than a decade. September high-tier imports, estimated around 26,000 STRV, are down significantly from July and August, but still well above average. For much of the past year, U.S. prices have remained elevated and the spread between U.S. and world sugar prices has been wider than the high-tier tariff. Note that for raw sugar, the tariff is set at 33.87 cents per kilogram or 15.4 cents per pound; for refined sugar, it is set at 35.74 cents per kilogram or 16.2 cents per pound. Depending upon the country of origin,

the usual cost of freight and associated logistics can be as low as 3-4 cents per pound for raw sugar, and 5-6 cents per pound for refined sugar. Figure 3 shows that the nominal refined sugar price spread has averaged more than 27 cents per pound during the first 9 months of calendar year 2020, providing ample incentive for imports of high-tier sugar. USDA's October estimate for FY 2020 high-tier imports is increased by 41,000 STRV to 251,000 STRV due to the rapid pace of imports seen in recent months.

However, this price spread is expected to narrow at the start of FY 2021 as contracting for U.S. refined sugar is reported at much lower price levels, and world refined sugar futures prices are expected to remain relatively stable. Consequent to tightening price spreads, the 2020/21 high-tier import forecast remains at a more typical level of 50,000 STRV.

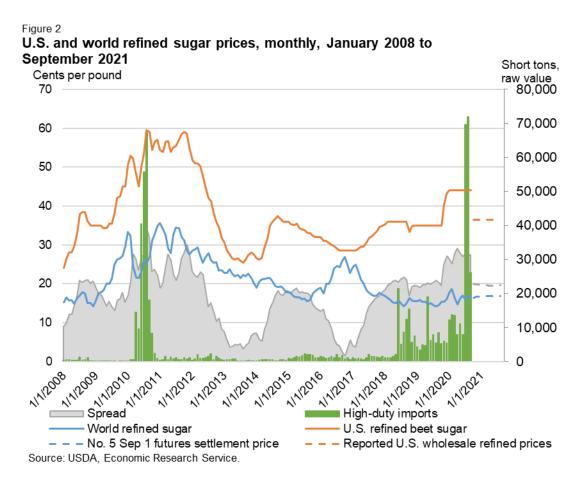
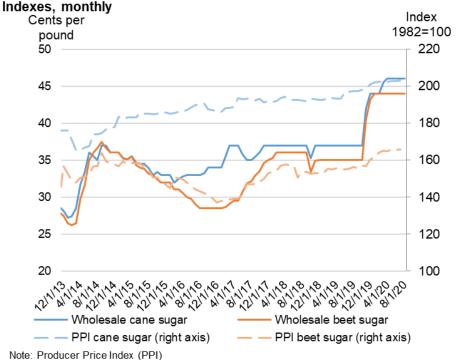


Figure 3
Refined sugar prices, wholesale and Producer Price

Source: USDA, Economic Research Service.



Ending Stocks Down Marginally for 2019/20, but Raised for 2020/21

U.S. 2019/20 ending stocks are estimated down by 43,000 STRV to 1.702 million as stronger production is more than offset by larger deliveries and reduced imports. The stocks-to-use ratio, now projected at 13.79 percent, is down from the 14.20 percent forecast last month.

For 2020/21, ending stocks are raised 90,000 STRV to 1.749 million. Larger imports more than offset the effects of tighter beginning stocks, reduced production, and higher deliveries. The U.S. stocks-to-use ratio is projected at 14.18 percent, up from the September forecast of 13.5 percent.

Mexico Outlook

Production Outlook Unchanged

Mexico sugar production for 2019/20 is still estimated at 5.278 million metric tons (MT), actual value, as all mills have concluded their processing season. Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA) has not yet pubished an official sugarcane production forecast for 2020/21. Mexico's sugar production is currently projected by USDA to rebound 14 percent in 2020/21 to 6.0 million MT, which would be down 7 percent from 2018/19, but up slightly from the 5-year (2015/16-2019/20) average.

The recently published Mexico Sugar Semi-Annual report from USDA's Foreign Agricultural Service provides some background on conditions for Mexico's sugarcane crop. The report notes that the crop is expected to recover from last year's drought, but challenges still remain. Mexico's sugarcane production is spread over a wide geographical area, so the conditions facing the crop are variable and include pest infestations, reduced sucrose content, and abnormally heavy rainfall in some locations. There is some lingering drought in northern Mexico, but it is not expected to impact any major cane producing areas.

