



# Sugar and Sweeteners Outlook: May 2022

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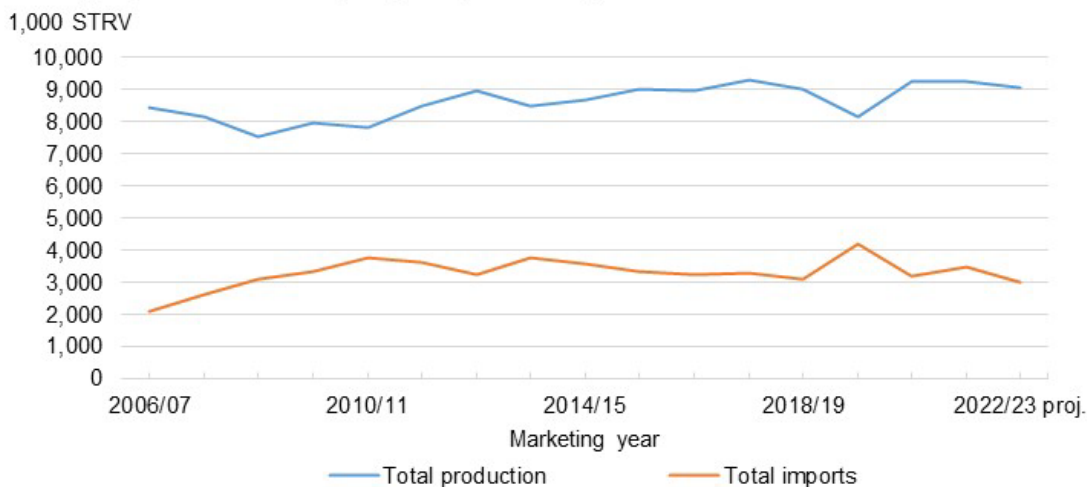
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## U.S. Sugar Supply Lower in 2022/23; Use Unchanged

In the May 2022 *World Agricultural Supply and Demand Estimates*, U.S. sugar ending stocks for 2022/23 are lower than 2021/22 primarily on smaller supply. Larger 2022/23 beginning stocks, relative to 2021/22, are offset by lower domestic sugar production, primarily of beet sugar, and lower imports that are set at the minimum levels consistent with trade agreements and average production of U.S.-bound Mexican sugar. U.S. total use in 2022/23 is projected to be flat with the current 2021/22 estimate. Thus, 2022/23 ending stocks are 1.266 million STRV, which translates to a 10.1-percent stocks-to-use ratio.

Figure 1  
U.S. sugar production and imports, 2006/07 to 2022/23



STRV = short tons, raw value; proj. = projected.  
Source: USDA, World Agricultural Outlook Board.

# U.S. Outlook Summary

## U.S. Sugar Supplies Projected To be Lower in 2022/23

In the May 2022 *World Agricultural Supply and Demand Estimates (WASDE)*, U.S. total sugar supply for 2022/23 is projected to be 13.856 million short tons, raw value (STRV), a 3.8-percent decrease from the 2021/22 estimate of 14.403 million STRV (table 1). The larger 2022/23 beginning stocks, relative to 2021/22, are offset by lower domestic sugar production, primarily of beet sugar, and lower imports that are set at the minimum levels consistent with trade agreements and average production of U.S.-bound Mexican sugar. U.S. total use in 2022/23 is projected to be flat with the current 2021/22 estimate. Thus, 2022/23 ending stocks are 1.266 million STRV, which translates to 10.1-percent stocks-to-use ratio.

**Table 1: U.S. sugar: supply and use by fiscal year (October/September), May 2022**

Items	2020/21	2021/22		Monthly change	2022/23
		April (estimate)	May (estimate)		May (forecast)
		1,000 short tons raw value			
Beginning stocks	1,618	1,705	1,705	0	1,813
Total production	9,234	9,309	9,229	-80	9,040
Beet sugar	5,092	5,338	5,254	-85	5,000
Cane sugar	4,142	3,971	3,976	4	4,040
Florida	2,090	1,937	1,942	4	2,000
Louisiana	1,918	1,906	1,906	0	1,910
Texas	134	128	128	0	130
Total imports	3,195	3,058	3,469	411	3,003
Tariff-rate quota imports	1,749	1,568	1,727	159	1,379
Other program imports	292	250	300	50	250
Non-program imports	1,154	1,240	1,442	202	1,373
Mexico	968	1,050	1,220	170	1,323
High-duty	186	190	221	32	50
Total supply	14,047	14,072	14,403	331	13,856
Total exports	49	35	35	0	35
Miscellaneous	40	0	0	0	0
Total deliveries	12,251	12,470	12,555	85	12,555
Domestic food and beverage use	12,135	12,365	12,450	85	12,450
To sugar-containing products re-export program	89	80	80	0	80
For polyhydric alcohol, feed, other alcohol	27	25	25	0	25
Commodity Credit Corporation (CCC) sale for ethanol	0	0	0	0	0
Total use	12,340	12,505	12,590	85	12,590
Ending stocks	1,707	1,567	1,813	246	1,266
Private	1,707	1,567	1,813	246	1,266
Commodity Credit Corporation	0	0	0	0	0
Stocks-to-use ratio (percent)	13.8	12.5	14.4	1.9	10.1

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

## Sluggish Pace of Sugarbeet Planting Lowers 2021/22 and 2022/23 Production Forecasts

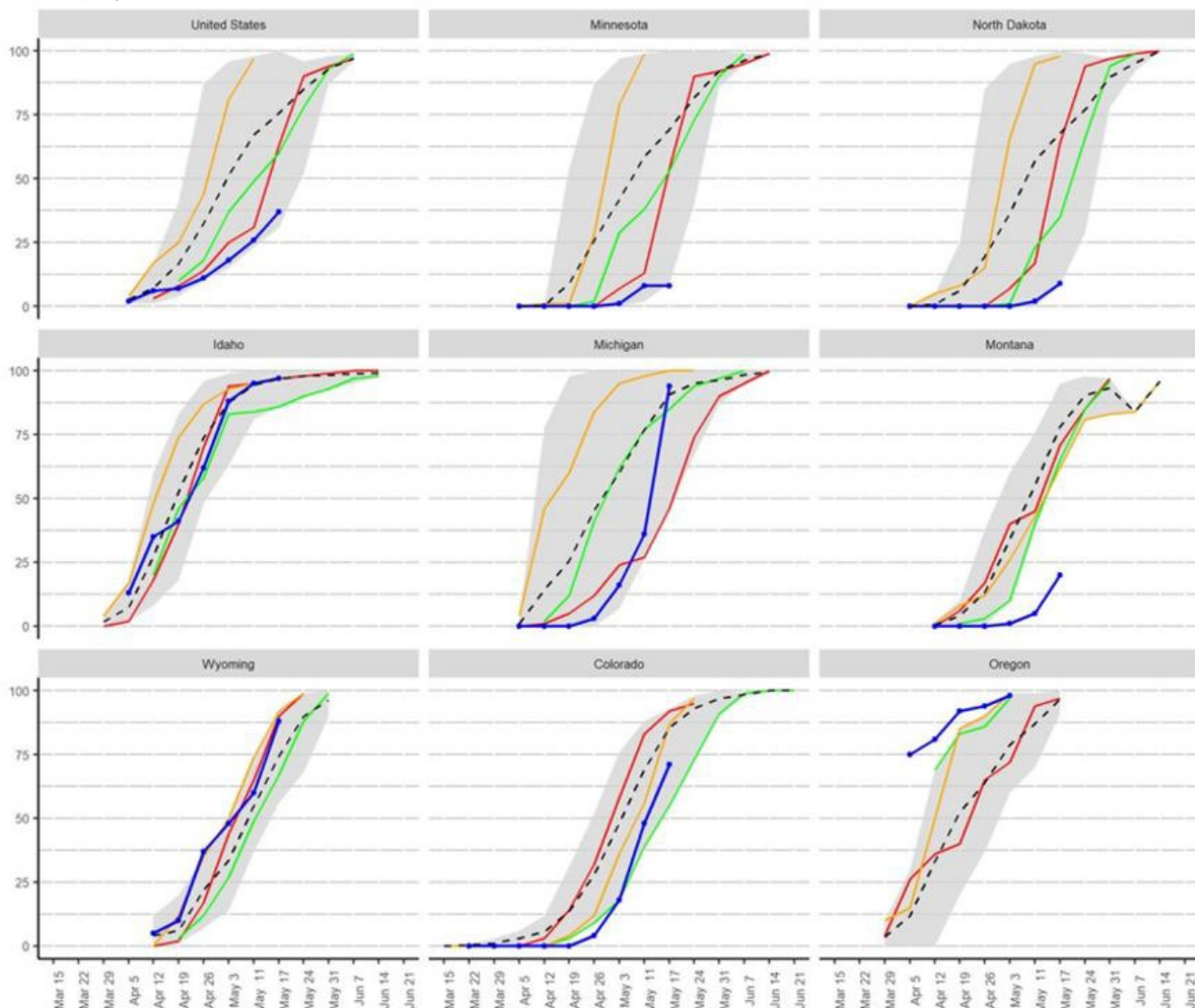
The sugarbeet planting season, which usually occurs in April and May for most of the producing States, was significantly delayed by cold and soggy weather conditions. Through May 8, which represents week 18 of the National Agricultural Statistics Service (NASS) *Crop Progress* report, the weighted average of planting progress was only 26 percent for the four largest sugarbeet-growing States—Idaho, Michigan, Minnesota, and North Dakota—which planted 84 percent of the 2021 crop sugarbeet acreage. This pace is well below last year’s 95 percent and trails the five-year average of 69 percent and even behind the weather-affected 2019/20 season’s 31 percent (figure 2). Of the four States, only Idaho’s planting progress at week 18 (95 percent) was ahead of the 5-year average levels. Minnesota (8 percent), North Dakota (2 percent), and Michigan (36 percent) were all behind the normal pace of planting. The planting delay has implications for the forecast of the sugarbeet yield and early-season production, which in turn affect the production outlook for both 2021/22 and 2022/23.

