



# Sugar and Sweeteners Outlook: September 2023

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## U.S. Supply Higher in 2022/23, Lower in 2023/24; Mexico's 2022/23 Imports Up

In the September 2023 *World Agricultural Supply and Demand Estimates (WASDE)*, the 2022/23 U.S. sugar supply is raised from last month by 91,000 short tons, raw value (STRV) to 14.819 million on larger beet sugar production and high-tier tariff imports. Conversely, U.S. sugar use in 2022/23 is lowered by 55,000 STRV to 12.660 million on the continued slowdown in pace of domestic sugar deliveries for human consumption. With higher total supply but lower use, ending stocks are raised by 146,000 STRV to 2.159 million and the resulting stocks-to-use ratio is 17.06, larger by 1.22 percentage points from last month's 15.84 percent and the largest since 2013/14.

The 2023/24 U.S. sugar supply is lowered from last month by 278,000 STRV to 14.404 million as the increase in beginning stocks and beet sugar production are offset by lower Louisiana cane sugar production and imports from Mexico. U.S. sugar use in 2023/24 is lowered by 50,000 STRV to 12.655 million in concurrence with the slowdown observed in 2022/23 deliveries for human consumption. As such, ending stocks are down by 228,000 STRV to 1.714 million, corresponding to a stocks-to-use ratio of 13.5 percent.

Mexico's 2022/23 sugar supply is raised from last month by 54,000 metric tons (MT) to 6.442 million on larger imports expected, which translates to larger deliveries to companies participating in the *Industria Manufacturera, Maquiladora y de Servicios de Exportación (IMMEX)* program. Mexico's 2023/24 sugar production is reduced by 100,000 MT to 5.8 million due to the expected, cumulative, and negative impacts of the ongoing drought.

# U.S. Outlook Summary

## Stocks-to-use Ratio Raised in 2022/23; Set to 13.5 Percent in 2023/24

In the September 2023 *WASDE*, the 2022/23 U.S. sugar supply is raised from last month by 91,000 STRV to 14.819 million on larger beet sugar production and high-tier tariff imports (table 1). Beet sugar production is increased by 32,000 STRV to 5.168 million on the availability of full crop year (August 2022–July 2023) production data in the USDA, Farm Service Agency (FSA) *Sweetener Market Data (SMD)*. High-tier tariff imports are raised by 60,000 STRV to a record 450,000 after cane refiners imported additional high-tier raw sugar in August. Conversely, U.S. sugar use is lowered by 55,000 to 12.660 million on a continued slowdown in pace of domestic sugar deliveries for human consumption, which are reduced by 75,000 STRV this month to 12.5 million. Lower deliveries for human consumption are partly offset by the combined 20,000-STRV increase in exports and deliveries for re-export products. With higher total supply but lower use, ending stocks are raised by 146,000 STRV to 2.159 million and the resulting stocks-to-use ratio is 17.06, larger by 1.22 percentage points from last month's 15.84 percent and the largest since 2013/14.

U.S. sugar supply in 2023/24 is lowered from last month by 278,000 STRV to 14.404 million as the increase in beginning stocks and beet sugar production are offset by the lower Louisiana cane sugar production and imports from Mexico. Beet sugar production is raised by 150,000 STRV to 5.223 million on the higher sugarbeet yield published in the USDA, National Agricultural Service Statistics' (NASS) September *Crop Production*. Meanwhile, amid the ongoing drought, Louisiana cane sugar production is lowered by 371,000 STRV to 1.682 million—the lowest since 2019/20's 1.566 million—on NASS' reduction of the State's sugarcane yield from last month's 31.4 tons per hectare to 27.2 tons. As such, the combined beet and cane sugar production in 2023/24 is 8.981 million STRV, down 222,000 STRV from last month and would be the second lowest since 2015/16 (figure 1). Imports from Mexico are lowered by 202,000 STRV to 1.284 million in anticipation of U.S. Department of Commerce's September U.S. Needs calculation per the U.S.-Mexico sugar suspension agreements to achieve a 13.5-percent stocks-to-use ratio. Sugar deliveries for human consumption are lowered by 50,000 STRV to 12.550 million in concurrence with the observed delivery slowdown in 2022/23. Correspondingly, U.S. sugar use is lowered by 50,000 STRV to 12.655 million. As such, ending

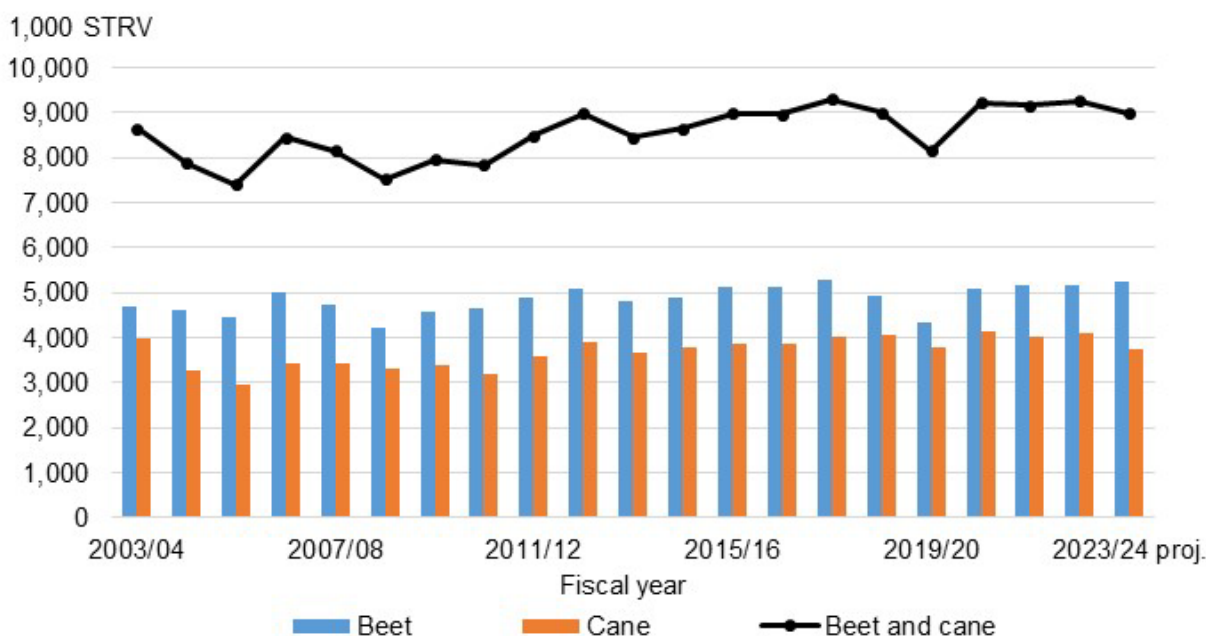
stocks are down by 228,000 STRV to 1.714 million, corresponding to a stocks-to-use ratio of 13.5 percent.

