



Sugar and Sweeteners Outlook: March 2023

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Vidalina Abadam, coordinator

U.S. Sugar Supply Lowered; Mexican Sugar Production Reduced

In the March 2023 *World Agricultural Supply and Demand Estimates (WASDE)*, the 2022/23 U.S. total sugar supply is reduced by 54,000 short tons, raw value (STRV) to 14.460 million from last month as the larger sugar production—a new record if realized—is offset by lower imports. The decrease in imports is mainly driven by the 172,000-STRV downward adjustment of imports from Mexico to 1.306 million countering the 31,000-STRV increase in high-tier imports to 156,000. Sugar delivered for human consumption is raised 100,000 STRV to 12.6 million. Total use is raised by the same amount to 12.705 million STRV. Ending stocks are lowered by 154,000 to 1.720 million for an ending stocks-to-use ratio of 13.5 percent, down by 1.3 percentage points from last month's 14.8 percent.

Mexico's sugar production in 2022/23 is reduced 415,000 metric tons (MT), actual value from last month to 5.485 million due to lower expectation for sugarcane yields and sucrose recovery. USDA forecasts that low polarity sugar production has the potential to be between 784,000 and 805,200 MT, about 70 to 72 percent of the revised Mexican export quota (equivalent to 1.118 million MT). Fulfilling the remaining portion of the quota that is allocated for refined sugar implies reduction in sugar deliveries to the Mexican market and ending stocks.

U.S. Outlook Summary

U.S. Sugar Supply Down; Use Raised

In the March 2023 *WASDE*, the 2022/23 U.S. total sugar supply is reduced by 54,000 short tons, raw value (STRV) to 14.460 million from last month as the increase in both beet and cane sugar production is offset by the decrease in imports (table 1).

Beet sugar production in 2022/23 is raised by 60,000 STRV to 5.160 million from last month on an increased forecast of sucrose recovery based on processors' August–January data reported in the USDA, Farm Service Agency *Sweetener Market Data (SMD)*. If realized, the updated forecast would surpass last year's 5.155 million STRV and would be the second largest production behind 2017/18's 5.270 million. Also based on the *SMD*, cane sugar production is up by 19,000 STRV to 4.150 million from last month—a new record exceeding 2020/21's 4.142 million—as the 30,000-STRV combined increase in Florida and Louisiana countered the 11,000-STRV decrease in Texas. In total, sugar production is raised by 79,000 STRV from last month to a record-high 9.310 million, surpassing 2017/18's 9.293 million (figure 1).

Total imports in 2022/23 are lowered by 134,000 STRV to 3.330 million from last month as the anticipated 172,000-STRV reduction of imports from Mexico to 1.306 million countered the increased forecast for high-tier tariff imports and the 2021/22 World Trade Organization (WTO) raw sugar tariff-rate quota (TRQ) imports. High-tier tariff imports are increased by 31,000 STRV to 156,000 from last month due to larger-than-expected entries of refined sugar paying the high-duty. The raw sugar TRQ imports are up 7,000 STRV to 1.153 million on an upward revision in imports under the extended 2021/22 raw sugar that arrived by the end of 2022.

The 2022/23 forecast of sugar delivered for human consumption is raised 100,000 STRV to 12.6 million based on the strong pace through January. Total use is raised by the same amount to 12.705 million STRV. Ending stocks are lowered by 154,000 to 1.720 million from last month and the resulting ending stocks-to-use ratio is 13.5 percent, down by 1.3 percentage points from last month's 14.8 percent.

Table 1: U.S. sugar: supply and use by fiscal year (October/September), March 2023

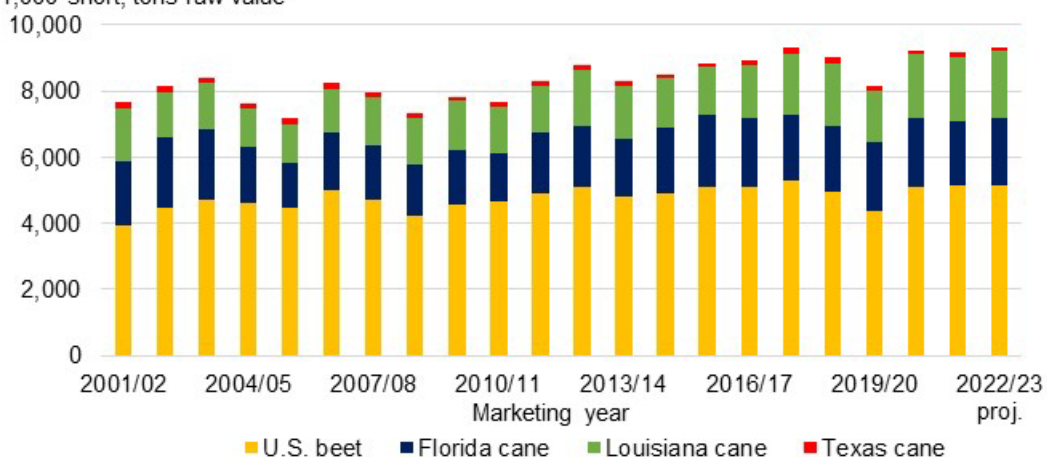
Items	2020/21		2021/22		2022/23		
	Final	February (estimate)	March (estimate)	Monthly change	February (forecast)	March (forecast)	Monthly change
	1,000 short tons raw value						
Beginning stocks	1,618	1,705	1,705	0	1,820	1,820	0
Total production	9,233	9,157	9,157	0	9,231	9,310	79
Beet sugar	5,092	5,155	5,155	0	5,100	5,160	60
Cane sugar	4,141	4,002	4,002	0	4,131	4,150	19
Florida	2,090	1,934	1,934	0	2,014	2,040	26
Louisiana	1,918	1,944	1,944	0	2,030	2,034	4
Texas	134	124	124	0	87	76	-11
Total imports	3,221	3,646	3,646	0	3,463	3,330	-134
Tariff-rate quota imports	1,749	1,579	1,579	0	1,611	1,618	7
Other program imports	292	298	298	0	250	250	0
Non-program imports	1,180	1,769	1,769	0	1,602	1,462	-141
Mexico	968	1,379	1,379	0	1,477	1,306	-172
High-duty	212	390	390	0	125	156	31
Total supply	14,072	14,508	14,508	0	14,514	14,460	-54
Total exports	49	29	29	0	35	35	0
Miscellaneous	40	81	81	0	0	0	0
Total deliveries	12,277	12,578	12,578	0	12,605	12,705	100
Domestic food and beverage use	12,161	12,470	12,470	0	12,500	12,600	100
To sugar-containing products re-export program	89	80	80	0	80	80	0
For polyhydric alcohol, feed, other alcohol	27	27	27	0	25	25	0
Commodity Credit Corporation (CCC) for ethanol	0	0	0	0	0	0	0
Total use	12,367	12,688	12,688	0	12,640	12,740	100
Ending stocks	1,705	1,820	1,820	0	1,874	1,720	-154
Private	1,705	1,820	1,820	0	1,874	1,720	-154
Commodity Credit Corporation	0	0	0	0	0	0	0
Stocks-to-use ratio (percent)	13.8	14.3	14.3	0.0	14.8	13.5	-1.3

Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates (WASDE)*.