With no NASS projection for the 2022/23 sugarbeet yield at the time of this Outlook, the national yield is forecast based on a regression model that uses trend yield and planting progress from 2000/01 to 2021/22 as parameters. The time trend is important to incorporate since yields have been increasing, on average, by about 0.5 tons/acre each year. Timely planting sugarbeets is correlated with higher yields, as it allows the plants to establish themselves before the warmer summer months when key growth and development occur. The planting progress at NASS’ week 18 reporting is used because it is around the mid-May period that growers see as critical cut-off point for optimal crop development. In addition, an indicator variable was included as the third parameter in the model to differentiate crop years before and after 2009/10 that saw widespread technological adoption among growers such as biotech seeds. These three parameters account for 88 percent of the total variation in sugarbeet yields during 2000/01 to 2021/22. The resulting yield forecast that was used in the May *WASDE* is 30.23 tons/acre, which is below the five-year Olympic average<sup>1</sup> (30.51 tons/acre) and the long-term trend line (figure 3).

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<sup>1</sup> While the simple average uses all observations, the Olympic average eliminates the high and low observations, and then averages the remaining observations.

Figure 2  
**Planting progress by State, 2019 (red), 2020 (green), 2021 (orange), 2022 (blue), average, and range, since 2000**  
 Percent complete



Source: USDA, National Agricultural Statistics Service.

The yield forecast is combined with the planted area forecast from the NASS March 2022 *Prospective Plantings* report (1,143.4 million acres), along with a 5-year Olympic average harvest-to-planted ratio (97 percent), to forecast 2022/23 harvested area (1,113 million acres). This results in sugarbeet production for 2022/23 totaling 33.652 million short tons (table 2). Beet sugar production for the August-July crop year 2022/23 is projected to be 4.992 million STRV assuming average regional levels of beet pile shrink and sucrose recovery, as well as normal weather and growing conditions. This would be a 7.2-percent decrease from the 2021/22 revised crop year beet sugar production estimate of 5.301 million STRV.

**Table 2: Beet sugar production projection calculations, 2021/22 and 2022/23**

	2018/19	2019/20	2020/21	2021/22 Apr	2021/22 May	Monthly change	2022/23 May
Area harvested (1,000 acres)	1,096	980	1,142	1,108	1,108	0	1,113
Yield (tons per acre)	30.4	29.2	29.4	33.2	33.2	0	30.23
Sugarbeet production (1,000 short tons) 1/	33,282	28,650	33,618	36,751	36,751	0	33,652
Sugarbeet shrink (percent)	5.17	5.34	6.60	8.90	8.47	-0.4	7.37
Sugarbeet sliced (1,000 short tons)	31,561	27,072	31,399	33,481	33,639	158	31,173
Sugar extraction rate from slice (percent)	14.77	14.14	15.34	14.78	14.69	-0.1	14.63
Sugar from beets sliced (1,000 STRV) 2/	4,660	3,828	4,818	4,947	4,941	-6	4,562
Sugar from molasses (1,000 STRV) 2/	352	341	362	360	360	0	360
Crop-year sugar production (1,000 STRV) 2/	5,012	4,169	5,181	5,307	5,301	-6	4,922
August-September sugar production (1,000 STRV)	655	582	765	676	676	0	600
August-September sugar production of subsequent crop (1,000 STRV)	582	765	676	678	600	-78	678
Sugar from imported beets (1,000 STRV) 3/	N/A	N/A	N/A	28	28	0.1	N/A
Fiscal year sugar production (1,000 STRV)	4,939	4,351	5,092	5,338	5,254	-84	5,000

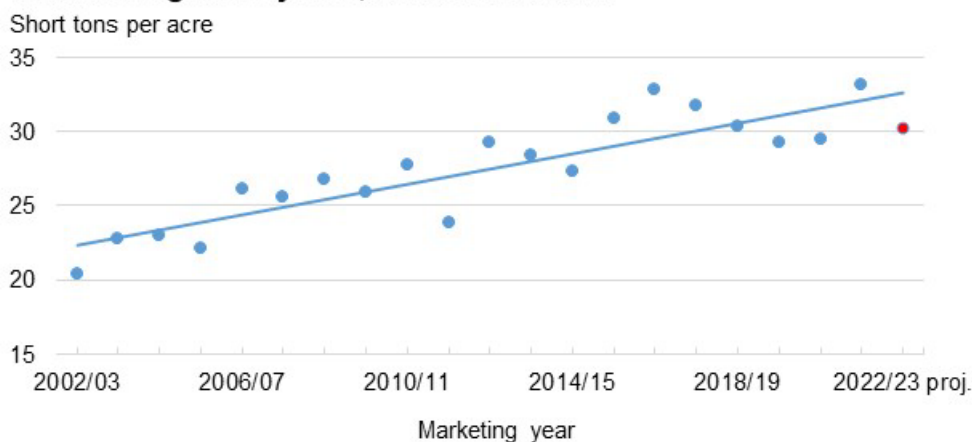
1/ USDA, National Agricultural Statistics Service.

2/ August–July.

3/ For 2022/23 projection, sugar from imported beets are included in crop-year production. Typically, this component is separated out for projections and included in total once full crop-year slice is recorded.

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

Figure 3  
**National sugarbeet yields, 2002/03 to 2022/23**



proj. = projected.

Source: USDA, National Agricultural Statistics Service

Early-season beet sugar production from the crop being planted—which is expected to be harvested and processed into sugar prior to October 1, 2022, and thus accounted in fiscal year 2021/22—is also strongly correlated with planting progress. Similar with the yield forecast, a regression model that includes time trend, planting progress, biotech varietal adoption, and yield from 2000/01 to 2021/22 as parameters was estimated. The model captures 63 percent of the total variation in early-season production. Using the 2022/23 national yield forecast (30.23 tons/acre) and planting progress through week 18 (26 percent), the model predicts a 600,000-STRV production in August–September 2022, which is lower than last month’s 678,000-STRV

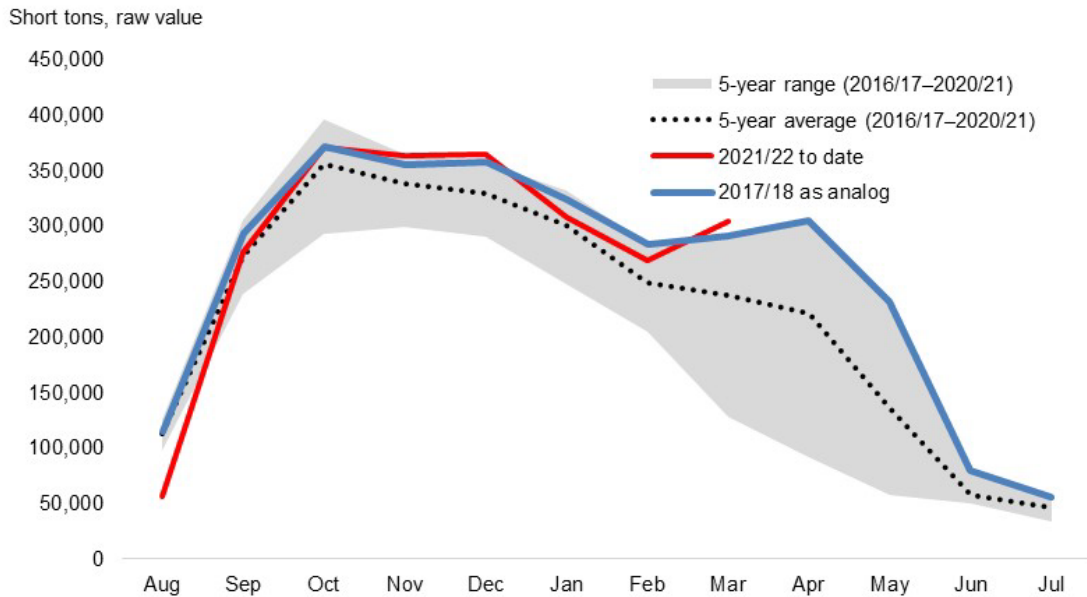
forecast, which was based on a 5-year average.

As such, the fiscal year 2021/22 is reduced 85,000 STRV to 5.254 million (table 1), based on the lower expected August-September 2022 production, and a slight reduction to reflect processors' reporting to the Farm Service Agency's Sweetener Market Data (SMD) report. Per the SMD report, the beet processors reported lower beet pile shrink, larger quantity of beets sliced, and lower sucrose recovery.

Conversely, the August-September 2023 is estimated to be 678,461 STRV, using a five-year average. Combining the net effect of early season production between the 2 years with the forecast crop year 2022/23 production (4.992 million STRV) results in a fiscal year 2022/23 beet sugar production of 5 million STRV (table 2). This level represents a 254,000-STRV reduction, or 4.8 percent, from the 2021/22 revised fiscal year beet sugar production estimate of 5.254 million STRV.

In terms of crop year 2021/22, the three beet processors in the Red River Valley (RRV) region—where more than half of the beet sugar is produced—are looking to have a strong late-season campaign, such as in 2017/18, to process most of the frozen beet piles. All processors in the region, which includes Minnesota and North Dakota, are confident with this appraisal particularly if normal weather conditions continue and the quality of the piles is preserved. The 303,751-STRV March beet sugar production reported in the SMD, which surpasses the previous record-high in March 2018, supports this (figure 4). Through March, the RRV processors have produced 2.310 million STRV, or 77 percent of their estimated 3.007 million-STRV sugar production through July (figure 5). As such, the region's sugar production in the last three months is crucial.