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

Items	2021/22	2022/23		2023/24			Monthly change
	Final	August (estimate)	September (estimate)	Monthly change	August (forecast)	September (forecast)	
	1,000 short tons, raw value						
Beginning stocks	1,705	1,820	1,820	0	2,014	2,159	146
Total production	9,157	9,231	9,261	31	9,203	8,981	-222
Beet sugar	5,155	5,136	5,168	32	5,073	5,223	150
Cane sugar	4,002	4,095	4,094	-1	4,130	3,758	-371
Florida	1,934	1,983	1,983	0	2,034	2,034	0
Louisiana	1,944	2,034	2,034	0	2,054	1,682	-371
Texas	124	78	76	-1	42	42	0
Total imports	3,646	3,678	3,738	60	3,465	3,264	-202
Tariff-rate quota imports	1,579	1,869	1,869	0	1,604	1,604	0
Other program imports	298	200	200	0	200	200	0
Non-program imports	1,769	1,609	1,669	60	1,661	1,459	-202
Mexico	1,379	1,219	1,219	0	1,486	1,284	-202
High-duty	390	390	450	60	175	175	0
Total supply	14,508	14,729	14,819	91	14,682	14,404	-278
Total exports	29	35	45	10	35	35	0
Miscellaneous	81	0	0	0	0	0	0
Total deliveries	12,578	12,680	12,615	-65	12,705	12,655	-50
Domestic food and beverage use	12,470	12,575	12,500	-75	12,600	12,550	-50
To sugar-containing products re-export program	80	80	90	10	80	80	0
For polyhydric alcohol, feed, other alcohol	27	25	25	0	25	25	0
Commodity Credit Corporation (CCC) for ethanol	0	0	0	0	0	0	0
Total use	12,688	12,715	12,660	-55	12,740	12,690	-50
Ending stocks	1,820	2,014	2,159	146	1,942	1,714	-228
Private	1,820	2,014	2,159	146	1,942	1,714	-228
Commodity Credit Corporation	0	0	0	0	0	0	0
Stocks-to-use ratio (percent)	14.3	15.8	17.1	1.2	15.2	13.5	-1.7

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

Figure 1  
**U.S. beet and cane sugar production, by fiscal year, 2003/04–2023/24**



STRV = short tons, raw value; proj. = projected.  
 Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates (WASDE)*.

## Larger Beet Sugar Production Outlook in 2023/24

Beet sugar production in crop year 2023/24 (August 2023–July 2024) is increased from last month by 150,000 STRV to 5.188 million based on the higher sugarbeet yield published by USDA, NASS in its September 12 *Crop Production* (table 2). In this report, NASS increased the national yield from last month’s 30.9 tons per acre to 31.5 tons. If realized, this would be 2.9-tons per acre (10 percent) higher than last year’s 28.6 tons and would be the fourth highest yield since 2007/08 (figure 2).

Yields in 2023/24 are expected to be larger relative or at par with last year for all growing States except Colorado partly because there was a shortage of growing degree days in the State due to cool and rainy summer weather (table 3). The largest over-the-year increase (4.7 tons per acre) in yield is expected in Michigan where heavy rains since mid-August, after a dry summer, allowed the sugarbeets to rapidly grow in size and put on weight. If realized, Michigan’s 33.5 ton-per-acre yield would be the State’s second highest behind 2021/22’s 37.4 tons.

This month, NASS also slightly increased total U.S. 2023/24 sugarbeet area planted and harvested to 1.132 million acres and 1.119 million acres, respectively—with most of the gains in

North Dakota. The forecast of sugarbeet shrink and extraction rate from sliced beets reflect 10-year averages. There was a slight revision for these 2 variables this month because 2022/23 is now included in the 10-year average calculation after the full crop year data in the *SMD* (August 2022–July 2023) became available.

**Table 2: Beet sugar production calculations, 2020/21–2023/24**

	2022/23	2022/23	Monthly change	2023/24		Monthly change
	August	September		August	September	
Area planted (1,000 acres)				1,129	1,132	4
Sugarbeet production (1,000 short tons) 1/	32,574	32,574	0	34,358	35,259	901
Sugarbeet shrink (percent)	6	6	-0.07	7	7	-0.01
Sugarbeet sliced (1,000 short tons)	30,535	30,558	23	32,103	32,947	844
Sugar extraction rate from slice (percent)	15	15	0.05	15	15	0.08
Sugar from beets sliced (1,000 STRV) 2/	4,680	4,700	20	4,678	4,828	150
Sugar from molasses (1,000 STRV) 2/	360	372	12	360	360	0
Crop year sugar production (1,000 STRV) 2/	5,040	5,071	32	5,038	5,188	150
Aug.–Sep. sugar production (1,000 STRV)	537	537	0	633	633	0
Aug.–Sep. sugar production of subsequent crop (1,000 STRV)	633	633	0	633	633	0
Sugar from imported beets (1,000 STRV) 3/	N/A	N/A	N/A	35	35	0
Fiscal year sugar production (1,000 STRV)	5,136	5,168	32	5,073	5,223	150

STRV = short tons, raw value.

1/ USDA, National Agricultural Statistics Service.

2/ August–July.

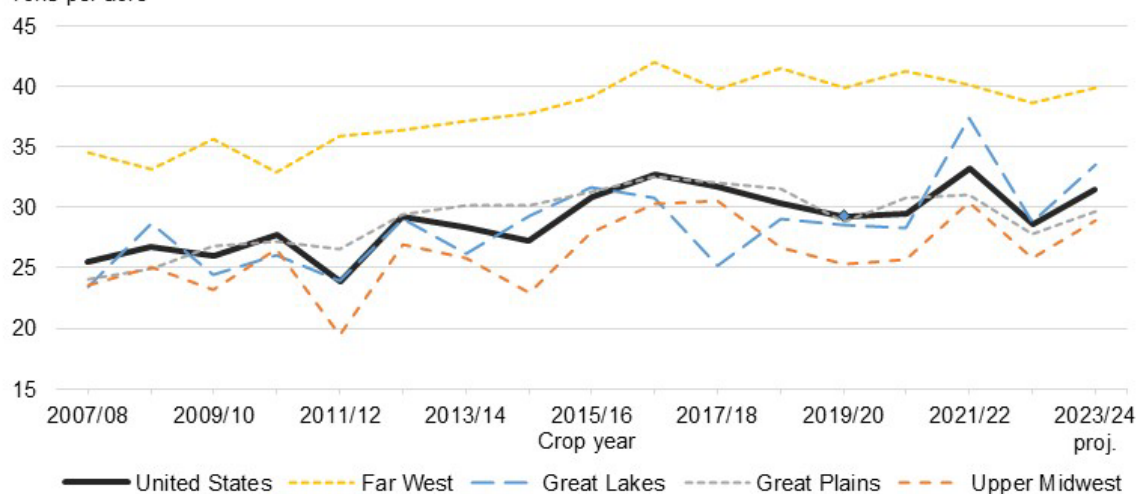
3/ Sugar from imported beets in 2022/23 are already included in the crop year production. Typically, this component is separated for projection purposes and included in total once full crop year slice is available.