Figure 1

U.S. production of beet sugar and cane sugar by State, 2001/02–2022/23

1,000 short, tons raw value



proj. = projected.

Source: USDA, Farm Service Agency.

Improved Outlook for Beet Sugar Production

Beet sugar production in fiscal year 2022/23 is raised by 60,000 STRV to 5.160 million from last month, exceeding last year's 5.155 million to become the second largest production behind 2017/18's 5.270 million (table 2). The increase is driven by the higher sucrose recovery forecast for the crop year, from 15.2 percent to 15.4 (figure 2). This recovery, which is based on the SMD August–January processors data, would set a record in the last decade. It is driven by above-average-recovery rates observed across most of the major sugarbeet-producing regions.

Table 2: Beet sugar production calculations, 2019/20–2020/23

	2020/21 Final	2021/22 February	2021/22 March	Monthly change	2022/23 February	2022/23 March	Monthly change
Sugarbeet production (1,000 short tons) 1/	33,610	36,751	36,751	0	32,574	32,574	0
Sugarbeet shrink (percent)	6.60	7.9	7.9	0.0	6.83	6.83	0.0
Sugarbeet sliced (1,000 short tons)	31,392	33,850	33,850	0	30,348	30,348	0
Sugar extraction rate from slice (percent)	15.34	14.63	14.63	0.00	15.20	15.40	0.20
Sugar from beets sliced (1,000 STRV) 2/	4,817	4,954	4,954	0	4,614	4,674	60
Sugar from molasses (1,000 STRV) 2/	362	341	341	0	360	360	0
Crop year sugar production (1,000 STRV) 2/	5,181	5,294	5,294	0	4,974	5,034	60
Aug.–Sep. sugar production (1,000 STRV)	765	676	676	0	537	537	0
Aug.–Sep. sugar production of subsequent crop (1,000 STRV)	676	537	537	0	633	633	0
Sugar from imported beets (1,000 STRV) 3/	N/A	N/A	N/A	N/A	30	30	0
Fiscal year sugar production (1,000 STRV)	5,092	5,155	5,155	0	5,100	5,160	60

STRV = short tons, raw value; NA = not applicable.

1/ USDA, National Agricultural Statistics Service.

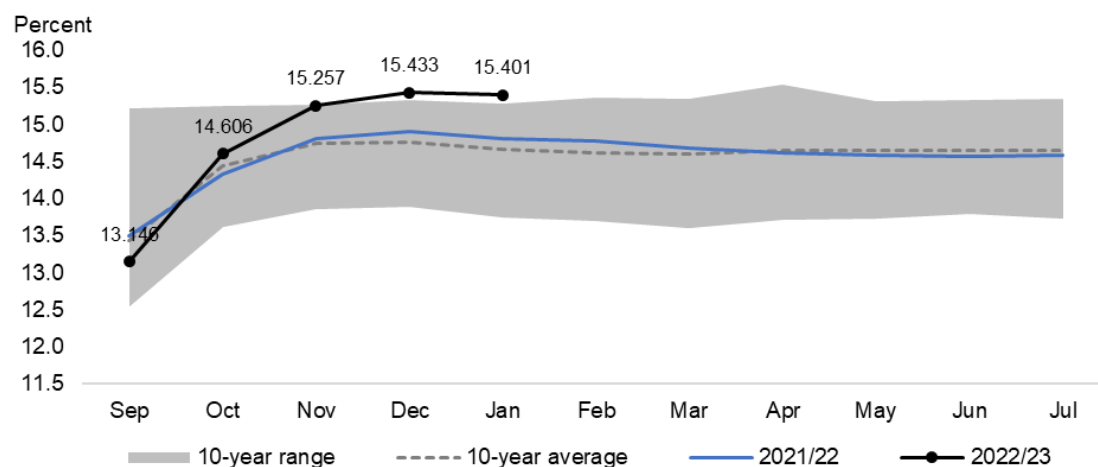
2/ August–July.

3/ Sugar from imported beets in 2020/21 and 2021/22 are already included in the crop year production. Typically, this component is separated for projections and included in total once full crop year slice is available.

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

Figure 2

Cumulative sugar extraction rate, beet sugar produced per sugarbeet sliced, by crop year, 2012/13–2022/23



Source: USDA, Economic Research Service; USDA, Farm Service Agency.

An initial forecast for the 2023/24 sugarbeet planted acreage will be published in the National Agricultural Statistics Service's (NASS) *Prospective Plantings* report on March 31. On its March 8 *Sweetener Report*, Sosland estimated that in the aftermath of the recently concluded International Sweetener Colloquium, at least 50 percent of the prospective 2023/24 beet sugar production has already been contracted. Given the bullish tone generated by the March *WASDE's* outlook for tight supplies and increased demand, Sosland predicts that the booking share of the 2023/24 business would rise to 75 percent before the spring planting gets under way in April.

Cane Sugar Production Raised to a New Record

Cane sugar production in fiscal year 2022/23 is up by 19,000 STRV to 4.150 million from last month as the 30,000-STRV combined increases in Louisiana and Florida counter the 11,000-STRV decrease in Texas. If realized, this would be a new record, overtaking 2020/21's 4.142 million. The adjustment in Louisiana is based on the actual January production data in the *SMD*, while the changes in Florida and Texas are aligned with the processor-submitted forecasts in the *SMD*.

Louisiana cane sugar production in fiscal year 2022/23 is adjusted upward by 4,297 STRV to 2.034 million. The availability of the actual January production data in the *SMD* implies the finalization of crop year 2022/23 sugar production at 2.054 million STRV (table 3). Thus, despite the freeze in late December that saw temperatures drop to 25 degrees Fahrenheit (°F) then immediately warm to 65°F, this campaign would mark the first time that the State produced more than 2 million STRV of sugar based on crop year. This would also hold true for the fiscal year if the September 2023 forecast is realized at 55,000 STRV or more.