Table 6: Mexico sugar supply and use 2018/19 - 2019/20 and projected 2020/21, October 2020

Beginning stocks	Items	2018/19	2019/20 (estimate)	2020/21 (forecast)
Production 6,426 5,278 6,000 Imports 85 110 89 Imports for consumption 22 45 24 Imports for sugar-containing product exports, IMMEX 1/, other 63 65 65 Total supply 7,905 6,557 6,941 Disappearance Human consumption 4,092 4,103 4,073 For sugar-containing product exports (IMMEX) 460 385 415 Other deliveries and end-of-year statistical adjustment -20 0 0 0 Total 4,532 4,488 4,488 4,88 4,88 Exports 2,204 1,218 1,518 Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757 Total use 6,737 5,706 6,006 Ending stocks 1,169 852 935 Ending stocks 1,478 1,239 903 177 94 Imports for osugar-containing product exports (IMMEX)			1,000 metric tons,	actual weight
Production 6,426 5,278 6,000 Imports 85 110 89 Imports for consumption 22 45 24 Imports for sugar-containing product exports, IMMEX 1/, other 63 65 65 Total supply 7,905 6,557 6,941 Disappearance Human consumption 4,092 4,103 4,073 For sugar-containing product exports (IMMEX) 460 385 415 Other deliveries and end-of-year statistical adjustment -20 0 0 0 Total 4,532 4,488 4,488 4,88 4,88 Exports 2,204 1,218 1,518 Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757 Total use 6,737 5,706 6,006 Ending stocks 1,169 852 935 Ending stocks 1,478 1,239 903 177 94 Imports for osugar-containing product exports (IMMEX)	Beginning stocks	1.395	1.168.741	852
Imports for consumption 22 415 24 24 24 24 24 24 25 25				
Imports for consumption		•		
Imports for sugar-containing product exports, IMMEX 1/, other 63 65 65 65 Total supply 7,905 6,557 6,941 Disappearance	•			
Disappearance Human consumption 4,092 4,103 4,073 4,073 5,000 0 0 0 0 0 0 0 0 0		63	65	65
Human consumption	Total supply	7,905	6,557	6,941
For sugar-containing product exports (IMMEX) 460 385 415 Other deliveries and end-of-year statistical adjustment Total -20 0 0 Total 4,532 4,488 4,488 Exports 2,204 1,218 1,518 760 Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757 Total use 6,737 5,706 6,006 Ending stocks 1,169 852 935 Ending stocks 1,478 1,239 903 Production 6,811 5,595 6,360 Imports 90 117 94 Imports for consumption 23 48 25 Imports for sugar-containing product exports (IMMEX) 67 69 69 Total supply 8,380 6,950 7,357 Disappearance 4 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440	Disappearance			
Other deliveries and end-of-year statistical adjustment -20 0 0 Total 4,532 4,488 4,488 Exports 2,204 1,218 1,518 Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757 Total use 6,737 5,706 6,006 Ending stocks 1,169 852 935 Ending stocks 1,478 1,239 903 Production 6,811 5,595 6,360 Imports 90 117 94 Imports for consumption 23 48 25 Imports for sugar-containing product exports (IMMEX) 67 69 69 Total supply 8,380 6,950 7,357 Disappearance Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0	Human consumption	4,092	4,103	4,073
Total 4,532 4,488 4,488 Exports 2,204 1,218 1,518 Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757 Total use 6,737 5,706 6,006 Ending stocks 1,169 852 935 Ending stocks 1,478 1,239 903 Production 6,811 5,595 6,360 Imports 90 117 94 Imports for consumption 23 48 25 Imports for sugar-containing product exports (IMMEX) 67 69 69 Total supply 8,380 6,950 7,357 Disappearance Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 E	For sugar-containing product exports (IMMEX)	460	385	415
Exports to the United States & Puerto Rico 856 1,183 760	Other deliveries and end-of-year statistical adjustment	-20	0	0
Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757	Total	4,532	4,488	4,488
Exports to the United States & Puerto Rico 856 1,183 760 Exports to other countries 1,348 35 757	Exports	2 204	1 218	1 518
Exports to other countries				·
Total use 6,737 5,706 6,006			•	
Ending stocks	Exports to outer countries	1,040	30	
Beginning stocks	Total use	6,737	5,706	6,006
Beginning stocks	Ending stocks	1,169	852	935
Production 6,811 5,595 6,360 Imports 90 117 94 Imports for consumption 23 48 25 Imports for sugar-containing product exports (IMMEX) 67 69 69 Total supply 8,380 6,950 7,357 Disappearance Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6 </td <td></td> <td></td> <td>1,000 metric ton</td> <td>s, raw value</td>			1,000 metric ton	s, raw value
Production 6,811 5,595 6,360 Imports 90 117 94 Imports for consumption 23 48 25 Imports for sugar-containing product exports (IMMEX) 67 69 69 Total supply 8,380 6,950 7,357 Disappearance Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6 </td <td>Beginning stocks</td> <td>1,478</td> <td>1,239</td> <td>903</td>	Beginning stocks	1,478	1,239	903
Imports for consumption 23 48 25 Imports for sugar-containing product exports (IMMEX) 67 69 69 Total supply 8,380 6,950 7,357 Disappearance		6,811	5,595	6,360
Imports for sugar-containing product exports (IMMEX)	Imports	90	117	94
Total supply 8,380 6,950 7,357 Disappearance Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	Imports for consumption	23	48	25
Disappearance Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	Imports for sugar-containing product exports (IMMEX)	67	69	69
Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	Total supply	8,380	6,950	7,357
Human consumption 4,337 4,349 4,317 For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	Disappearance			
For sugar-containing product exports (IMMEX) 488 408 440 Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	• •	4.337	4.349	4.317
Other deliveries and end-of-year statistical adjustment -21 0 0 Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6				
Total 4,804 4,757 4,757 Exports 2,337 1,291 1,609 Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6			0	0
Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6			4,757	4,757
Exports to the United States & Puerto Rico 908 1,254 806 Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	Exports	2,337	1,291	1,609
Exports to other countries 1,429 37 803 Total use 7,141 6,048 6,366 Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	·			
Ending stocks 1,239 903 991 Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	•	1,429	37	803
Stocks-to-human consumption (percent) 28.6 20.8 23.0 Stocks-to-use (percent) 17.3 14.9 15.6	Total use	7,141	6,048	6,366
Stocks-to-use (percent) 17.3 14.9 15.6	Ending stocks	1,239	903	991
Stocks-to-use (percent) 17.3 14.9 15.6	Stocks-to-human consumption (percent)	28.6	20.8	23.0
w /				
	High-fructose corn syrup (HFCS) consumption (dry weight)	1,528	1,380	1,470