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

Figure 2

**U.S. sugarbeet yields, national and by region, 2007/08–2023/24**

Tons per acre



proj. = projected.

Note: The States in each region are as follows: Great Lakes (Michigan), Upper Midwest (North Dakota, Minnesota); Great Plains (Colorado, Montana, Nebraska, Wyoming); and Far West (California, Idaho, Oregon, Washington).

Source: USDA, Economic Research Service calculations using data from USDA, National Agricultural Statistics Service.

**Table 3: Sugarbeet yield per acre, 2018/19–2022/23**

Region and State	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24 forecast		Change	
						Aug.	Sep.	Aug. vs. Sep.	2023/24 vs. 2022/23
Tons									
<b>Great Lakes</b>	<b>29.1</b>	<b>28.6</b>	<b>28.3</b>	<b>37.4</b>	<b>28.8</b>	<b>30.2</b>	<b>33.5</b>	<b>3.3</b>	<b>4.7</b>
Michigan	29.1	28.6	28.3	37.4	28.8	30.2	33.5	3.3	4.7
<b>Upper Midwest</b>	<b>26.7</b>	<b>25.3</b>	<b>25.7</b>	<b>30.4</b>	<b>25.8</b>	<b>28.6</b>	<b>28.9</b>	<b>0.3</b>	<b>3.1</b>
Minnesota	25.7	25.0	26.1	31.0	25.7	29.0	29.6	0.6	3.9
North Dakota	28.8	26.0	24.9	29.2	26.1	27.9	27.6	-0.3	1.5
<b>Great Plains</b>	<b>31.6</b>	<b>28.7</b>	<b>30.8</b>	<b>31.0</b>	<b>27.8</b>	<b>29.6</b>	<b>29.6</b>	<b>0.0</b>	<b>1.8</b>
Colorado	32.6	30.7	31.3	33.7	28.7	29.6	27.4	-2.2	-1.3
Montana	31.1	31.6	31.3	29.8	30.5	33.2	33.7	0.5	3.2
Nebraska	31.9	25.4	31.0	31.9	24.2	28.3	28.7	0.4	4.5
Wyoming	30.8	28.3	29.6	29.5	29.1	28.9	29.4	0.5	0.3
<b>Far West</b>	<b>41.5</b>	<b>39.8</b>	<b>41.3</b>	<b>40.2</b>	<b>38.7</b>	<b>39.5</b>	<b>39.9</b>	<b>0.4</b>	<b>1.2</b>
California	48.8	45.4	46.6	45.4	45.8	45.8	45.8	0.0	0.0
Idaho	40.5	39.0	40.5	39.5	38.1	39.0	39.4	0.4	1.3
Oregon	39.4	38.5	40.9	37.9	33.9	36.1	37.1	1.0	3.2
Washington	48.3	45.5	47.9	46.1	44.0	45.0	45.0	0.0	1.0
<b>U.S. total</b>	<b>30.4</b>	<b>29.2</b>	<b>29.4</b>	<b>33.2</b>	<b>28.6</b>	<b>30.9</b>	<b>31.5</b>	<b>0.6</b>	<b>2.9</b>

vs. = versus.

Source: USDA, Economic Research Service calculations using USDA, National Agricultural Statistics Service data.

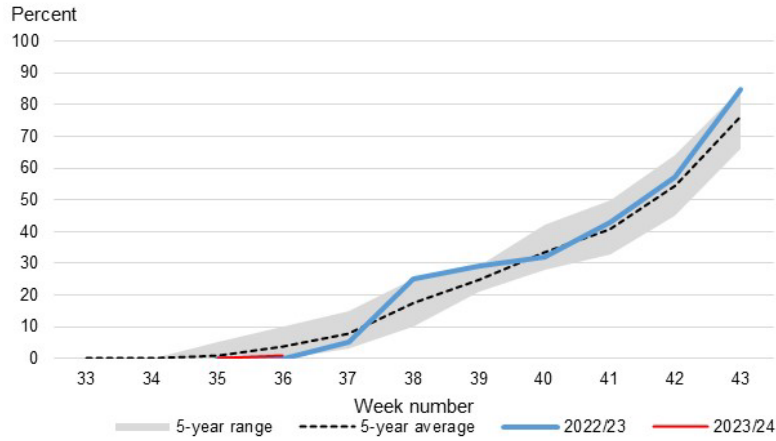
There were no changes to the other variables including the 633,000-STRV estimate for early beet sugar production in August–September 2023. The crop year 2023/24 sugarbeet pre-pile harvest is underway and harvest progress is available from the four largest producing States (figures 3a–3b)<sup>1</sup>. As of the week ending in September 10 (week 36), the harvest in Minnesota is ahead of last year and the 5-year average but behind in Michigan where the heavy rains are reported to have contributed to harvest delays. The actual sugar output in August–September 2023 will only be available in the November *SMD* report, so harvest progress in the following weeks will be considered as forecasts are developed for next month's *WASDE*.

## Beet Sugar Production Revised Upward in 2022/23

Beet sugar production in crop year 2022/23 is increased from last month by 32,000 STRV to 5.071 million on the availability of full crop year (August 2022–July 2023) data in the USDA, Farm Service Agency (FSA) *Sweetener Market Data (SMD)* (table 2). Compared with last month's estimate, *SMD* showed a larger crop year sugarbeets sliced (30.558 million short tons), as well as sugar produced from sliced sugarbeets (4.7 million STRV) and molasses (372,000 STRV). The national sucrose recovery is adjusted upwards to 15.38 percent, a new record in

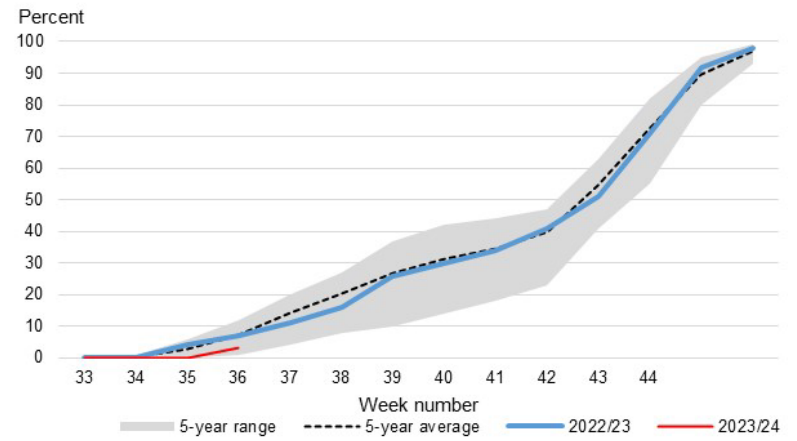
<sup>1</sup> USDA, NASS reports harvest progress for 8 of 11 sugarbeet-producing States: Colorado, Idaho, Michigan, Minnesota, Montana, North Dakota, and Oregon. There are no data available for California and Nebraska. NASS previously published harvest progress in Washington but stopped after 2020/21.