Florida cane sugar production in fiscal year 2022/23 is increased by 26,000 STRV from last month to 2.040 million, taking back the lead from Louisiana. The revision is driven by processors' increased expectation of acreage harvested, sugarcane yield, and recovery rate. This is consistent with the NASS March *Crop Production* report, which showed increased sugarcane production for the State. Using the State's 5-year monthly average share to the final, production needs to be above average levels in the succeeding months to achieve the updated forecast (figure 3).

For the second consecutive month, Texas cane sugar production in fiscal year 2022/23 is adjusted downward, this time by 11,000 STRV to 76,000 from last month. The reduction is based on processors reporting lower sugarcane yield and recovery rate in the *SMD*. If realized, would be 48,000-STRV lower (39 percent) than last year's 124,000 and 130,000-STRV lower (63 percent) than the record-high production of 206,000 STRV since 2000/01. The State's cumulative production of 67,000 STRV through January in the *SMD* implies that 88 percent of the revised forecast has already been produced. Thus, this year's campaign will likely wrap up relatively early, by end of March.

Table 3: U.S. sugarcane and cane sugar production, by State, 2020/21–2022/23

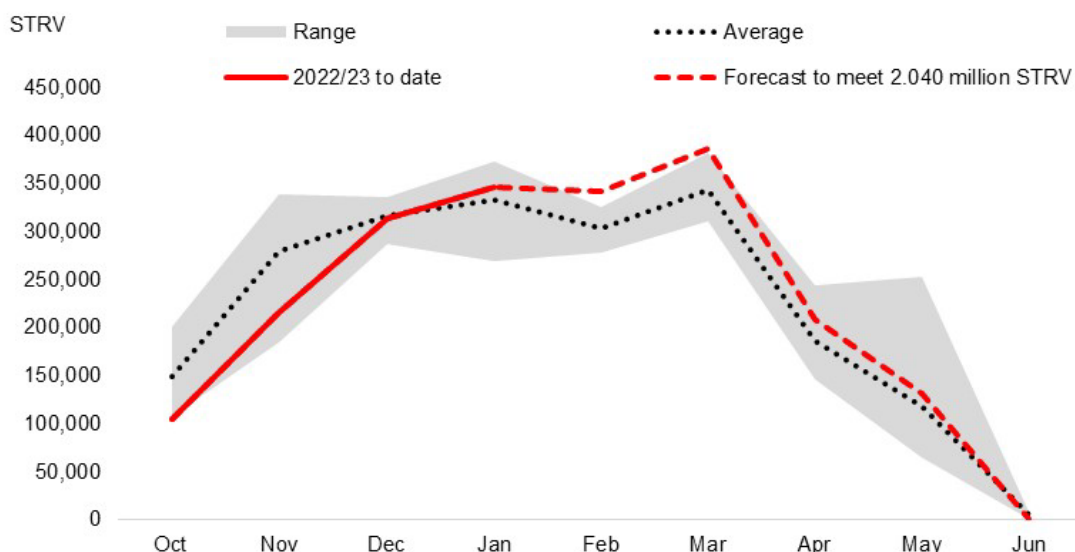
	2020/21	2021/22 Feb.	2021/22 Mar.	2022/23 Feb.	2022/23 Mar.	Monthly change (percent)
Florida						
Sugarcane harvested for sugar and seed (1,000 acres)	423.3	403.5	403.5	397.9	401.9	1.0
Sugarcane harvested for sugar (1,000 acres)	409.0	388.0	388.0	382.0	386.0	1.0
Sugarcane yield (short tons per acre)	44.3	42.4	42.4	44.3	44.5	0.5
Sugarcane production (1,000 net tons)	18,119	16,451	16,451	16,923	17,177	1.5
Recovery rate (percent)	11.53	11.76	11.76	11.90	11.88	-0.2
Sugar production (1,000 STRV)	2,090	1,934	1,934	2,014	2,040	1.3
Louisiana						
Sugarcane harvested for sugar and seed (1,000 acres)	488.4	495.3	495.3	497.8	497.8	0.0
Sugarcane harvested for sugar (1,000 acres)	461.0	466.0	466.0	475.0	475.0	0.0
Sugarcane yield (short tons per acre)	32.9	29.0	29.0	33.3	33.3	0.0
Sugarcane production (1,000 net tons)	15,167	13,514	13,514	15,818	15,818	0.0
Recovery rate (percent)	13.03	13.92	13.92	12.97	12.97	0.0
Crop year sugar production (1,000 STRV) 1/	1,976	1,881	1,881	2,051	2,054	0.1
Sep. sugar production (1,000 STRV)	70	12	12	75	75	0.0
Sep. sugar production of subsequent crop (1,000 STRV)	12	75	75	55	55	0.0
Fiscal year sugar production (1,000 STRV) 1/	1,918	1,944	1,944	2,030	2,034	0.2
Texas						
Sugarcane harvested for sugar and seed (1,000 acres)	35.9	36.4	36.4	32	31	-2.2
Sugarcane harvested for sugar (1,000 acres)	33.4	34.3	34.3	31	31	-1.6
Sugarcane yield (short tons per acre)	31.5	30.8	30.8	21.8	22.6	3.6
Sugarcane production (1,000 net tons)	1,052	1,056	1,056	685	698	2.0
Recovery rate (percent)	12.00	11.72	11.72	12.7	10.9	-14.3
Sugar production (1,000 STRV)	134	124	124	87	76	-12.6
United States						
Sugarcane harvested for sugar and seed (1,000 acres)	947.6	935.2	935.2	927.6	930.9	0.4
Sugarcane harvested for sugar (1,000 acres)	903.4	888.3	888.3	888.4	891.9	0.4
Sugarcane production (1,000 net tons)	38.0	34.9	34.9	37.6	37.8	0.4
Sugarcane production (1,000 short tons)	34,338	31,021	31,021	33,425	33,693	0.8
Recovery rate (percent)	12.2	12.7	12.7	12.4	12.4	-0.4
Crop year sugar production (1,000 STRV)	4,200	3,939	3,939	4,152	4,170	0.4
Fiscal year sugar production (1,000 STRV)	4,142	4,002	4,002	4,131	4,150	0.5

STRV = short tons, raw value.

1/ Louisiana's harvest and processing of sugarcane begins typically in September, thus the crop year and fiscal year sugar production for this State tend to be slightly different. Fiscal year production is the final value used for official USDA estimates. For Florida and Texas, the crop year is the same as the fiscal year.

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

Figure 3
Cane sugar production in Florida, 2017/18–2022/23



STRV = short tons, raw value.
 Source: USDA, Economic Research Service; USDA, Farm Service Agency.