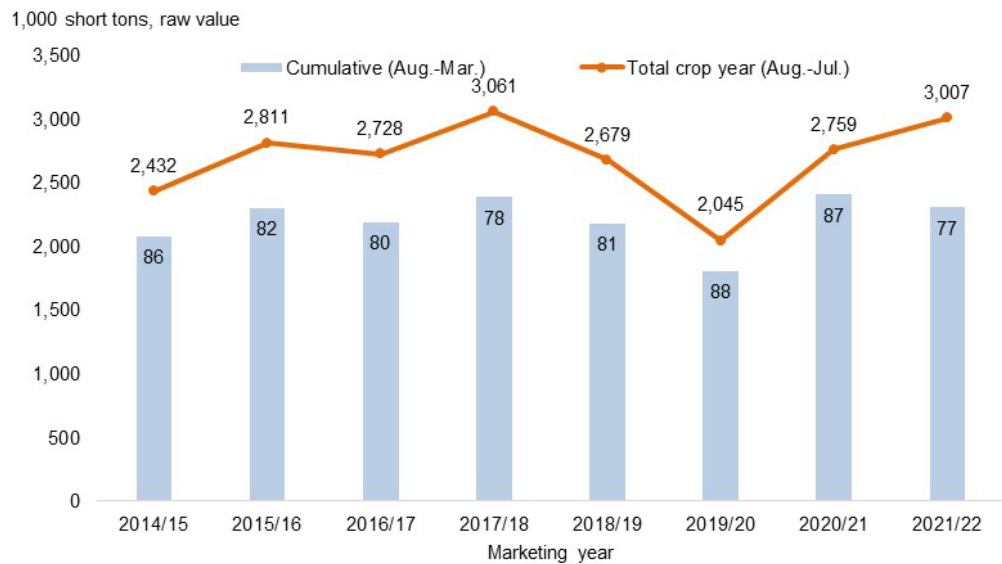
Figure 4  
**Beet sugar production in the Red River Valley region, August to July, 2016/17–2021/22**



Note: On average, sugarbeet processors in the Red River Valley region, which includes Minnesota and North Dakota, produce more than half of the total beet sugar.

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

Figure 5  
**Cumulative (August to March) and total crop year beet sugar production (August to July), and percent share of cumulative in total crop year estimate, 2014/15–2021/22**



Note: The numbers inside the bars represent the percent of actual production in total crop year estimate.  
 Sources: USDA, Economic Research Service; USDA, Farm Service Agency.

## 2022/23 Cane Sugar Production Projected Higher

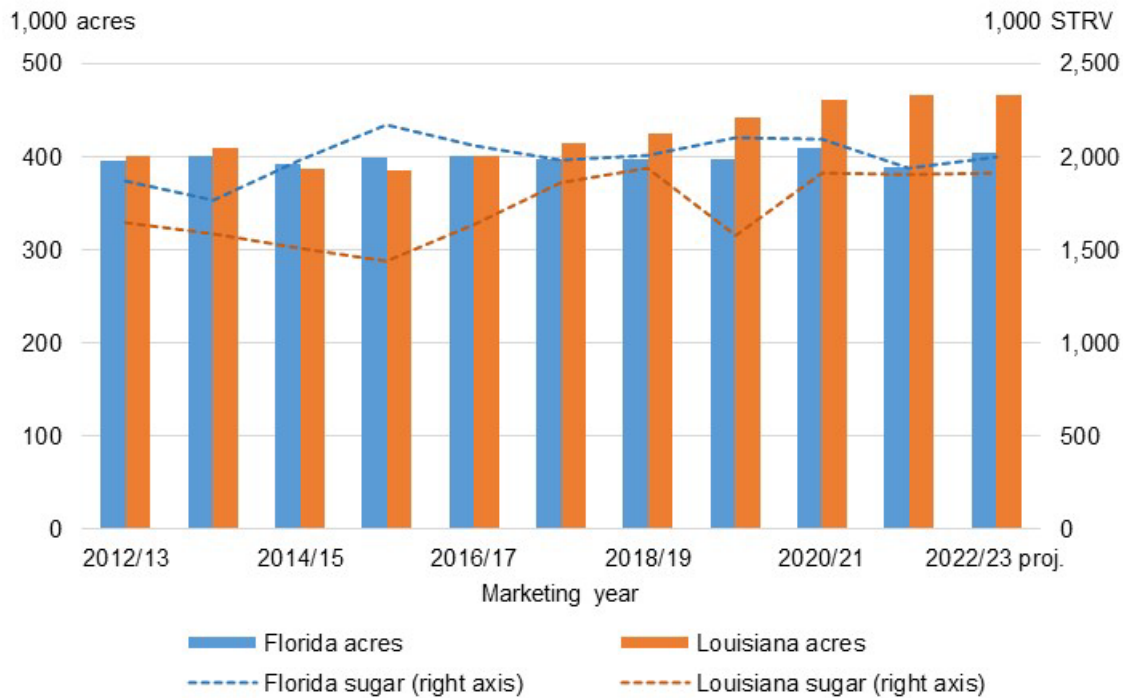
Cane sugar production for 2022/23 is projected to total 4.040 million STRV, which would be a 64,000-STRV increase or 1.6-percent, from the adjusted 2021/22 estimate of 3.976 million. The first official NASS statistics for the 2021/22 sugarcane sector—which includes the initial forecasts for sugarcane harvested area in Florida, Louisiana, and Texas—will not be released until the June 30 *Acreage* report. As a result, the current forecasts are based on extrapolation from recent years and reflect trends in harvested area, yield, and recovery rate for each State. Cane sugar production in all States is projected to be higher, with Florida accounting for the bulk of the increase.

Production in Florida is projected at 2 million STRV for 2022/23. This would be a 58,000-STRV increase or 3 percent from 2021/22, which was marginally increased 4,358 STRV in the May *WASDE* due to updated processors' reporting. The projection reflects trend yields and recovery rates that are in line with recent years, along with slightly higher harvested area which was reduced in 2021/22 due to an unusual freeze at the end of January, during the middle of the harvest season. Harvested sugarcane acreage in the State remained relatively stable at about 400,000 acres in recent years (figure 6), and production levels were largely driven by local weather conditions that have affected yield and recovery quality.

Louisiana cane sugar production for 2022/23 is forecast at 1.910 million STRV, up slightly by 2,000 STRV (or 0.2 percent) from 1.906 million in 2021/22. At this level, Louisiana continues to closely track Florida's sugar output. Over the last five years, sugarcane area has trended upwards due to expansion on the northern edges of the State's growing region (figure 6). This was made possible by the adoption of higher yielding varieties that can better withstand late-season frost conditions (December to January). Out of the three States, Louisiana is the only one for which NASS publishes a weekly sugarcane crop condition rating. As of the week ending on May 8, the good-to-excellent rating increased from last week's 65 percent to 72 percent, which is both the highest level for the current crop and at this same time since 2016. The rest of the ratings are 25 percent fair (30 percent a week ago) and 3 percent poor/very poor (5 percent).



Figure 6  
**Sugarcane harvested area and sugar production, Florida and Louisiana, 2008/09 to 2019/20**



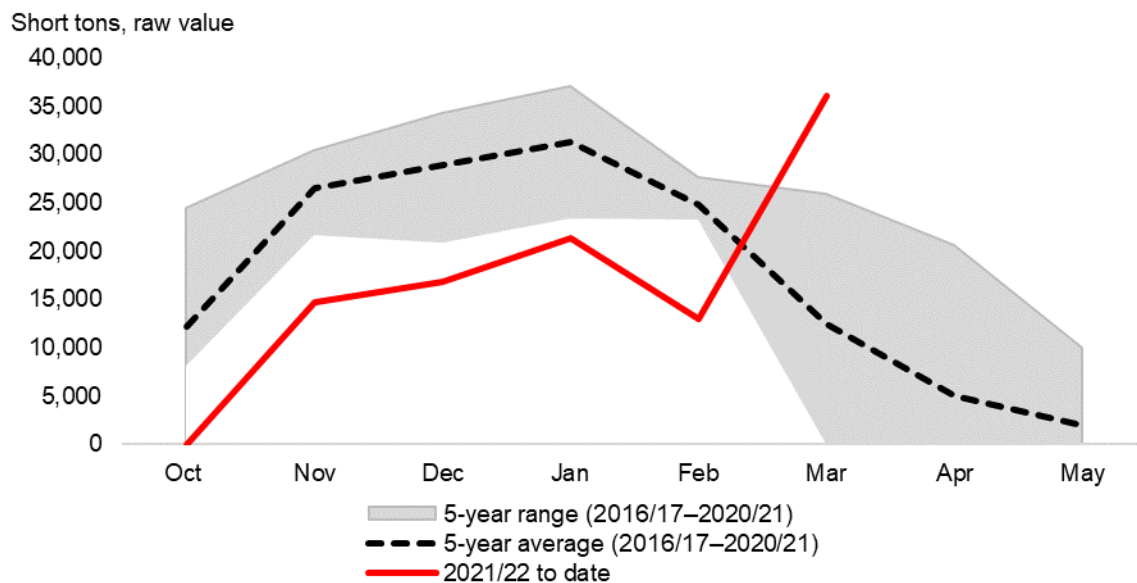
STRV = short tons, raw value.  
 Source: USDA, National Agricultural Statistics Service.

Production in Texas for 2022/23 is projected at 130,000 STRV, which matches the recent 3-year average, and represents an increase of 2,000 STRV, or 1.6 percent, from last year's 128,000 STRV. A potential downside risk as the season progresses can come from the rain-delayed harvest in 2021/22, which may carry over to the 2022/23 season due to the shortened time for cane stubble to regrow.