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

Sources: USDA, World Agricultural Outlook Board; USDA, Economic Research Service; CONADESUCA.

Use Forecasts Reduced Based on Weak Pace Through August

Total sugar use in Mexico for 2019/20 is estimated at 5.706 million MT, a 35,000-MT reduction from the previous month's figure based on lower deliveries and exports. Deliveries for human use are dropped by 50,000 MT to 4.103 million, more than offsetting a 20,000-MT increase in deliveries for the *Industria Manufacturera, Maquiladora y de Servicios de Exportación* program (IMMEX). Deliveries in 2020/21 for human use are forecast unchanged from the previous projection, while deliveries for IMMEX are raised 20,000 MT to 415,000. Total 2020/21 deliveries are projected at 4.488 million MT, unchanged from the previous year as slightly larger IMMEX deliveries offset a marginal decline in human use.

Similar to sugar, consumption is also forecast to be lower for HFCS. Demand for HFCS is projected at 1.380 million MT (dry basis) in 2019/20, down from the previous forecast of 1.410 million in light of low international sugar prices, a weakening exchange rate with the U.S. dollar, and COVID-19 related consumption effects. Furthermore, health-related campaigns to reduce sugar intake are seen as likely having an impact on consumption of HFCS. The 2020/21 projection for HFCS deliveries is unchanged at 1.470 million MT.