Total Imports Reduced Due Mostly on Lower Mexican Quota

Total imports in 2022/23 are lowered by 134,000 STRV to 3.330 million from last month as the anticipated 172,000-STRV reduction of imports from Mexico countered the increased forecast for high-tier tariff imports and for the 2021/22 raw sugar tariff-rate quota (TRQ) imports. If realized, this would be 316,000-STRV lower than last year’s 3.646 million (figure 4).

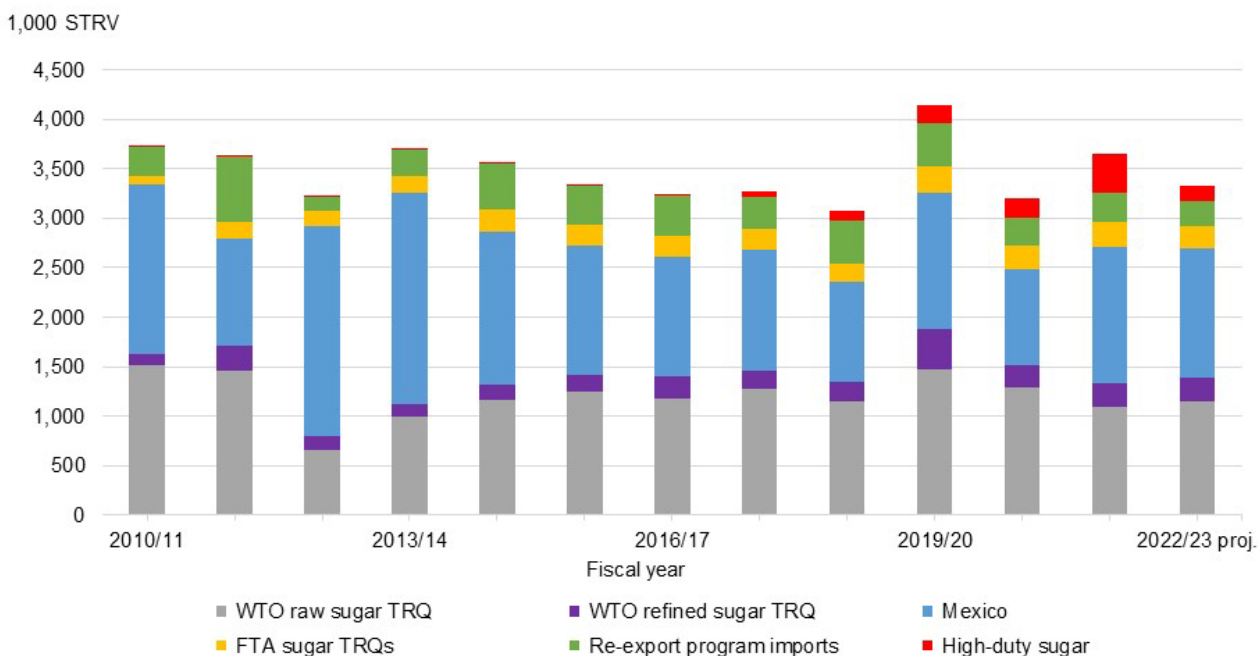
Per the terms of the U.S.-Mexico Sugar Suspension Agreements, the March Mexican Export Limit¹—equal to 100 percent of U.S. Needs² based on a 13.5-percent stocks-to-use ratio—will be determined by the U.S. Department of Commerce using this month’s *WASDE*. The anticipated U.S. Needs calculation is 1,305,900 million STRV, a 171,500-STRV reduction from last month’s 1,477,400 million (table 4). The cumulative imports from Mexico through February 2023 of about 350,000 STRV imply that 27 percent of the revised quota has already been imported.

¹ The suspension agreements define Export Limit as “the quantity of Mexican Sugar permitted to be exported, based on the Date of Export, during a given Export Limit Period”.

² Per the suspension agreements, U.S. Needs is “calculated based on information in the *WASDE* published by USDA” and is equal to (Total Use * 1.135) - Beginning Stocks - Production - TRQ Imports - Other Program Imports - (Footnote 5 for “other high tier” + “other”). Starting in the May 2022 *WASDE*, footnote 5 was changed and the “High-tier tariff/other” was assigned its own row.

Using Mexican sugar production data through February 25, USDA projects Mexico will be able to fulfill its commitment that least 70 percent of its total export quota will be comprised of sugar with below 99.2 polarity; the Mexico Outlook section provides additional details.

Figure 4
U.S. sugar imports by type, 2010/11–2022/23



STRV = short tons, raw value; FTA = free trade agreement; WTO = World Trade Organization; TRQ = tariff-rate quota; proj. = projected.
Source: USDA, Foreign Agricultural Service.

Table 4: U.S. Needs and Mexican Export Limit calculation by the U.S. Department of Commerce

	U.S. Needs (STRV)	Percent to derive Export Limit	Export Limit (STRV)
Fiscal year 2022/23			
July 2022	1,900,775	50	950,388
September 2022	1,618,775	70	1,133,143
December 2022	1,477,400	80	1,181,920
March 2023 proj.	1,305,900	100	1,305,900

STRV = short tons, raw value; proj. = projected

Source: U.S. Department of Commerce ACCESS repository.

High-tier tariff imports are increased by 31,000 STRV to 156,000 from last month due to larger-than-expected entries of refined sugar paying the high duty. Based on the USDA, Foreign Agriculture Service (FAS) *U.S. Sugar Monthly Import and Re-Exports* report in March, about 68 percent of the revised forecast has already entered through February (table 5). The raw sugar

tariff-rate quota (TRQ) imports are up 7,000 STRV to 1.153 million on an upward revision in the 2021/22 raw sugar TRQ imports that arrived through the end of 2022. There were no changes to the rest of import categories.

Table 5: Pace to date of U.S. sugar imports by type, October to December, 2017/18 to 2022/23