For 2021/22, Florida cane sugar production, which is expected to wrap up in May, is marginally increased by 4,358 STRV to 1.942 million based on processors' reporting to SMD. There were no production changes to 2021/22 Louisiana's 1.906 million STRV as mills have completed processing for the season and there is little information at this time to adjust early production. The estimated production in Texas, 128,000 STRV, is also unchanged from last month. The Texas campaign, which typically wraps up in March, was reportedly extended through April due to unusually wet weather during the first part of harvest. Data from the SMD show a 36,092-STRV sugar production in March, which is the largest recorded for the month since 2015/16 (figure 7).

Through March, Texas cane sugar production amounted to 101,876 STRV. Since the actual production reported on the SMD lags by 2 months, if the 2021/22 estimate of 128,000 STRV comes to fruition, then about 26,124 STRV would have been produced in April—also a record-high since 2015/16.

Figure 7  
**Cane sugar production in Texas, 2016/17 to 2021/22**



Source: USDA, Farm Service Agency.

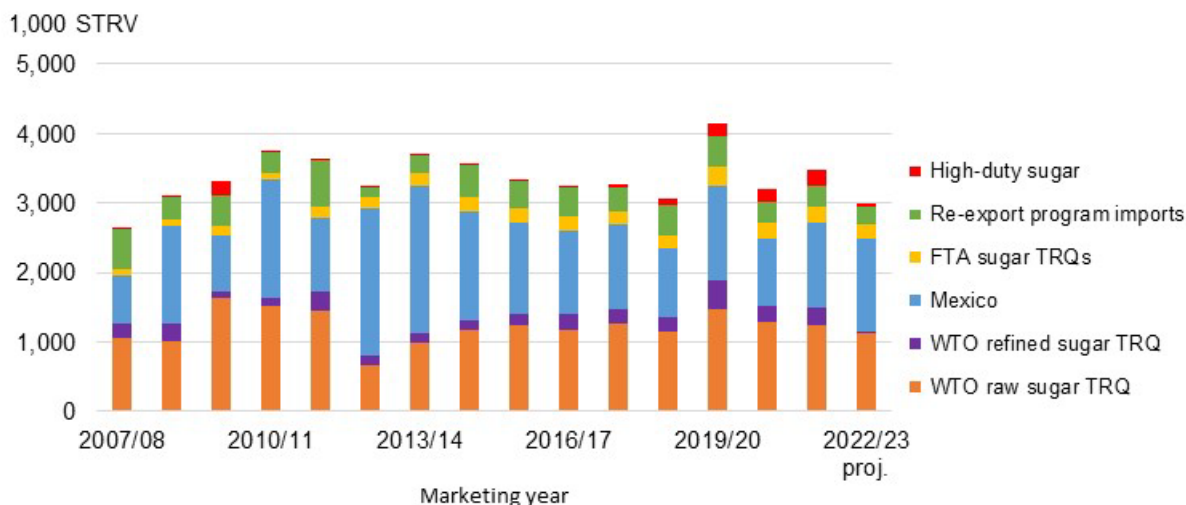
## 2022/23 Imports Projected to be Lower

Total U.S. sugar imports for 2022/23 are projected to be 3.003 million STRV, which is 467,000 STRV lower, or 13.4 percent, than the revised 2021/22 estimate (figure 8). The forecast across all the import categories, except Mexico, is reduced. Tariff-rate quota (TRQ) imports are projected at 1.379 million STRV, down 348,000 from 2021/22, with levels set at minimum levels consistent with existing World Trade Organization (WTO) and Free-Trade Agreement (FTA) commitments. The additional Specialty Sugar TRQ for 2022/23 has yet to be announced by the USDA Secretary and is not included in this forecast. While the amount has traditionally been announced prior to the July WASDE, for 2021/22, the notice came out in September 2021 and was established at 220,462 STRV. The TRQ shortfall, which represents an estimate of the quantity of quota that the 40 WTO countries will not be able to fill, is projected at a typical base level of 99,000 STRV. Imports under the re-export and polyhydric alcohol programs are also set at the base level of 250,000 STRV, down 50,000 STRV from last year's updated estimate.

Similarly, high-tier imports, which enter the U.S. at the full-duty rate, are forecast at the standard amount of 50,000 STRV, down 171,000 from 2021/22 revised level.

Imports from Mexico for 2022/23 are projected at 1.323 million STRV, a 103,000-STRV increase from last year. The forecast is based on the average Mexican production of U.S.-bound “Other Sugar” (less than 99.2 polarity), which comprise 70 percent of total exports to the U.S. under the Suspension Agreements. This methodology is used because the first U.S. Department of Commerce (DOC) calculation to determine Mexico’s fiscal year (FY) 2023 Export Limit will not be made until after the July WASDE. The methodology is explained in the Mexico Sugar Outlook section.

Figure 8  
**U.S. sugar imports, 2007/08 to 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.

## 2021/22 Imports Raised

The 2021/22 total U.S. imports are raised 411,458 from last month’s *WASDE* to 3.469 million STRV in the aftermath of two sugar actions in combined with increased estimates for high-tier imports and imports under the re-export programs. As a result, from being the lowest since 2008/09 as of the April *WASDE*, the revised total imports estimate, if fulfilled, would be the sixth largest since 2008/09. It would also be the second largest in the last five years behind 2019/20

which saw record-high imports in response to the weather-reduced beet sugar production (figure 8). In addition to increased volume, the pace of entry through April (62 percent of the 2021/22 total imports) is the strongest in the last 5 years (table 3). Leading the pace is high-tier imports, with 80 percent out of the updated 226,810 STRV for 2021/22 already entered through April, which is double the 5-year average entry pace (40 percent).

The first action was on April 15, when the U.S. Office of Trade Representative reallocated 222,170 STRV of WTO raw sugar TRQ. This action shifted the allocation from quota-holding countries that do not intend to fill their quotas to those with the capacity to ship additional supplies to the U.S. The reallocation reduced the estimated 2021/22 shortfall from 230,000 to 71,000 STRV and correspondingly increased the 2021/22 WTO raw sugar TRQ by 160,000 STRV. The second action was on April 28, when the U.S. Department of Commerce, upon the request of USDA, increased Mexico's FY 2022 Export Limit by 170,000 STRV of the less-than-99.2 polarity "Other Sugar".

**Table 3: U.S. sugar imports, October to March, 2016/17 to 2021/22**

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22 projected	5-year average
October to April	Short tons, raw value						
Mexico	648,238	659,896	546,561	692,457	411,146	644,497	591,660
WTO raw sugar TRQ	746,110	855,933	742,279	795,852	932,075	768,505	814,450
WTO refined sugar TRQ	185,603	153,336	166,430	334,194	172,989	192,282	202,510
FTA sugar TRQ	129,496	81,258	99,743	130,338	120,224	134,073	112,212
Re-export program	140,746	169,832	256,336	244,878	115,339	226,810	185,426
High-duty sugar	5,648	8,758	45,801	64,110	103,779	177,386	45,619
Total	1,855,843	1,929,012	1,857,150	2,261,831	1,855,552	2,143,553	1,951,877
Share of fiscal year total	Percent						
Mexico	54	54	55	50	42	53	51
WTO raw sugar TRQ	63	67	65	54	72	61	64
WTO refined sugar TRQ	85	81	80	82	80	80	81
FTA sugar TRQ	62	40	53	47	51	57	50
Re-export program	34	52	59	57	39	76	48
High-duty sugar	46	14	50	35	56	80	40
Total	57	59	60	55	58	62	58

WTO = World Trade Organization; TRQ = tariff rate quota; FTA = free trade agreement.

Source: USDA, Foreign Agricultural Service.

Imports under the re-export programs for 2021/22 are increased 50,000 STRV from last month to 300,000 on increased pace. The USDA, Foreign Agricultural Service (FAS) *Sugar Monthly Import and Re-Export Data* report indicates that re-export program imports were particularly

strong in April (72,773 STRV). Through the first 7 months of the fiscal year, October to April, re-export program imports amounted to 226,810 STRV, implying that 76 percent of the estimated 300,000 STRV has been entered into the U.S., versus the 5-year average of 185,426 STRV, or 48 percent, during the same period, respectively (table 3). The re-export program increases U.S. cane refiners' competitiveness in the world market by allowing them to import a limited quantity of non-quota, world-priced sugar for refining, if it is exported as refined sugar or delivered to manufacturers of sugar-containing products for exports within a certain period. Given the relative high price of the No. 16 raw cane sugar, an indication of supply scarcity, the re-export program is providing refiners an alternative source of raw cane sugar going into the typical busy, summer quarter.

The 2021/22 high-tier tariff imports are increased 31,833 STRV to 221,495 on confirmed entry of raw sugar imports that paid high duty. If the revised estimate materializes, it will surpass the record-high 207,380 STRV in 2009/10, the last time a significant quantity of high-tier raw sugar was imported (figure 9). Even with the upward revision, an estimated 80 percent of the projected total high-tier imports has already been imported through April, which is double the 5-year average pace. The FAS report, which breaks down high-tier tariff imports through March by port and country of origin, showed that 46 percent entered in Savannah, GA and 11 percent in San Francisco, CA. This indicates that more than half of the total was imported by cane refiners. In terms of country of origin, the majority (66 percent) of the high-tier sugar imports to date has come from Brazil.