Figure 3a  
**Idaho sugarbeet harvest progress**



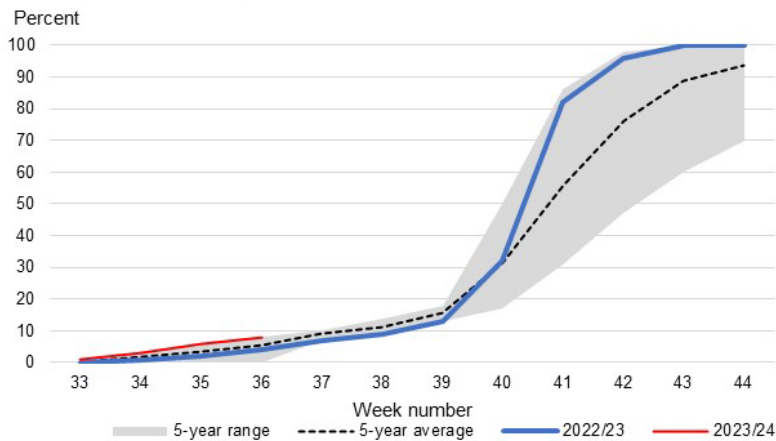
Source: USDA, National Agricultural Statistics Service.

Figure 3b  
**Michigan sugarbeet harvest progress**



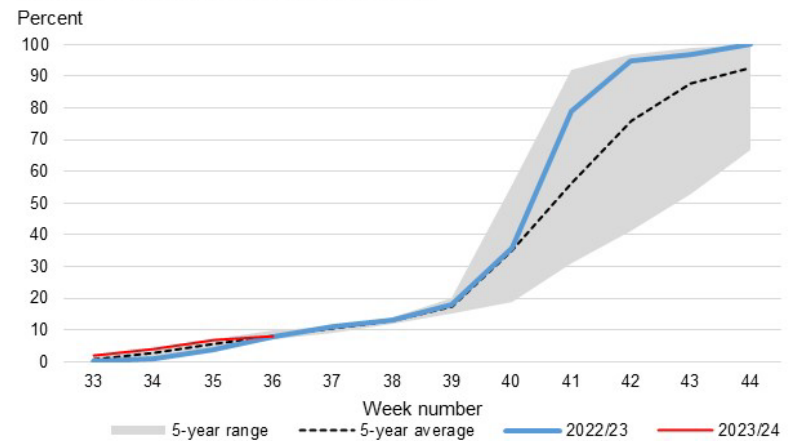
Source: USDA, National Agricultural Statistics Service.

Figure 3c  
**Minnesota sugarbeet harvest progress**



Source: USDA, National Agricultural Statistics Service.

Figure 3d  
**North Dakota sugarbeet harvest progress**



Source: USDA, National Agricultural Statistics Service.

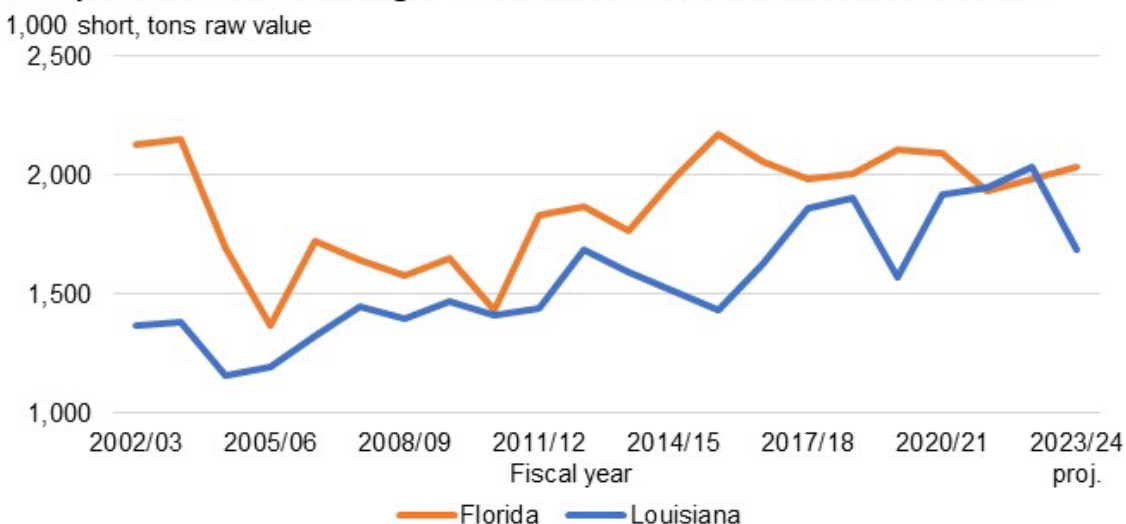
the last 10 years, surpassing 2020/21's 15.34 percent. The high sucrose recovery was primarily driven by a likewise record-high recovery in the Red River Valley region of 15.71 percent, as well as the over-the-year improvement in the Great Lakes region (from 12.47 to 14.99 percent).

The estimate for early sugar production in August–September 2023 (which would be counted in fiscal year 2022/23) is unchanged at 633,000 STRV. Thus, the fiscal year 2022/23 beet sugar production is increased from last month by the same amount as the crop year–32,000 STRV–to 5.168 million. The final fiscal year 2022/23 sugar production can still change depending on the processors' actual sugar output in August–September 2023, which will be reported in the November *SMD*.

## Louisiana 2023/24 Cane Sugar Production Reduced

Amid the ongoing drought, Louisiana's fiscal year 2023/24 cane sugar production is reduced from last month by 371,000 STRV (18 percent) to 1.682 million based on NASS' reduction of the State's sugarcane yield from 31.4 tons per hectare to 27.2 tons (13 percent) in the September *Crop Production*. If realized, the 1.682 million-STRV forecast would be 352,000 (17 percent) lower than last year's record for Louisiana of 2.034 million STRV and would be below Florida after outpacing the Sunshine State the past 2 consecutive years (2021/22 and 2022/23) (figure 4).