	2017/18	2018/19	2019/20	2020/21	2021/22 est.	2022/23 proj.	5-year average	Over-the-year change		
To-date: October to February	1,000 short tons, raw value (STRV)								STRV	Percent
Mexico	193	168	241	232	358	350	238	-8	-2.3	
WTO raw sugar TRQ	729	628	618	723	687	661	677	-25	-3.7	
WTO refined sugar TRQ	122	127	133	103	145	146	126	2	1.2	
FTA sugar TRQ	55	57	80	57	94	83	69	-12	-12.4	
Re-export program	158	216	207	77	97	48	151	-49	-50.4	
High-duty sugar	6	36	43	79	126	106	58	-20	-15.9	
Total	1,263	1,231	1,321	1,272	1,506	1,394	1,319	-112	-7.5	
Fiscal year: October to September	1,000 short tons, raw value (STRV)								STRV	Percent
Mexico	1,223	1,000	1,376	968	1,379	1,306	1,189	-73	-5.3	
WTO raw sugar TRQ	1,272	1,144	1,468	1,296	1,096	1,153	1,272	57	5.2	
WTO refined sugar TRQ	190	207	408	217	237	241	248	4	1.8	
FTA sugar TRQ	202	190	276	236	246	223	223	-22	-9.0	
Re-export program	326	438	432	292	298	250	382	-48	-16.1	
High-duty sugar	64	91	183	186	390	156	107	-234	-60.1	
Total	3,277	3,070	4,143	3,195	3,646	3,330	3,387	-316	-8.7	
Share of to-date to fiscal year total	Percent								Percent	
Mexico	16	17	18	24	26	27	19	1		
WTO raw sugar TRQ	57	55	42	56	63	57	50	-5		
WTO refined sugar TRQ	64	61	33	48	61	61	51	0		
FTA sugar TRQ	27	30	29	24	38	37	28	-1		
Re-export program	48	49	48	26	32	19	40	-13		
High-duty sugar	10	40	23	42	32	68	29	36		
Total	39	40	32	40	41	42	36	1		

WTO = World Trade Organization; TRQ = tariff-rate quota; FTA = free trade agreement; est. = estimated; proj. = projected.

Note: Using the "Total" category, the share is interpreted as follows: The total imports of 494,000 STRV from October to November represent 14 percent of the total fiscal year imports.

Source: USDA, Foreign Agricultural Service.

Sugar Prices Likely to Remain Firm Until Next Year

After being unquoted since the first week of December 2022 due to lack of spot supplies, the nominal price for the 2022/23 Midwest refined beet sugar is again published—at 60 cents per pound—by *Sosland Sweetener Report* during the week of February 22. This is about 16 to 18 cents per pound higher (about 37 to 39 percent) than the same time last year. Sosland noted that most of the spot beet sugar supplies are only available from distributors since beet processors have already contracted all their 2022/23 supplies. As discussed earlier in the beet sugar outlook section, dealings for 2023/24 have been moving at a relatively rapid pace. As of Sosland's March 8 report, quoted prices ranged between 52.5 to 55 cents per pound. This is high considering that beet sugar prices averaged between 35 to 36 cents per pound before the force majeure incidents occurred in late 2019.

The quoted 2022/23 Northeast refined cane sugar price for spot supplies is 62 cents per pound freight on board. This is 10 cents (19 percent) higher than this time last year. For calendar year 2024, the prices offered are lower—between 57 to 57.5 cents per pound—but are relatively high by historic standards similar with the beet sugar price. Support for the beet sugar price has also come from the recent uptick in the U.S. No.16 nearby (May 2023) raw cane sugar prices, which closed at 38.3 cents per pound as of March 9—a level not seen since early 2011. Subsequent contracts also closed at relatively high levels: July and September at 38.3 cents, and November through May 2024 at 37 cents. The increase in the No. 16 price is likewise attributed to the higher trading volume following the less optimistic market outlook that industry participants gathered from the International Sugar Colloquium and March *WASDE*. Buyers likely increased bookings to lock in contracts early and hedge against supply uncertainty and potentially higher prices later in the year. The No. 16, in turn, is being partly supported by the world No. 11 raw cane sugar nearby prices (March 2023, which has since expired) posting a 6-year high of 22.36 cents per pound amid expectations of lower production and exports from major-producing countries such as India, Thailand, and the European Union.

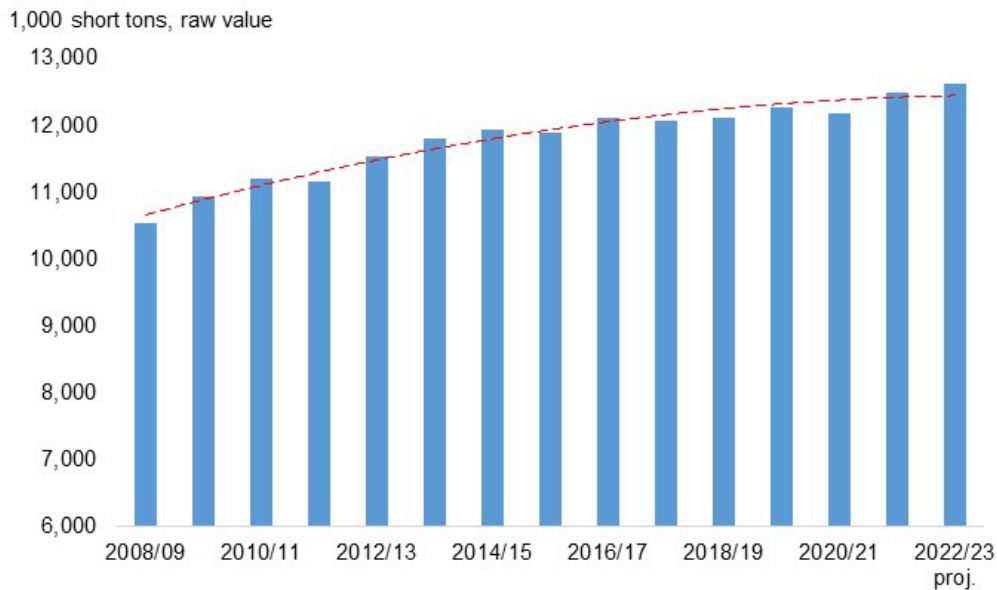
Sugar Deliveries Raised

The 2022/23 forecast of sugar delivered for human consumption is raised 100,000 STRV to 12.6 million based on the heightened pace of cane sugar deliveries and direct consumption imports (DCI). Conversely, beet sugar deliveries, constrained by supply availability, have been tracking the 5-year average. The upward revision to food use deliveries reflects a 130,000-STRV increase (1 percent) from last year's 12.470 million, continuing to overpass the trend line for 2 consecutive years (figure 6). With the rest of the deliveries' components unchanged, total sugar delivery is also raised by 100,000 STRV from last month to 12.705 million STRV.

The pace of cane sugar deliveries continues to be strong, even during the typical winter season slow down. Three of the initial 4 months into the fiscal year either surpassed the recent 5-year highs (October and January) or equaled it (December) (figure 7). As such, deliveries through January amount to 2.190 million STRV, the highest on record (table 6). The record pace of melt of 2.212 million STRV reflects an almost one-to-one correspondence between refiners' melt and deliveries. Refiners typically melt raw cane sugar when there is a corresponding order to be fulfilled since storage of refined sugar is typically more expensive and logistically harder than raw sugar. If the cane refiners' to-date deliveries share from table 6 is assumed to be between 52 to 53 percent of the 12.600 million-STRV food deliveries, then refiners are on pace to deliver

between 6.6 million to 6.7 million STRV of sugar. Thus, there is a chance that cane sugar deliveries in 2022/23 would exceed the prior record of 6.615 million STRV in 2019/20. This seems to be likely given the refiners' above average inventory levels of refined and raw sugar, implying that future deliveries are possible and that there are adequate raw supplies going into the spring and summer seasons.