**Table 4: U.S. high duty sugar imports, October to March 2022**

	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Total	Share of total
Top five ports:	Short tons, raw value							Percent
Los Angeles, CA	778	1,068	1,255	1,131	642	519	5,394	4
Philadelphia, PA	1,198	1,143	2,718	1,187	7,207	1,738	15,191	11
San Francisco, CA	141	768	264	13,303	181	142	14,800	11
Savannah, GA	29,078	5,698	27,973	286	119	93	63,247	46
Seattle, WA	2,651	3,452	2,728	2,861	2,371	3,228	17,292	13
Rest of ports	4,209	1,945	3,854	3,029	3,285	4,245	20,567	15
<b>Total</b>	<b>38,057</b>	<b>14,075</b>	<b>38,793</b>	<b>21,797</b>	<b>13,804</b>	<b>9,965</b>	<b>136,491</b>	<b>100</b>
Top five origins:								
Brazil	32,350	7,671	32,013	4,668	9,619	3,825	90,145	66
Colombia	29	2,004	3,711	2,614	1,414	0	9,772	7
Costa Rica	1,599	315	114	22	0	0	2,050	2
Guatemala	1,808	2,166	604	227	1,917	0	6,723	5
Nicaragua	0	0	368	12,237	0	1,976	14,581	11
Rest of countries	2,270	1,920	1,983	2,029	854	245	9,301	7
<b>Total</b>	<b>38,057</b>	<b>14,075</b>	<b>38,793</b>	<b>21,797</b>	<b>13,804</b>	<b>9,965</b>	<b>136,491</b>	<b>100</b>

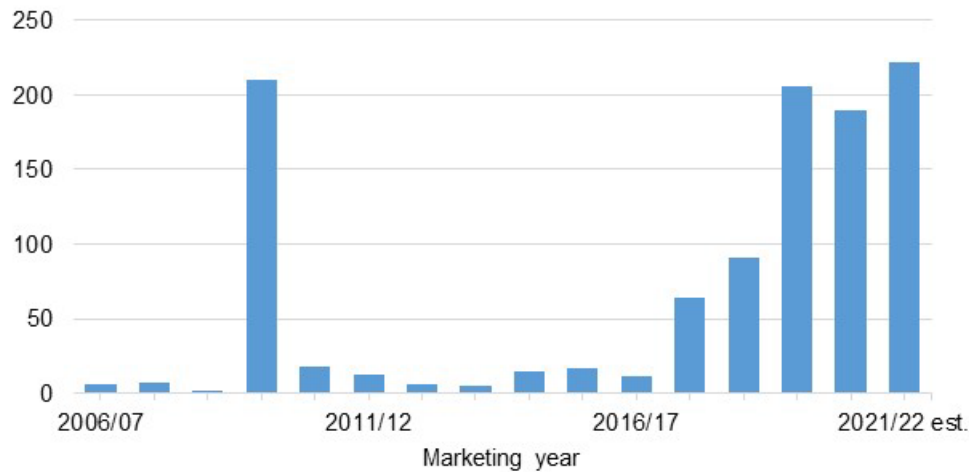
CA = California, PA = Pennsylvania; GA = Georgia, WA = Washington.

Source: USDA, Foreign Agricultural Service.

Figure 9

**U.S. imports of high-tier tariff sugar, 2006/07 to 2021/22**

1,000 short tons, raw value



est. = estimated.

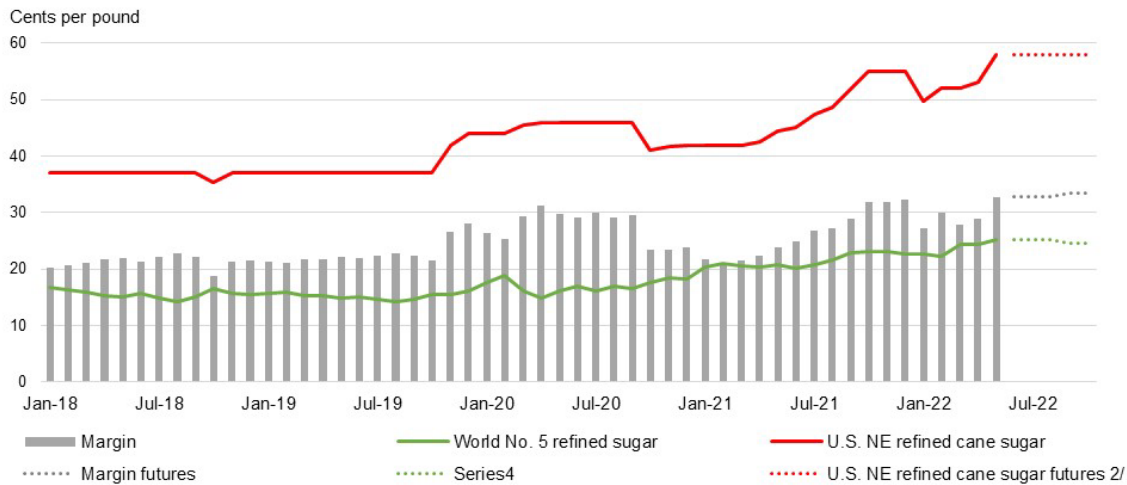
Sources: USDA, Foreign Agricultural Service; U.S. Department of Commerce, Bureau of the Census.

Since the recent sugar actions provided some means for cane refiners to import raw cane sugar without paying the high duty, one might expect that high-tier sugar imports during the remaining months would mostly be comprised of refined sugar. This is especially likely given the relatively widespread between U.S. and global prices, the late planting of the new crop, and Michigan Sugar’s *force majeure*, a situation causing an inability to fulfill contracts. Refined cane sugar prices offered in the Northeast and West coasts, published on *Sosland Sweetener Report*, recently increased from 52 to 58 cents per pound (figure 10). Meanwhile, there are still no quotes for beet sugar across all regions due to lack of readily available supplies. With the current margin between U.S. refined cane prices and the world No. 5 refined sugar—34 cents per pound—being greater than the 22.4-cents per pound cost of importing high-tier refined sugar (assuming a 6.1-cent per pound logistic cost on top of the 16.3-cent per pound tariff), high-tier refined imports remain attractive.

The U.S. No. 16 raw cane price response was not significant following the two sugar actions during the second half of April as the nearby months remain above 36 cents per pound in the aftermath. In the past months, the margins between the U.S. No. 16 and the world No. 11 raw cane sugar—15-16-cents per pound—have been below the presumed 18.6-cent level where high-tier raw sugar imports would be economical (figure 11). However, given high-tier raw

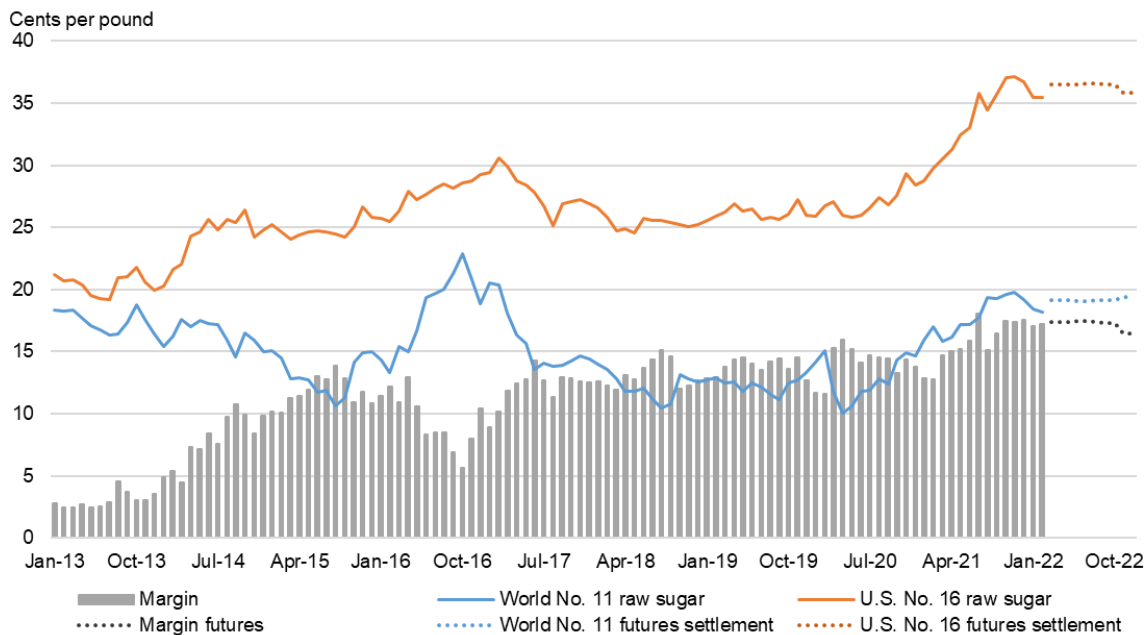
sugar imports have been entering is an indication that the actual logistic costs of bringing in this sugar may be lower than thought, perhaps due to efficiencies gained over the sustained period of high-tier imports.

Figure 10  
**Monthly U.S. refined cane sugar and world refined sugar prices and margin, January 2018 to October 2022**



Note: Data on U.S. Northeast refined cane sugar are only available starting January 2018.  
 NE = Northeast.  
 1/ Nearby futures, No. 5 contract, Intercontinental Exchange Inc., and futures price settlements on 5/13/2022 through October 2022.  
 2/ Northeast refined cane sugar and future price as quoted in Milling and Baking News on 5/13/2022 through September 2022.  
 Sources: Milling and Baking News; Intercontinental Exchange, Inc.

Figure 11  
**U.S. and world raw sugar prices and margin, monthly, January 2013 to December 2022**



Note: No. 11 and No. 16 contract futures settlement prices, Intercontinental Exchange Inc., on 5/13/2022 out to December 2022.  
 Source: USDA, Economic Research Service; Intercontinental Exchange, Inc.

## U.S. Deliveries for 2021/22 Up on Stronger Pace; Unchanged in 2022/23 Due to Uncertainties

The 2021/22 domestic sugar deliveries for food and beverage use are raised 85,000 STRV from last month to 12.450 million, marking the third consecutive month of increase since February. Like prior months, the increase in the May *WASDE* is based on the strong delivery pace for beet sugar and direct consumption imports. This increase reflects a 2.6-percent growth from the 2021/22 level of 12.365 million STRV. The higher estimate for 2021/22 food and beverage deliveries assumes that the remaining half of the fiscal year will closely tracks the 5-year average but can be subject to the uncertainties discussed below. With no changes to the rest of the delivery categories, 2021/22 total use is also up 85,000 STRV to 12.555 million.