Figure 4  
**U.S. production of cane sugar in Florida and Louisiana, 2002/03–2023/24**



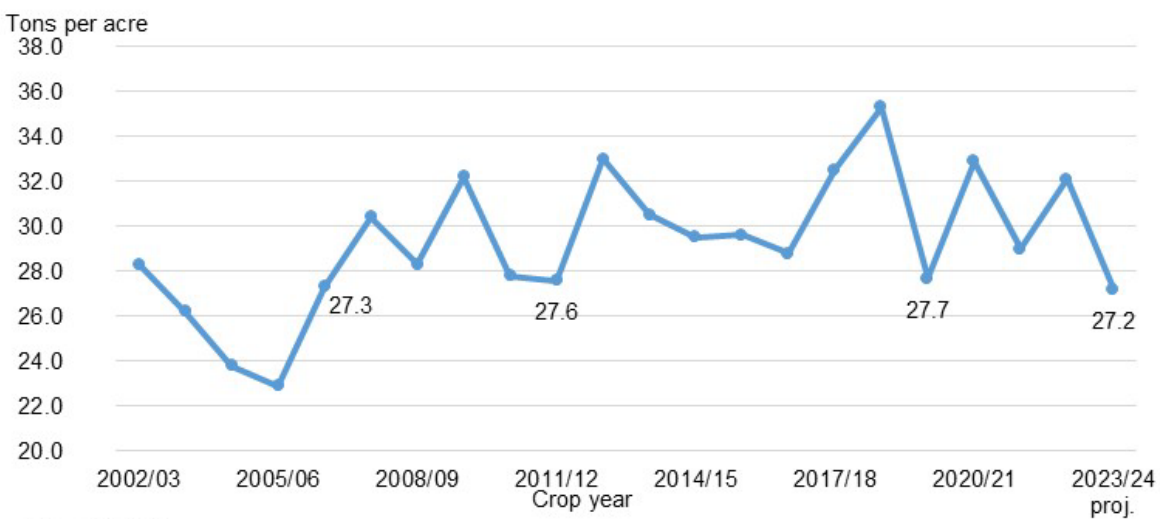
proj. = projected.

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



The drought conditions in Louisiana since June have stunted the full growth potential of the sugarcane crop. If realized, the NASS' 27.2 tons per acre yield forecast in Louisiana would be the lowest since 2006/07 (figure 5). According to USDA's interpretation of the September 5 U.S. Drought Monitor, 100 percent of the State's sugarcane production areas are experiencing drought conditions, with 44 percent in exceptional drought (D4) and the remaining 56 percent in extreme drought (D3) (figure 5). The National Weather Service, New Orleans/Baton Rouge Office, forecasts that above normal temperatures and less-than-normal rainfall will continue throughout September.

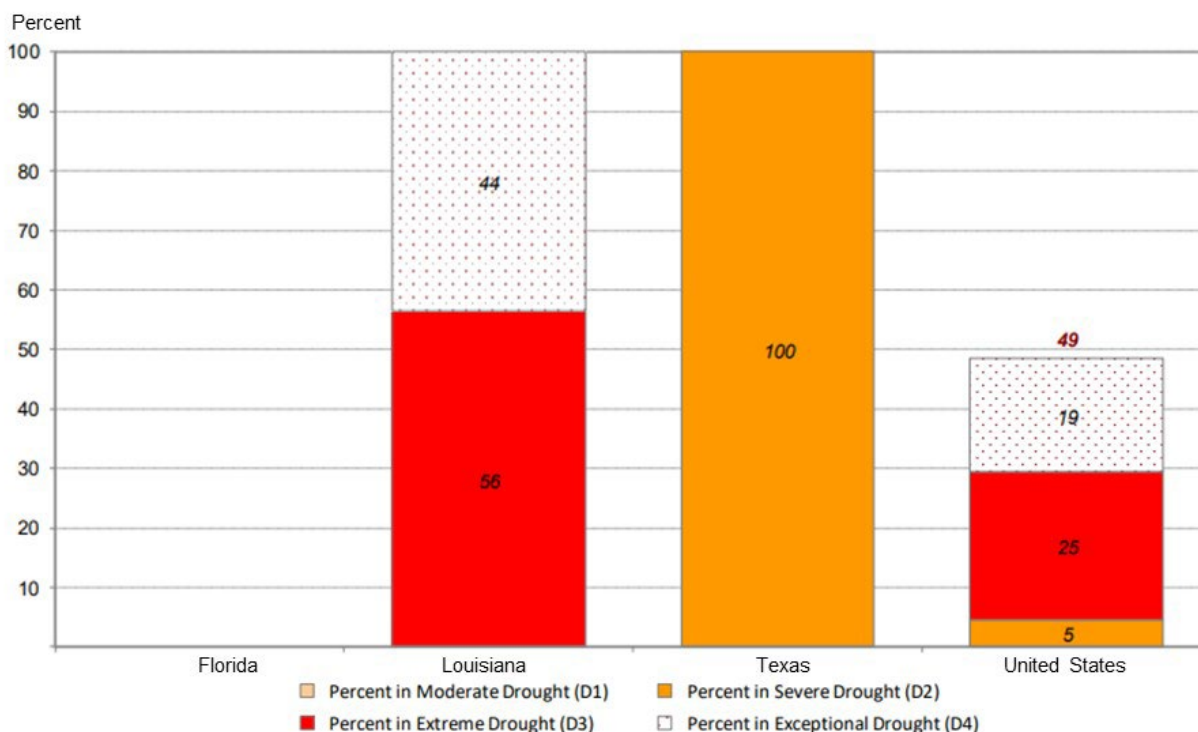
Figure 4  
**Louisiana sugarcane yield, 2002/03–2023/24**



proj. = projected.  
 Source: USDA, National Agricultural Statistics Service.

Production in Florida and Texas for fiscal year 2023/24 is unchanged at 2.034 million STRV and 42,000 STRV, respectively. The 2.034 million STRV production outlook for Florida, which has no drought conditions so far, would be 51,000 STRV larger (3 percent) than 2022/23's 1.983 million and would mark the return to the State's typical production of at least 2 million STRV. When Hurricane Idalia made landfall in the State on August 30, it brought rain but did not cause major damage to Florida's sugarcane areas.