Figure 6
U.S. sugar deliveries for food and beverage use, fiscal year, 2008/09 to 2022/23

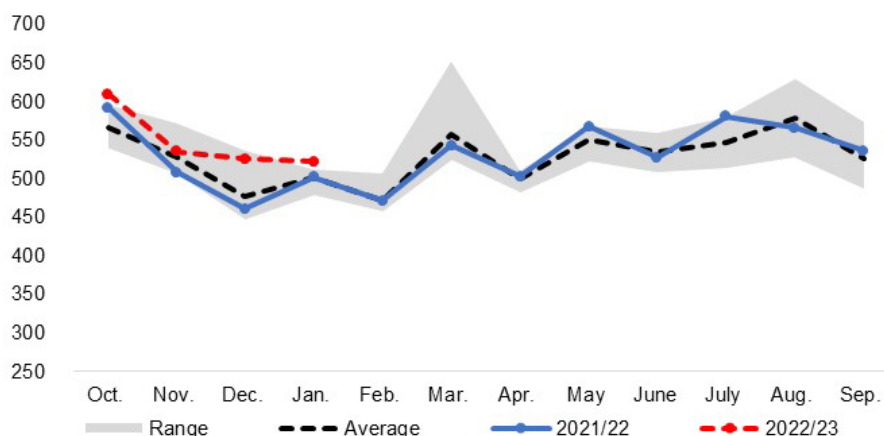


proj. = projected.
 Source: USDA, Economic Research Service.

The monthly pace of DCI, which represents deliveries by entities that do not report to the *SMD*, is near the 5-year average highs for October, December, and January. The resulting cumulative amount is 312,000 STRV, on par with the strong pace seen in 2017/18 and 2021/22. Timelier information from the U.S. Customs Border and Protection Automated Commercial Environment (ACE) system provides additional evidence of the heightened DCI pace than what has been captured in the 2-month lagged *SMD* data. Non-reporting companies may likely turn to sourcing DCI to fill unmet sugar needs due to tight supplies available from the reporting beet processors and cane refiners.

Figure 7
Cane sugar deliveries, monthly, 2017/18 to 2022/23

1,000 short tons, raw value



Source: USDA, Farm Service Agency.

Table 6: Food and beverage deliveries, October–January, 2017/18–2022/23

	2017/18	2018/19	2019/20	2020/21	2021/22 est.	2022/23 proj.	Annual change	
	1,000 short tons, raw value (STRV)						1,000 STRV	Percent
Beet sugar processors	1,784	1,623	1,654	1,618	1,739	1,681	-58	-3
Cane sugar refiners	1,967	2,108	2,111	2,102	2,060	2,190	129	6
Non-reporter (direct consumption)	317	265	242	165	318	312	-6	-2
Total	4,068	3,996	4,008	3,884	4,117	4,182	65	2
	Percent share in total						5-year average	
Beet sugar processors	44	41	41	42	42	40	42	
Cane sugar refiners	48	53	53	54	50	52	52	
Non-reporter (direct consumption)	8	7	6	4	8	7	6	
Total	100	100	100	100	100	100	100	

est. = estimated; proj. = projected.

Source: USDA, Farm Service Agency.

Mexico Outlook

Exports to U.S. Adjusted Downward; Sugar Production Lowered

In the March 2023 *WASDE*, the 2022/23 Mexican sugar exports to the United States are reduced from last month by 147,000 metric tons, actual value (MT) to 1,117,635 MT (or 1,305,900 STRV) (table 7). As mentioned in the U.S. Outlook section, the reduction reflects the anticipated U.S. Department of Commerce's finalization of the 2022/23 Mexican export quota to the United States in accordance with the suspension agreements. Exports to other countries are unchanged at 4,000 MT, a significantly lower volume compared with last year's 495,000. This reflects that virtually all Mexican sugar exports are reserved for the United States. In case there are additional exports to other countries reported in the CONADESUCA's monthly *Balance National de Edulcorantes (National Balance of Sweeteners)* report, a concurrent decline in the domestic deliveries' (disappearance) ledger will likely be made.

Table 7: Mexican sugar: supply and use by fiscal year (October/September), March 2023

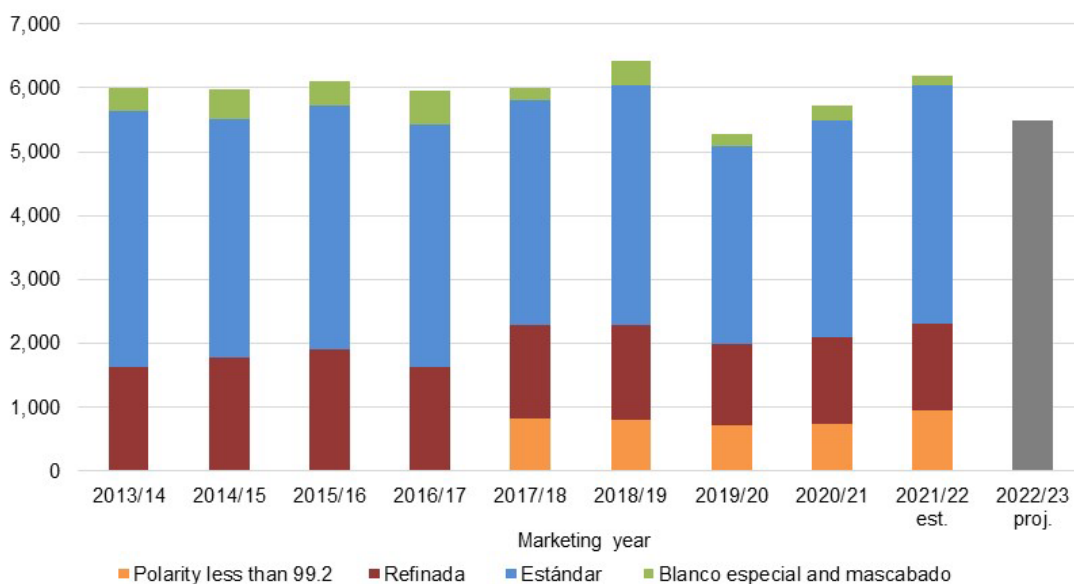
Items	2020/21		2021/22		2022/23		
	Final	February (estimate)	March (estimate)	Monthly change	February (forecast)	March (forecast)	Monthly change
	1,000 metric tons, actual weight						
Beginning stocks	858	1,053	1,053	0	964	964	0
Production	5,715	6,185	6,185	0	5,900	5,485	-415
Imports	65	31	31	0	35	35	0
Imports for consumption	32	7	7	0	10	10	0
Imports for sugar-containing product exports (IMMEX) 1/	33	24	24	0	25	25	0
Total supply	6,638	7,269	7,269	0	6,899	6,484	-415
Disappearance							
Human consumption	3,935	4,113	4,113	0	4,168	4,168	0
For sugar-containing product exports (IMMEX)	485	532	532	0	493	271	-222
Other deliveries and end-of-year statistical adjustment	0	-16	-16	0	0	0	0
Total	4,420	4,629	4,629	0	4,660	4,438	-222
Exports	1,165	1,676	1,676	0	1,268	1,121	-147
Exports to the United States and Puerto Rico	828	1,180	1,180	0	1,264	1,118	-147
Exports to other countries	337	495	495	0	4	4	0
Total use	5,585	6,305	6,305	0	5,928	5,560	-369
Ending stocks	1,053	964	964	0	971	925	-46
Stocks-to-human consumption (percent)	26.8	23.4	23.4	0	23.3	22.2	-1
Stocks-to-use (percent)	18.9	15.3	15.3	0	16.4	16.6	0
High-fructose corn syrup (HFCS) consumption (dry weight)	1,320	1,291	1,291	0	1,291	1,291	0