Based on the latest release of the USDA, FSA *Sweetener and Market Data* report, food and beverage deliveries through the first half of the fiscal year are 6.198 million STRV (table 5). This represents a 6.2-percent increase during the same period in 2021/22 and would be a new record high for the October-March period, surpassing the 6.091 million STRV set in 2019/20 (figure 12). The quarterly trends support this observation as deliveries in the first fiscal quarter (October-December) were the largest since 1992/93 and next largest in the second fiscal quarter (January-March) (figure 13).

**Table 5: Food and beverage deliveries, October–March, 2016/17– 2021/22**

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22 est.	Annual change	
	1,000 short tons, raw value (STRV)						1,000 STRV	Percent
Beet sugar processors	2,600	2,645	2,455	2,382	2,424	2,655	231	9.5
Cane sugar refiners	2,998	2,946	3,105	3,268	3,096	3,073	-23	-0.7
Total reporters	5,598	5,591	5,560	5,650	5,520	5,728	208	3.8
Non-reporter, direct consumption	302	343	384	441	318	470	152	47.7
Total	5,900	5,934	5,944	6,091	5,838	6,198	360	6.2

Source: USDA, Farm Service Agency.

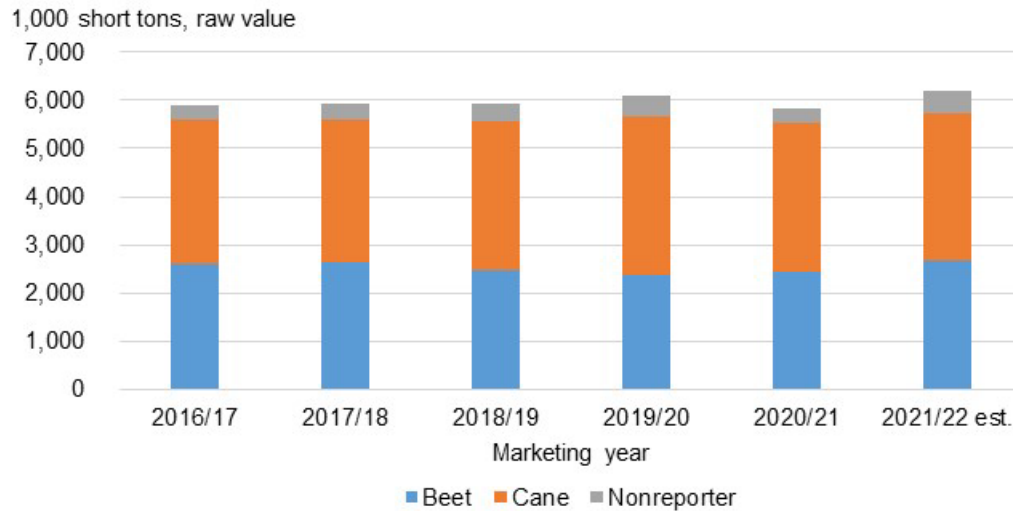
The October 2021 to March 2022 deliveries of 6.198 million STRV represent 49.8 percent of the revised estimate for fiscal year 2020/21 deliveries—a record-high share for the first six months of the fiscal year. This pace is higher than that of 2021/22 (48.1 percent) and the 10-year average (45.4 percent) over the same period (table 6). Historically, a greater portion of sugar deliveries occurred in the second half of the fiscal year—preceding the summer and the baking and holiday seasons in the United States. This pattern has not been holding recently because deliveries between October and March increasingly became stronger since 2016/17 (figure 13). If beet and cane sugar deliveries in 2021/22 were front-loaded, then there is downside risk to



the estimated food and beverage deliveries during the third and fourth fiscal year quarters that can affect the 2021/22 food and total use.

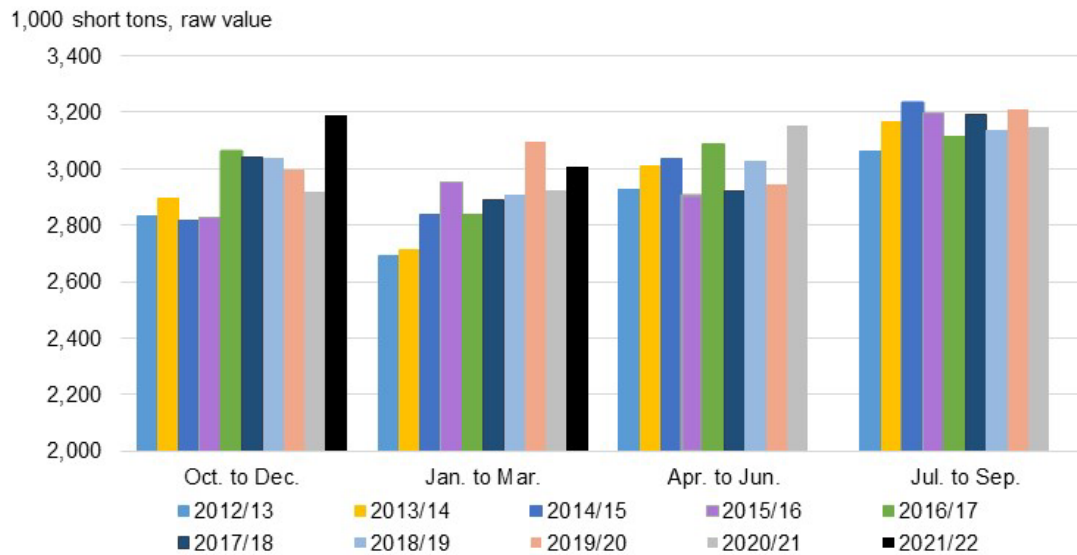
Due to these uncertainties, the projection for 2022/23 sugar deliveries for food and beverage use is set at 12.450 million STRV, unchanged from 2021/22.

Figure 12  
**Food and beverage deliveries, October–March, 2016/17–2021/22**



Source: USDA, Farm Service Agency.

Figure 13  
**Total U.S. sugar deliveries, quarterly, 2012/13–2021/22**



Source: USDA, Farm Service Agency.

**Table 6: Pace of U.S. deliveries, October–March, fiscal year 2011–2022**

	Oct.–Mar. 1,000 short tons, raw value	Fiscal year (FY)	Percent of total
FY11	5,383	11,193	48.1
FY12	5,345	11,141	48.0
FY13	5,526	11,511	48.0
FY14	5,612	11,786	47.6
FY15	5,652	11,921	47.4
FY16	5,779	11,881	48.6
FY17	5,900	12,102	48.8
FY18	5,934	12,048	49.3
FY19	5,944	12,106	49.1
FY20	6,091	12,246	49.7
FY21	5,838	12,135	48.1
FY22 (estimate)	6,198	12,450	49.8
10-year average	5,762	11,888	48.5

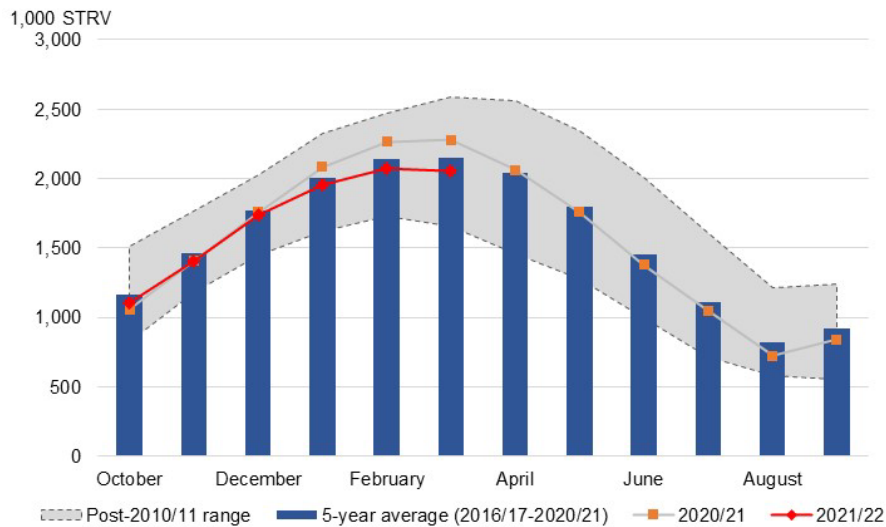
Source: USDA, Farm Service Agency, *Sweetener Market Data*; USDA, Economic Research Service.

Deliveries of reporting beet processors through March are 2,265 million STRV, 231,000 higher (or 9.5 percent) than the same period last year (table 5). The strong beet sugar deliveries, partly enabled by record-high 2021/22 beet sugar production, more than offset the cane refiners' deliveries. If the 9.5 percent over-the-year increase is extended to the second half of the fiscal year, then total beet sugar deliveries would amount to a record-setting 5.438 million STRV. If realized, this would overtake the prior records of 2016/17 and 2017/18 that totaled 5.348 million STRV and 5.271 million STRV, respectively. Given the current attractive market prices, as well as expected supply reduction during the second half of the fiscal year—due to Michigan's *force majeure* and lower estimated early season sugar stemming from delayed plantings—beet sugar inventories are likely to be drawn down to below average levels to meet the strong demand. Industry reporting from *Sosland Sweetener Report* indicated that major beet processors have fully contracted their 2021/22 sugar and are out of spot supplies. Refined beet sugar stocks at the midpoint of the fiscal year were 10 percent and 5 percent smaller than the previous year and 5-year average, respectively (figure 14).