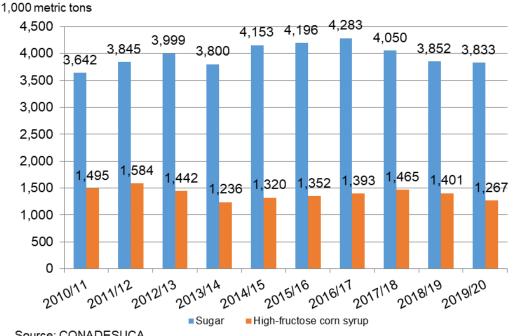
1,000 metric tons
700
600
400
300
200
100
Oct. Nov. Dec. Jan. Feb. Mar. Apr. May Jun. Jul. Aug. Sep.
=2019/20 ×2012/13 2013/14 = 2014/15 •2015/16 *2016/17 •2017/18 +2018/19

Figure 4

Mexican sugar deliveries for consumption, monthly, 2012/13 to 2019/20

Source: Conadesuca.

Figure 5 Mexican sweetener consumption October to August, 2010/11 to 2019/20

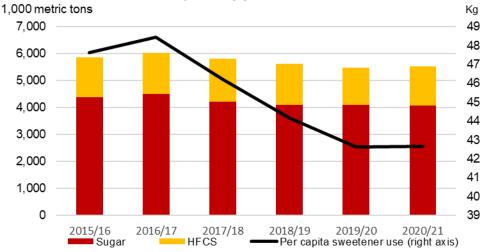


Source: CONADESUCA.

The latest USDA Foreign Agricultural Service (FAS) Global Agricultural Intelligence Network (GAIN) report on Mexico sugar provides a view of the various factors contributing to a decline in sugar and HFCS consumption. In that country, various health-related laws have been put in place to curb the intake of high-calorie and high-sugar foods. For example, some laws require labeling on the front of packages for foods that are high in nutrients such as sugar or fat. Some foods are similarly banned from using characters or graphics that target minors. Public campaigns are encouraging people to exercise more and eat healthier. Furthermore, some states have even imposed bans on sales of some high-calorie foods and beverages to minors. The exact effect of all of these measures is unclear as there are other factors impacting Mexico's sugar consumption, such as reduced consumer purchasing power and a weaker exchange rate (that pertains especially to HFCS, which is largely imported from the United States).

Total sweetener demand in 2019/20 is projected lower, both from the previous forecast and year to year. The year-to-year reduction in HFCS more than offsets marginally higher sugar consumption. The 2019/20 per capita sweetener (sugar and HFCS combined) consumption is estimated at 42.62 kg, down slightly from the previous projection of 43.24. Per capita sweetener consumption in 2020/21 is projected at 42.65, up only marginally from the previous year after 3 consecutive years of decline.

Figure 6 **Mexico sweetener consumption by year**



Source: USDA, World Agricultural Outlook Board.

Minimal Changes to Mexico's Export Projections

Exports for 2019/20 are estimated at 1.218 million MT, including 1.183 million MT shipped to the United States and only 35,000 tons to other destinations. Total projected exports and exports to non-U.S. destinations are both adjusted downward by about 5,000 MT this month. Exports for 2020/21 are projected up 15,000 MT to 1.518 million MT. For 2020/21, Mexico's projected exports to the United States are unchanged from the previous forecast at 760,000 MT, while exports to other markets are raised by about 15,000 MT to 757,000.

Ending Stocks for 2019/20 Boosted, but Still Tight

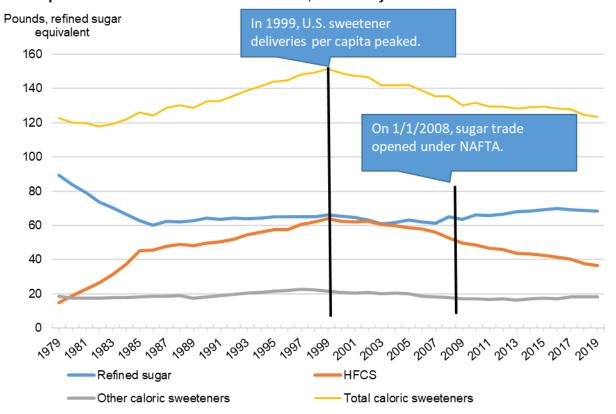
Mexico's 2019/20 ending stocks are estimated at 852,000 MT, up 40,000 from the previous month based on slightly higher imports, a small decrease in exports, as well as reduced deliveries. Even with this increase, Mexico's projected stocks are still below the 2½-month consumption target that domestic authorities use to monitor and manage domestic programs. The stocks-to-human consumption ratio is estimated at 20.8 percent, which would be the smallest since 2014/15. Mexico's 2020/21 ending stocks are projected to rebound and are currently set at 935,000 MT, up 4,000 from the previous month as a recalculation of the stock level needed to arrive at 2.5 months of consumption.