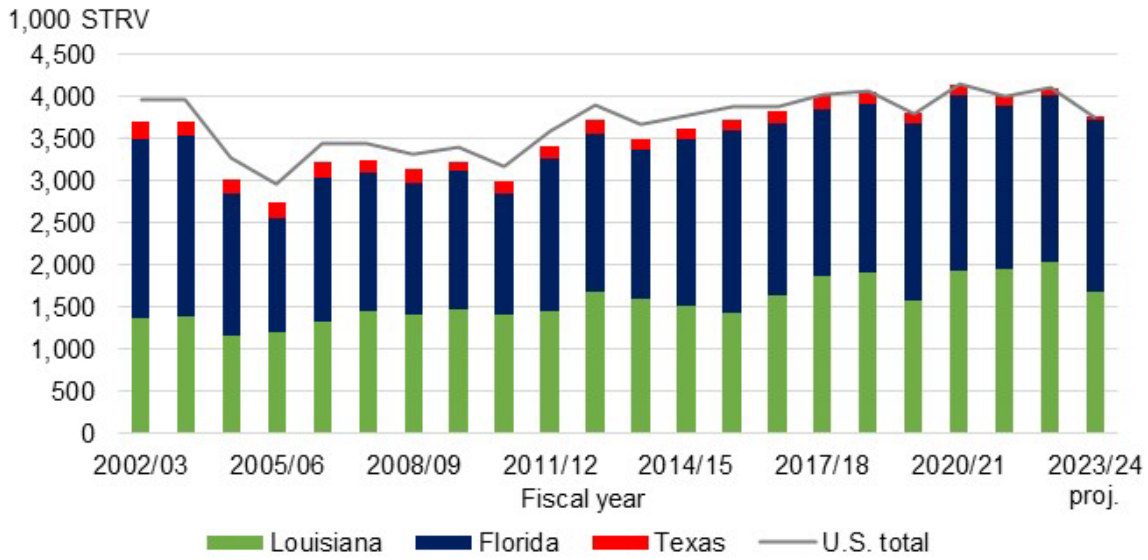
Figure 5  
**USDA's approximation of percent of U.S. sugarcane areas located in drought using the *U.S. Drought Monitor* product, as of September 5, 2023**



Similar to conditions in Louisiana, Texas is under drought conditions. In Texas, 100 percent of the sugarcane growing area are in severe drought (D2) and the effects of which are already incorporated in the State's 42,000-STRV sugar production forecast for 2023/24. This production level would be 34,000-STRV lower (45 percent) than last year's 76,000 STRV and the lowest since 2003/04. Similar to the weather situation in Louisiana, the Texas crop has been growing under hot and dry conditions. Sugarcane growers in the Rio Grande Valley who rely mainly on irrigation are being restricted by the timing of water releases from Mexico under the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande (1944 Water Treaty).

With no changes to Florida and Texas, the 2023/24 U.S. cane sugar production is lowered by 371,000 STRV—the same magnitude with that of Louisiana—to 3.758 million. If realized, the country's total cane sugar production would be 335,000-STRV lower (8 percent) than last year's 4.094 million (17 percent) and would be the lowest since 2019/20 (figure 6).

Figure 6  
**U.S. production of cane sugar by State, 2002/03–2023/24**



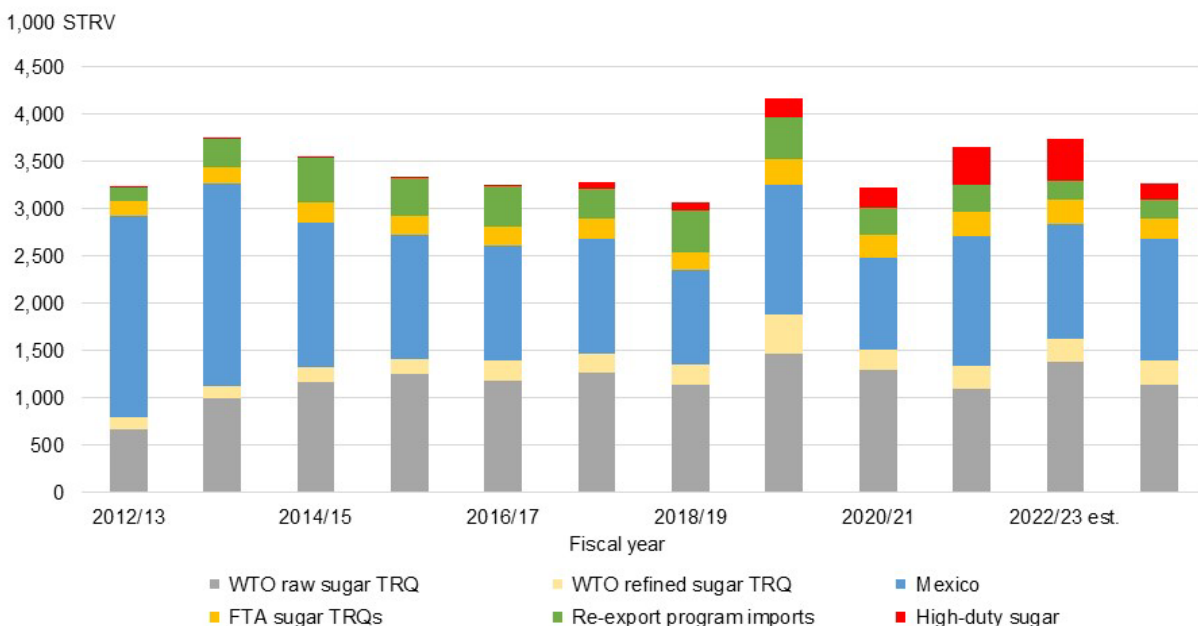
STRV = short tons, raw value; proj. = projected.  
 Source: USDA, Farm Service Agency.

## Record High-Tier Sugar Imports Expected in 2022/23

High-tier sugar imports in 2022/23 are raised from last month by 60,000 STRV to 450,000—a new record—based on additional raw sugar imports that cane refiners entered in August. This year’s estimate surpasses last year’s 390,000 STRV by 60,000 (15 percent). With no changes to the other import categories, total imports are also raised by 60,000 STRV to 3.738 million, 92,000-STRV larger (2.5 percent) than last year (3.646 million).