Accumulated cane refiner deliveries totaled 3.073 million STRV between October and March, which are down 23,000 (or 0.7 percent) from last year's 3.096 million. Cane refiners' melt was up in March following the typical trend this time of the year, but at a level below the 10-year average (figure 15). Cane refiners' raw inventories, which had been below the 5-year average in

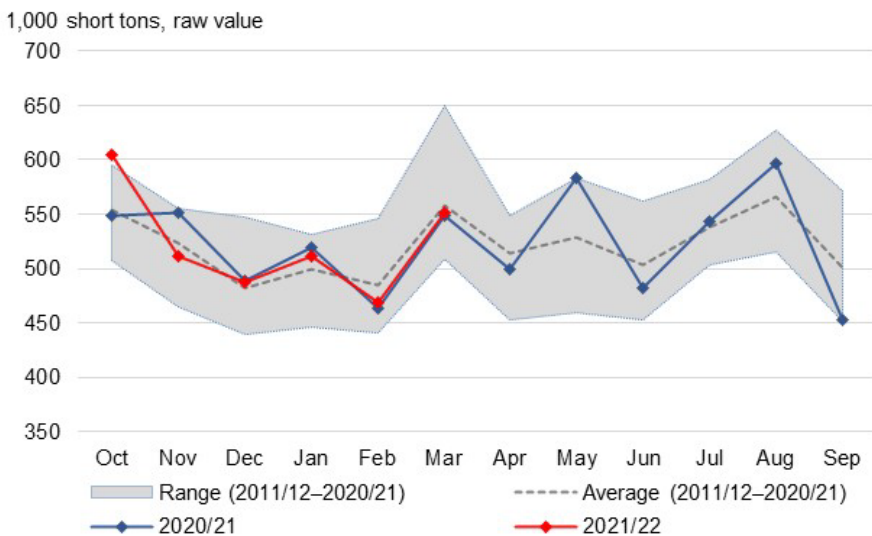
the recent months, increased to the average level by the end of March (figure 16). Recent sugar actions, which include increases in the Mexican Export Limit and TRQ reallocation, can provide the raw throughput for refiners to increase melt and delivery pace in the second half of the fiscal year.

Figure 14  
**Sugarbeet processors' total sugar inventories, monthly, 2010/11 to 2021/22**



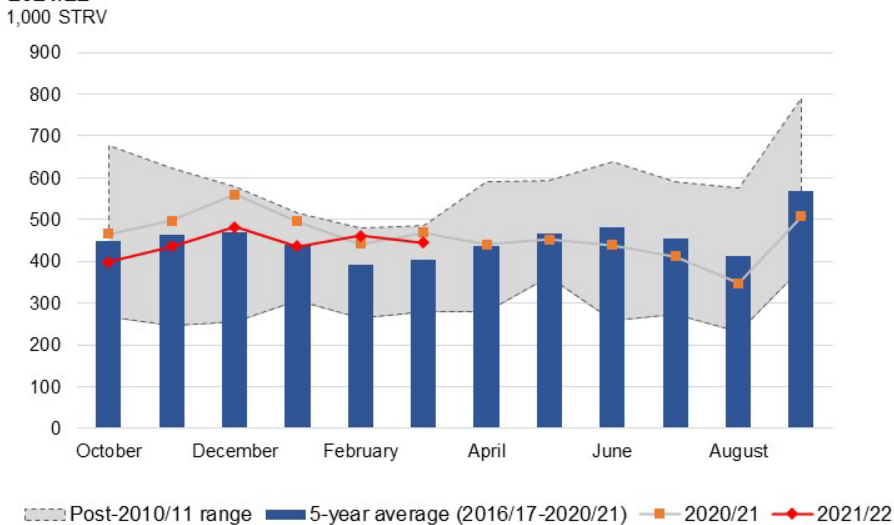
Note: STRV = short tons, raw value.  
 Source: USDA, Farm Service Agency.

Figure 15  
**Sugarcane refiners' melt, monthly, 2011/12 to 2021/22**



Note: Melt = quantity of raw sugar processed.  
 Source: USDA, Farm Service Agency.

Figure 16  
**Sugarcane refiners' raw sugar inventories, monthly, 2010/11 to 2021/22**



Note: STRV = short tons, raw value.  
 Source: USDA, Farm Service Agency.

Non-reporter, direct consumption imports through March are 152,000 STRV larger than the same period as last year, translating to a 47.7 percent yearly increase (table 5). The 2021/22 cumulation of non-reporter imports totaling 470,000 STRV is now the largest between October to March and has significantly contributed to the strong pace of deliveries to date. As such, the magnitude of non-reporter deliveries in the succeeding months will be important to determine for the 2021/22 total food and beverage deliveries. The increased rate of high-duty refined imports on continued price-spread opportunities between the U.S. and global refined sugar markets could also result in increased non-reporter deliveries. Worth noting is that the monthly series for non-reporter deliveries is inherently volatile, which makes it difficult to forecast. This is because non-reporter deliveries are not from actual data collection but are residually calculated using different data USDA sources.

# Mexico Outlook

## Lower Forecast for 2022/23 Mexican Sugar Production

The May 2022 *World Agricultural Supply and Demand Estimates (WASDE)* report projects Mexican 2022/23 production at 6 million metric tons (MT), down 166,690 or 2.7 percent, from 2021/22 (table 7). The projection is based on 10-year Olympic average of the key variables and are close to the 2021/22 USDA estimate, except for yield. Area harvested is forecast at 795,000 hectares (compared with the 2021/22 USDA estimate of 791,383 hectares), sucrose recovery rate at 11.14 percent (compared with 11.14 percent), and yield at 67.76 MT per hectare which is more in line with trend (compared with 69.04 MT per hectare). The USDA, Foreign Agricultural Service's (FAS) Post in Mexico noted that better weather conditions, availability of water in the reservoirs, and favorable summer rains are conducive for next year's crop. Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA) did not have an official forecast for 2022/23 sugar production at the time of this Outlook.



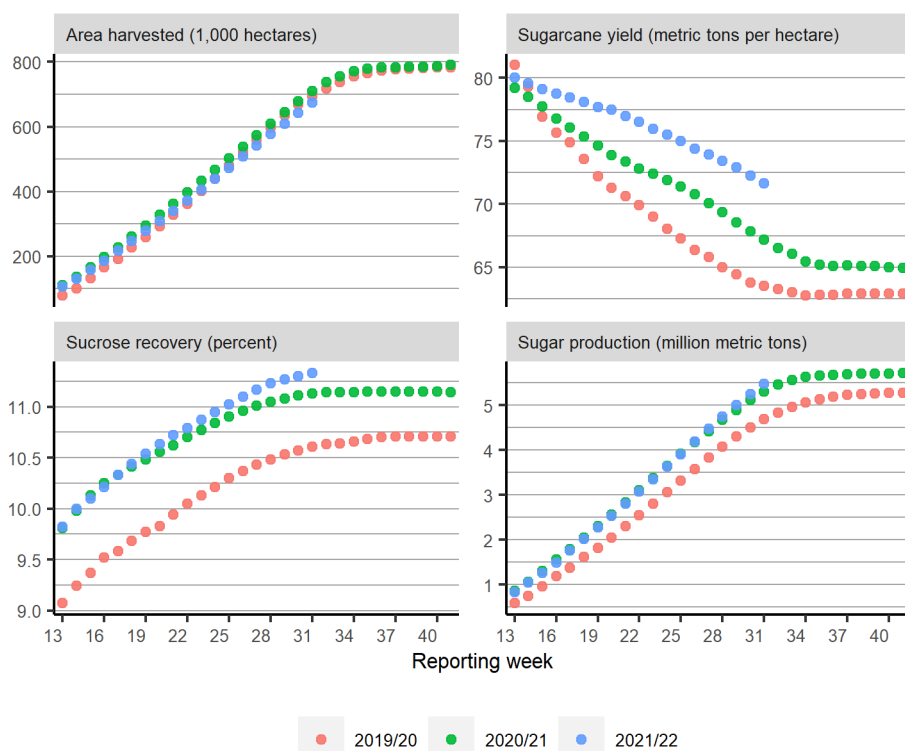
**Table 8: Mexican sugar production as of week 32, 2020/21 and 2021/22**

	As of week 32		Difference	
	2020/21	2021/22	Level	Percent
Area harvested (hectares)	737,143	703,815	-33,328	-5
Sugarcane processed (metric tons)	49,038,210	50,076,313	1,038,103	2
Sugarcane yield (metric tons per hectare)	66.52	71.15	4.63	7
Number of mills in operation	26	35	9	35
Extraction rate (percent)	11.14	11.34	0.20	2
Total factory yield (metric tons sugar per hectare)	7.47	8.12	0.65	9
Sugar production (metric tons)	5,464,062	5,679,863	215,801	4

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

Figure 17

**Mexican sugarcane cumulative harvest progress, 2019/20 to 2021/22**



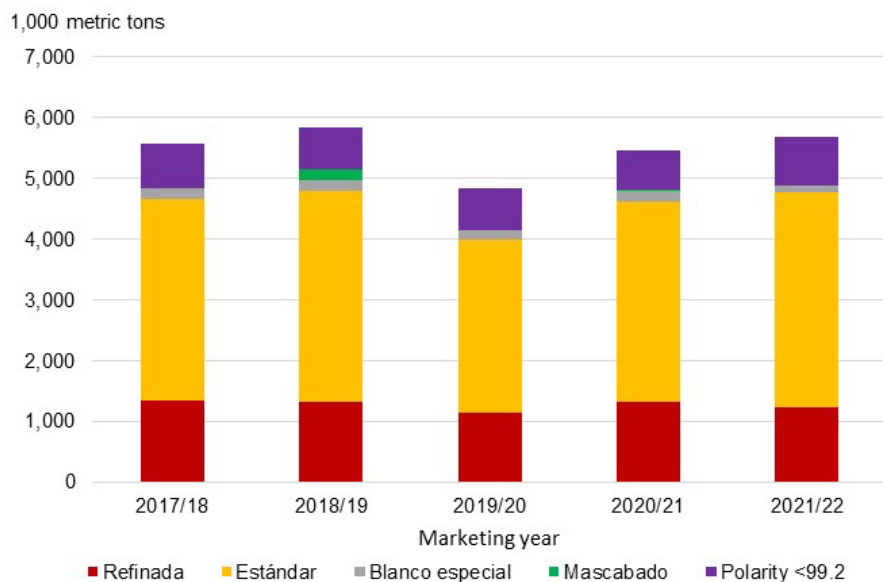
Source: Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