Special Article: Caloric Sweeteners Delivery

Per Capita Caloric Sweetener Deliveries Continue the Declining Trend of Past 20 Years

On a per capita basis, U.S. caloric sweetener deliveries (use) fell by 1.1 percent in 2019 to 123.3 pounds, refined sugar equivalent (pounds) compared with 124.6 pounds the previous year. This continued the declining trend seen since 1999, when per capita use peaked at 151.6 pounds. Most of the 2019 decline was driven by a 2.6-percent decline in per capita high-fructose corn syrup (HFCS) use; per capita sugar use fell 0.4 percent to 68.5 pounds, down from 68.7 pounds the year before. The per capita use of other caloric sweeteners (honey, maple syrup, glucose, and dextrose) has been relatively flat and does not have much influence on overall trends in caloric sweetener use.

Figure 7
Per capita U.S. caloric sweetener deliveries, calendar years 1979 to 2019



Source: USDA, Economic Research Service.

The dominant feature of figure 7 is the increase in per capita total caloric sweetener use from 1979 to 1999 by about 30 pounds, and then the decline over the next 20 years, also by about 30 pounds. During the first part of the period from 1979 to 2009, up until 1985, the growth of per capita HFCS use was largely offset by declining per capita sugar use. After 1985, sugar use per capita trended slightly higher, while the growth rate of HFCS slowed. Overall, the growth rate in per capita caloric sweetener use over the 20-year period was relatively constant.

The 20-year period from 1999 to 2019 is almost a mirror image of the 1979-1999 period. There is a relatively constant decline of overall per capita caloric sweetener use. But within this steady trend there are differences between sugar and HFCS. The years from 1999 to 2008 show a relatively slow decline in per capita HFCS use, and per capita sugar use, which first falls and then rises so that by 2008 it is roughly the same as 1999. After 2008, when Mexico and the United States fully implemented the NAFTA duty-free, quota-free provisions for sugar, per capita refined sugar use increased more rapidly. This occurred because relatively inexpensive sugar from Mexico displaced HFCS in some beverages, particularly those that used HFCS-42, which is less expensive and has a lower fructose concentration, compared to the alternative, HFCS-55.

The longer-term shift in total consumption patterns is not explained by changes in sugar and HFCS prices. Furthermore, there has been no sharp change in U.S. per capita income over the past two decades. Clearly there were some shifts in dietary patterns and consumer preferences. One key shift was a rise in the consumption of bottled water, which would tend to displace HFCS, which is primarily used in beverages.

The growth in per capita sugar use has stalled in recent years; the compound annual growth rate for the past 5 years has been 0.07 percent (table 5). Whether this flattening trend is temporary, continues, or even turns into a decline will have important consequences for overall U.S. import requirements in coming years. With the U.S. population growing at about 0.61 percent, a zero-growth rate in per capita sugar use would still result in total sugar use rising by about 70,000 tons per year. Conversely, if total sugar demand is flat, as is currently forecast by USDA for the next fiscal year 2020/21 compared to fiscal year 2019/20, then per capita use would decline next year by 0.47 percent.

Table 7: Average annual growth rates for per capita caloric sweeteners deliveries, to calendar year 2019

	5-year	10-year	20-year	40-year
Refined sugar	0.07%	0.77%	0.16%	-0.67%
HFCS	-3.36%	-3.02%	-2.76%	2.28%
Total caloric sweetener	-0.89%	-0.55%	-1.03%	0.02%

Source: Economic Research Service, USDA.

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