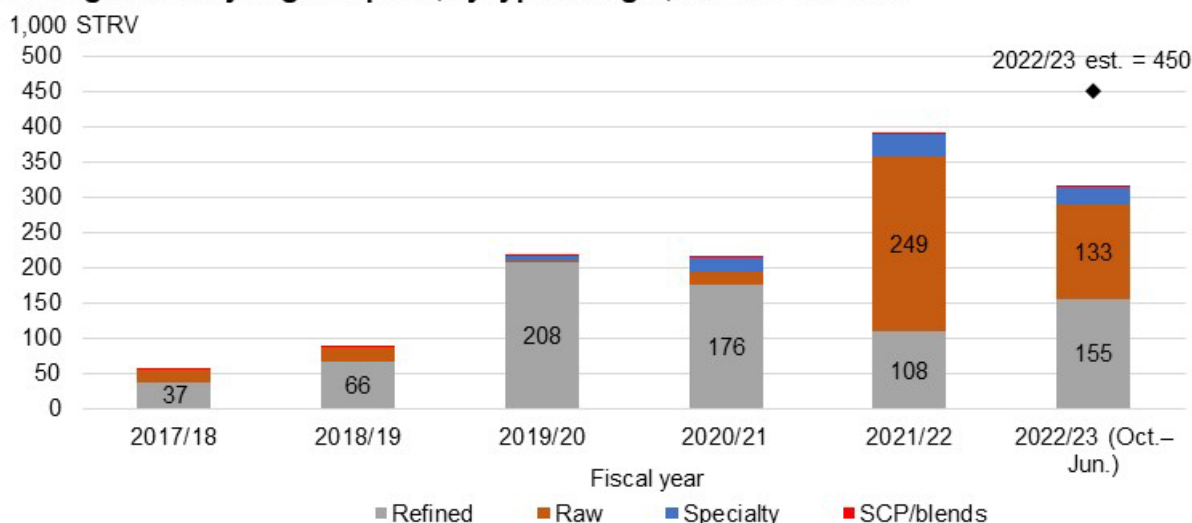
The increase in high-tier imports bumped total imports for 2022/23 (3.738 million STRV), which would be the third largest volume behind 2019/20 (4.165 million) and 2013/14 (3.742 million) (figure 7). However, in terms of the largest sources, the type of imports among these 3 years are different. For instance, in 2022/23, high-tier duty sugar imports (450,000 STRV) contributed the third largest share (12 percent) behind the World Trade Organization (WTO) raw sugar tariff-rate quota (TRQ) and Mexico. In 2013/14, prior to when the U.S.-Mexico suspension agreements were in place, the largest portion of U.S. imports were from Mexico (2.130 million STRV or 57 percent) while high-tier duty sugar was negligible. In 2019/20, the WTO refined sugar TRQ imports were relatively larger (408,000 STRV or 10 percent) and almost the same magnitude as re-exports program imports. This situation occurred after USDA took several actions to import refined sugar to replace weather-related domestic beet sugar production losses.

Figure 7  
**U.S. sugar imports by type, 2012/13–2023/24**



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

Figure 8  
**U.S. high-tier duty sugar imports, by type of sugar, 2017/18–2022/23**



STRV = short tons, raw value; SCP = sugar-containing products; est. = estimated.

Note: The Harmonized Tariff Schedule (HTS) lines are 1701.12.5000, 1701.13.5000, and 1701.14.5000 for raw sugar; 1701.91.3000, 1701.99.5025, 1701.99.5050, for refined sugar; 1701.99.5015 and 1701.99.5017 for specialty sugar including organic; and 1702.90.2000, and 2106.90.4600 for SCP/blends.

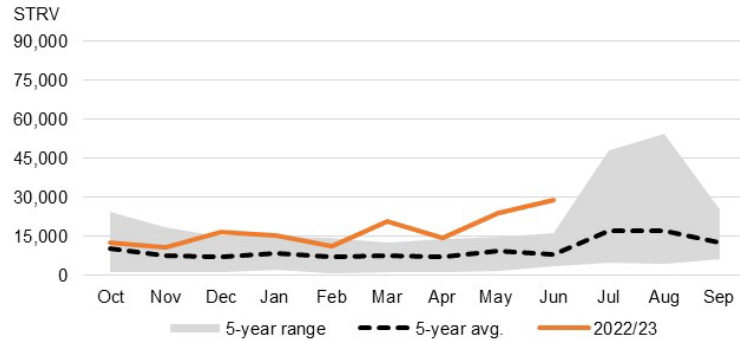
Source: USDA, Economic Research Service's calculation using U.S. Department of Commerce, Bureau of the Census trade data from the U.S. International Trade Commission's *DataWeb*.

The import data from the U.S. Department of Commerce, Bureau of the Census, is publicly available through between October 2022–June 2023, which lag the proprietary data used in the *WASDE* by 2 months. Through June 2023, total high-tier imports are around 316,000 STRV, which is about 55,000-STRV higher (21 percent) than last year’s 260,000 STRV over the same period (figure 8).

Publicly available data on high-tier refined sugar imports through June totaled 155,000 STRV, already surpassing the 2021/22’s total volume of refined sugar (108,000 STRV). Since October 2022, the monthly entry pace of high-tier refined imports has been faster than the 5-year average and either at or above the high end of the 5-year range since December 2022 (figure 9). High-tier raw sugar imports through June alone, which excludes the proprietary data entered by cane refiners in July and August, already amounted to 133,000 STRV. A contributing factor to the strong cumulative pace is the raw sugar entry of about 83,000 STRV in June (figure 10).

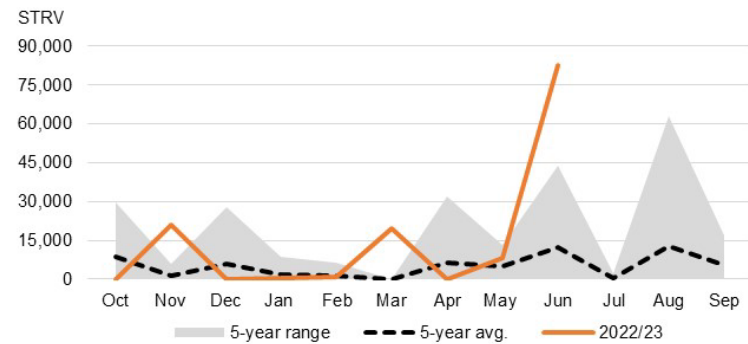
Of the 316,000-STRV total high-tier imports between October 2022–June 2023, about 142,000 STRV or 45 percent came from Brazil, followed by Guatemala (55,000 STRV or 17 percent) and El Salvador (48,000 STRV or 15 percent) (figure 11). Most of the sugar entered in 3 ports: New Orleans, Louisiana (72,000 STRV or 23 percent); Philadelphia, Pennsylvania (50,000 STRV or 16 percent); and San Francisco, California (46,000 STRV or 15 percent) (figure 12).