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

Sources: USDA, World Agricultural Outlook Board; Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

Mexico's sugar production in 2022/23 is reduced by 415,000-MT (or 7 percent) from last month, to 5.485 MT, reflecting a 700,000-MT decrease (11 percent) from last year. If realized, this would be the second lowest sugar production in the last decade behind 2019/20's 5.278 million MT (figure 8). The availability of production data from the Mexican National Committee for the Sustainable Development of Sugarcane (CONADESUCA) through February 25 (Week 22 of the campaign)—which is about the midway point³—increases the statistical validity of forecasting techniques that use progress to date as input.

Figure 8
Mexican sugar production by type of sugar, 2013/14–2022/23



Notes: Sugar with polarity less than 99.2 is produced starting in 2017/18 after the terms of the suspension agreements were revised. Breakdown by type is not yet available for 2022/23.
 Source: USDA, *World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates (WASDE)*; Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

USDA's updated projection is about 307,000-MT lower than 5.792 million MT—the second estimate that CONADESUCA released in February. USDA is more conservative than CONADESUCA's area harvested (829,000 hectares), sugarcane yields (62.37 MT per hectare), and sucrose recovery (11.2 percent) (table 8). While USDA raised its forecast for area harvested from 816,000 hectares to 820,000, sugarcane yield is lowered from 64.06 MT per hectare to 60.79, and sucrose recovery from 11.3 percent to 11 percent. As seen in figure 9, this year's cumulative yield through week 22 trails that of 2019/20—the year with the lowest

³ Historically, Mexico's sugar production typically starts in early November, then winds down by mid-April and concludes by late June.

sugar production (5.278 million MT) since 201/13. Sucrose recovery is also below historical levels, though less severe than that of yields. The lower-than-expected yield and recovery trends reflect the negative impacts of several factors during this year's campaign: lower rainfall during the critical growing season; delayed start of mills due to unfavorable late rains that prevented the timely harvest of sugarcane and its transportation to mills; and the less-than-ideal input application (e.g., fertilizer) due to high input prices.

Table 8: Comparison of forecasts between USDA and CONADESUCA

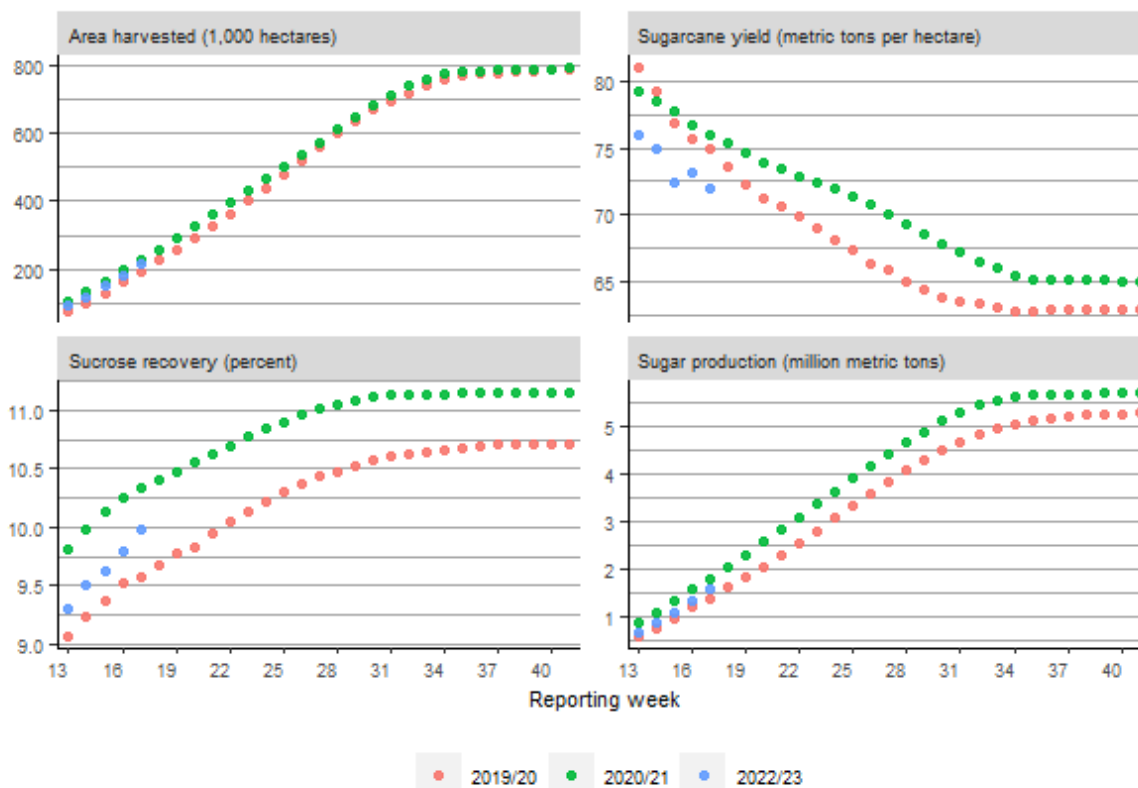
	CONADESUCA: WASDE			CONADESUCA: WASDE		
	first estimate (Nov. 2022)	Difference	second estimate (Feb. 2023)	Difference	Difference	Difference
Harvested area (1,000 ha)	832	815	17	829	820	9
Yield (MT per ha)	64.06	64.06	0.0	62.37	60.79	1.6
Sugarcane processed (1,000 MT)	53,310	52,199	1,110	51,703	49,822	1,881
Recovery (percent)	11.30	11.30	0.0	11.20	11.01	0.2
Sugar production (1,000 MT)	6,026	5,900	126	5,792	5,485	307

ha = hectare; MT = metric tons.