To date, production pace for less-than 99.2 polarity sugar continues to be strong. As of week 32, 805,669 MT were produced, which corresponds to 14 percent of total cumulative Mexican sugar production. This amount would be the largest in the last 5 years and up 162,923 MT from last year (figure 18). In its third estimate, CONADESUCA forecasts a total production for less-than 99.2 polarity sugar at 861,209 MT. This amount is more than enough to meet the sugar suspension agreements' fiscal year 2022 Export Limit that now includes two USDA requests for

additional sugar needs (150,000 STRV on November 2021 and 170,000 STRV in April 2022). The most recent CONADESUCA's *Avance de Comercio Exterior Ciclo 2021/22 (Advance of Foreign Sugar Trade 2021/2022)* report showed that after the Department of Commerce's (DOC) granted an extension for the 150,000-STRV "Other Sugar" that was originally supposed to be imported by March 31, all of it has been exported to the U.S., as of May 1.

Most of Mexico's sugar produced to date remains estándar (standard) sugar, which is the most-used sugar in Mexico. Through May 7, this type of sugar represents 62 percent (3.532 million MT) of Mexico's cumulative sugar production, compared with 60 percent at the same time last year (3.299 million MT) (figure 18).

Figure 18  
**Mexican sugar production, by type of sugar, as of week 32**



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



## 2022/23 Mexican Exports to the U.S. Lowered; Raised in 2021/22 To Reflect Recent Sugar Action

The first U.S. Department of Commerce (DOC) calculation to determine Mexico's fiscal year (FY) 2023 Export Limit will not be made until after the July *World Agricultural Supply and Demand Estimates* (WASDE) report is released. Thus, the forecast for 2022/23 was based on the average Mexican production of U.S.-bound less-than 99.2 polarity sugar, known as "Other Sugar". Using a 13.2-percent share of "Other Sugar" in total Mexican sugar production—which is the 5-year average—production of this sugar type for 2022/23 is projected at 792,868 metric tons (MT). Per the U.S.-Mexico Sugar Suspension Agreements, if this sugar must comprise at least 70 percent of the total Export Limit, then the total exports to the United States are projected to be 1.133 million MT. Total Mexican exports for 2022/23 are then residually projected to be 1.628 million MT, a reduction of 308,086 MT from the 2021/22 estimate. Of the total exports, 496,000 MT—almost 50 percent less than the 2021/22 level—are bound for countries other than the United States to maintain the government program goal of maintaining 2.5-months-worth of ending stocks.

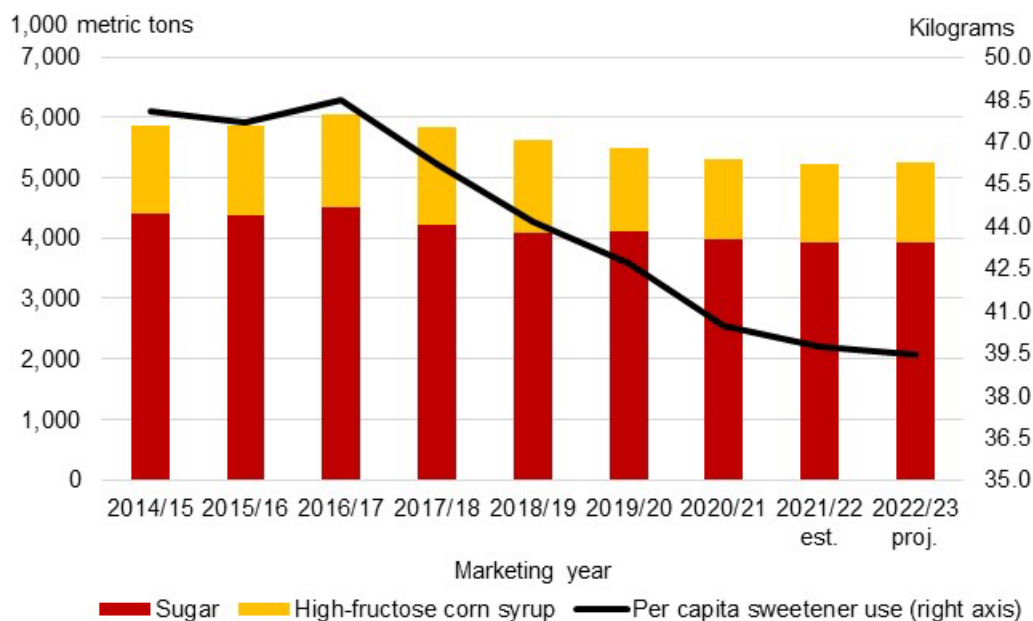
For 2021/22, exports to the United States are raised 145,492 MT (equivalent to 170,000 short tons, raw value) to reflect the April 28 announcement by the U.S. Department of Commerce, upon the request of USDA, to increase Mexico's FY 2022 Export Limit by 170,000 STRV of the less-than-99.2 polarity "Other Sugar". The announcement was made just before May 1, when the polarity threshold for any additional request for "Other Sugar" is increased from less than 99.2 to less than 99.5. To offset this increase and maintain the government's target stocks-to-use ratio, Mexican exports to other countries were reduced by roughly the same amount. As a result, the 2021/22 total exports from Mexico of 1,937 million MT were slightly changed from last month's estimate.

## Deliveries Unchanged in 2021/22; Slightly Higher in 2022/23

Total deliveries in 2021/22 remain at 4.412 million MT, of which 3.915 million MT are for deliveries of sugar for human consumption and the remaining 497,000 MT are destined for the *Industria Manufacturera, Maquiladora y de Servicios de Exportación* (IMMEX) program. The 2021/22 consumption of high-fructose corn syrup (HFCS) is also unchanged at 1.310 million, dry basis. For 2022/23, sugar and HFCS consumption are marginally raised to account for population growth, but the per capita consumption reflects the continuation of the downward

trend since 2016/17 (figure 19).

Figure 19  
**Mexican sweetener consumption by year, 2014/15–2022/23**



Note: est. = estimated; proj = projected.  
 Source: USDA, World Agricultural Outlook Board.

The 2021/22 estimate of deliveries to the *Industria Manufacturera, Maquiladora y de Servicios de Exportación* (IMMEX) program is unchanged at 497,000 MT. Deliveries to IMMEX, which allows the use of imported and domestically produced sugar as inputs to manufacture products for export, continue to be higher than the 5-year average. The elevated monthly pace is driven by the program’s higher returns and logistical advantages over shipping to non-U.S. export destinations (figure 20). The 2022/23 sugar deliveries for IMMEX are projected at the same level—497,000 MT.

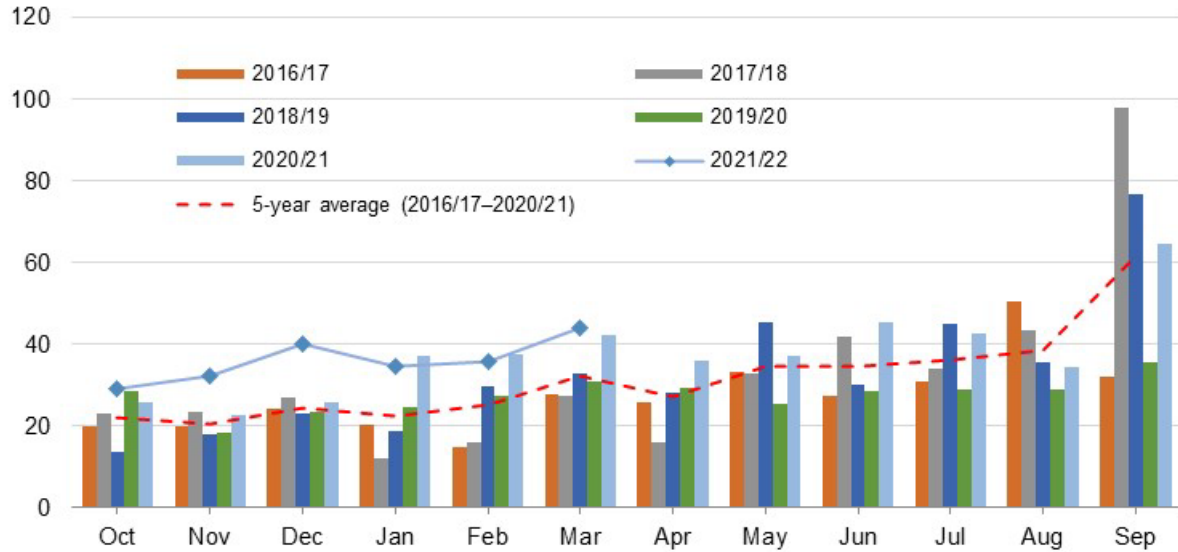
Mexico’s sugar imports for 2021/22 remain at 50,000 MT from last month’s *WASDE*, and this number is also carried forward as the projected 2022/23 imports (table 7).

As a result of the increased 2021/22 exports to the U.S., ending stocks are marginally raised to 921,152 MT, which is roughly equivalent to the Mexican government’s target stock levels. The same level of ending stocks is forecast for 2022/23.

Figure 20

**Mexican domestic IMMEX deliveries, monthly, 2016/17 to 2021/22**

1,000 metric tons



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

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

## Suggested Citation

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