Source: USDA, *World Agricultural Outlook Board, World Agricultural Supply and Demand Estimates (WASDE)*, Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

Figure 9

Mexican sugarcane cumulative harvest progress during years of low production



Source: Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

In terms of the sugar type, production of sugar with polarity less than 99.2 through week 22 is 420,000 MT, about 47,000-MT (10 percent) less than the same period last year, but larger than the five-year average by 41,000 MT (11 percent) (table 9). Based on its projection models, USDA forecasts that the final production of low polarity sugar has the potential to be between 784,000 and 805,200 MT, about 70 to 72 percent of the revised Mexican export quota (1,117,635 MT).

Table 9: Mexican sugar production as of week 22, 2021/22, 2022/23, and five-year average

	As of week 22			Difference vs. 2021/22		Difference vs. 5-year average	
			5-year average				
	2021/22	2022/23	(2017/18–2021/22)	Level	Percent	Level	Percent
Area harvested (ha)	371,617	399,742	380,820	28,125	8	18,922	5
Sugarcane processed (MT)	28,438,906	26,899,989	28,458,590	-1,538,917	-5	-1,558,601	-5
Sugarcane yield (MT per ha)	76.53	67.29	74.69	-9.2	-12	-7.4	-10
Number of mills in operation	49	48	49	-1	-2	-1	-3
Extraction rate (percent)	10.79	10.53	10.61	-0.26	-2	-0.08	-1
Total factory yield (MT per sugar ha)	8.26	7.09	7.94	-1.17	-14	-0.85	-11
Sugar production (metric tons)	3,069,938	2,832,707	3,025,024	-237,231	-8	-192,317	-6
By type:							
Refinada	670,522	578,355	702,963	-92,167	-14	-124,608	-18
Estándar	1,889,293	1,794,340	1,851,813	-94,953	-5	-57,473	-3
Polarity less than 99.2	466,461	419,681	379,611	-46,780	-10	40,070	11
Blanco especial and mascabado	43,663	40,331	90,637	-3,332	-8	-50,306	-56

ha = hectares; MT = metric tons.

Source: USDA, Economic Research Service calculations using data from Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

The pace of *refinada* and *estándar* production lags last year and the 5-year average. Thus, to fulfill the 30 percent of the Mexican quota allocated to refined sugar (with polarity of 99.2 and above), USDA lowered from last month its forecast for sugar deliveries to the *Industria Manufacturera, Maquiladora y de Servicios de Exportación* (IMMEX) program and ending stocks; the domestic sugar consumption is unchanged at 4.166 million MT. These variables would be closely monitored. Per the terms of the suspension agreements, starting in March, within a certain period after each month's *WASDE* publication, the Department of Commerce (DOC) will consult with the Government of Mexico (GOM). During these monthly consultations, the GOM is expected to provide notification and supporting documentation to DOC regarding Mexico's capability to fulfill its allocation.

IMMEX deliveries are reduced by 222,000 MT from last month to 271,000, the lowest since 2009/10 (figure 10). Except for certain years, deliveries to IMMEX participants have been trending upwards since 2008/09 partly because mills are motivated by the program's higher prices relative to the world price if they instead choose to export to other countries. The cumulative IMMEX deliveries through January amount to about 118,000 MT, implying that 44 percent of the revised forecast (271,000 MT) has already been delivered. Since 2008/09, a heightened pace over the same 4 months was only observed once—in 2009/10 (45 percent)—

when IMMEX deliveries were also around 271,000 MT. Given this year’s limited domestic sugar production, the pace of IMMEX deliveries in the ensuing months would be closely followed to understand how the Mexican mills balance commitments between exports to the U.S. and to IMMEX-dependent companies, which include Mexico-based U.S. manufacturing companies.

Figure 10
Mexican sugar deliveries to IMMEX program, 2008/09–2022/23

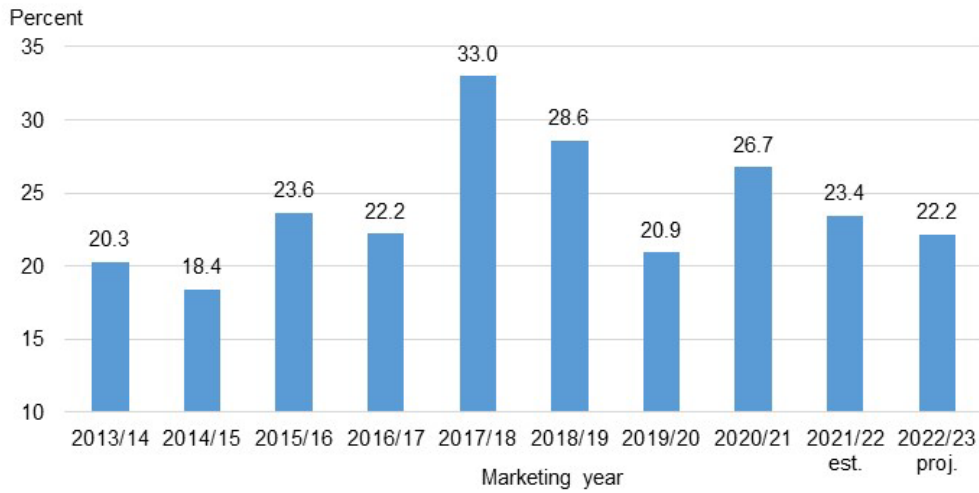


IMMEX = Industria Manufacturera, Maquiladora y de Servicios de Exportación; proj. = projected.
 Source: USDA, Economic Research Service calculations using data from Mexico’s National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

The 2022/23 ending stocks are reduced from last month by 46,000 MT to 925,000, which translates to a 22.2 percent stocks-domestic-consumption ratio (figure 11). While the forecast would be the lowest 2019/20’s 20.9 percent, the ratio is within bounds of maintaining a 2.5-months’ worth of ending stocks—a target used by Mexican officials to manage their sugar program.

Figure 11

Mexican stocks-to-human consumption ratio, 2013/14–2022/23



est. = estimated; proj. = projected.

Source: USDA, Economic Research Service's calculations.

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