Figure 9  
**U.S. monthly imports of high-tier refined sugar, 2017/18–2022/23**



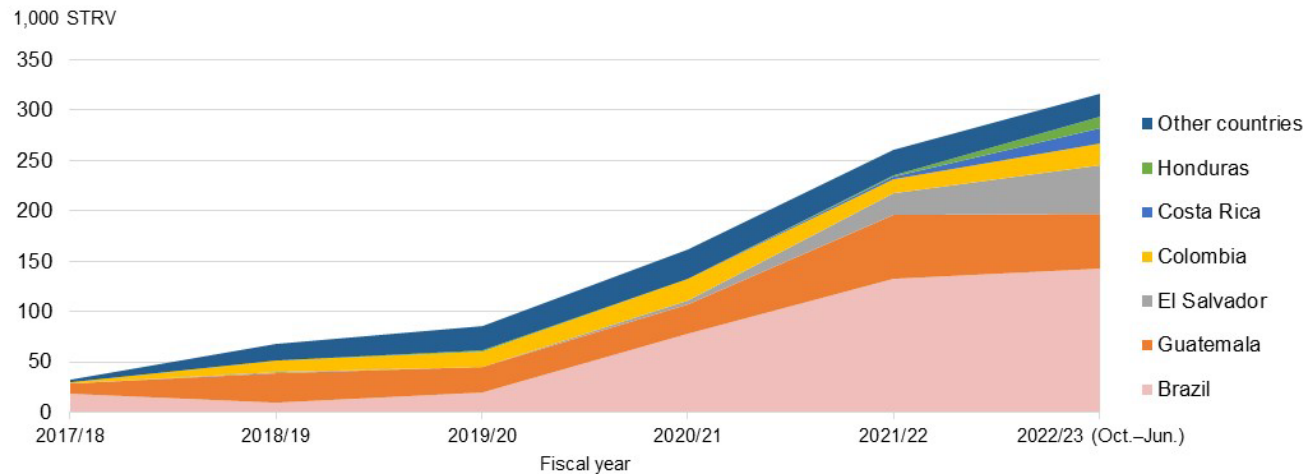
STRV = short tons, raw value; avg. = average.  
 Source: USDA, Economic Research Service's calculation using U.S. Department of Commerce, Bureau of the Census trade data from the U.S. International Trade Commission's *DataWeb*.

Figure 10  
**U.S. monthly imports of high-tier raw sugar, 2017/18–2022/23**



STRV = short tons, raw value; avg. = average.  
 Source: USDA, Economic Research Service's calculation using U.S. Department of Commerce, Bureau of the Census trade data from the U.S. International Trade Commission's *DataWeb*.

Figure 11  
**U.S. high-tier duty sugar imports, by country of origin, 2017/18–2022/23**

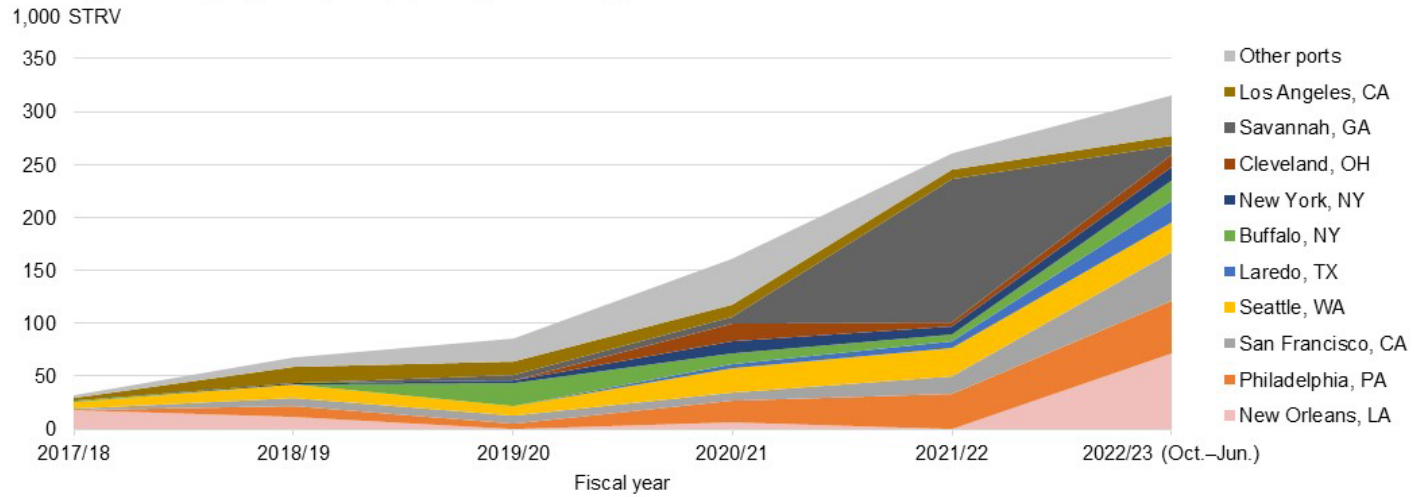


STRV = short tons, raw value; SCP = sugar-containing products.

Note: The Harmonized Tariff Schedule (HTS) lines are 1701.12.5000, 1701.13.5000, and 1701.14.5000 for raw sugar; 1701.91.3000, 1701.99.5025, 1701.99.5050, for refined sugar; 1701.99.5015 and 1701.99.5017 for specialty sugar including organic; and 1702.90.2000, and 2106.90.4600 for SCP/blends.

Source: USDA, Economic Research Service's calculation using U.S. Department of Commerce, Bureau of the Census trade data from the U.S. International Trade Commission's *DataWeb*.

Figure 12  
**U.S. high-tier duty sugar imports, by U.S. port of entry, 2017/18–2022/23**



STRV = short tons, raw value; SCP = sugar-containing products.

Note: The Harmonized Tariff Schedule (HTS) lines are 1701.12.5000, 1701.13.5000, and 1701.14.5000 for raw sugar; 1701.91.3000, 1701.99.5025, 1701.99.5050, for refined sugar; 1701.99.5015 and 1701.99.5017 for specialty sugar including organic; and 1702.90.2000, and 2106.90.4600 for SCP/blends.

Source: USDA, Economic Research Service's calculation using U.S. Department of Commerce, Bureau of the Census trade data from the U.S. International Trade Commission's *DataWeb*.

## Sugar Imports in 2023/24 Lowered on Recalculation of Imports from Mexico

Imports from Mexico are lowered by 202,000 STRV to 1.284 million in anticipation of the U.S. Department of Commerce’s September U.S. Needs calculation per the U.S.-Mexico sugar suspension agreements to achieve a 13.5-percent stocks-to-use ratio (table 4). With no changes to the other import categories, the 2023/24 forecast for total sugar imports is reduced from last month by the same magnitude—202,000 STRV—to 3.264 million, which would be 474,000-STRV lower (13 percent) than 2022/23’s 3.738 million.

**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 2023/24			
July 2023	1,485,900	50	742,950
September 2023	1,284,150	70	898,905

STRV = short tons, raw value.

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

## Sugar Deliveries Lowered in 2022/23 and 2023/24 on Delivery Pace Slowdown

Sugar delivery for food and beverage use in 2022/23 are lowered by 75,000 STRV from last month to 12.5 million given the continued slowdown in delivery pace, particularly for beet sugar. The estimate would be relatively close to last year’s 12.470 million and represents a 0.2-percent annual growth (figure 13). Combined with a 10,000-STRV increase in sugar delivery for re-export products, total use in 2022/23 is lowered by 65,000 STRV to 12.615 million.

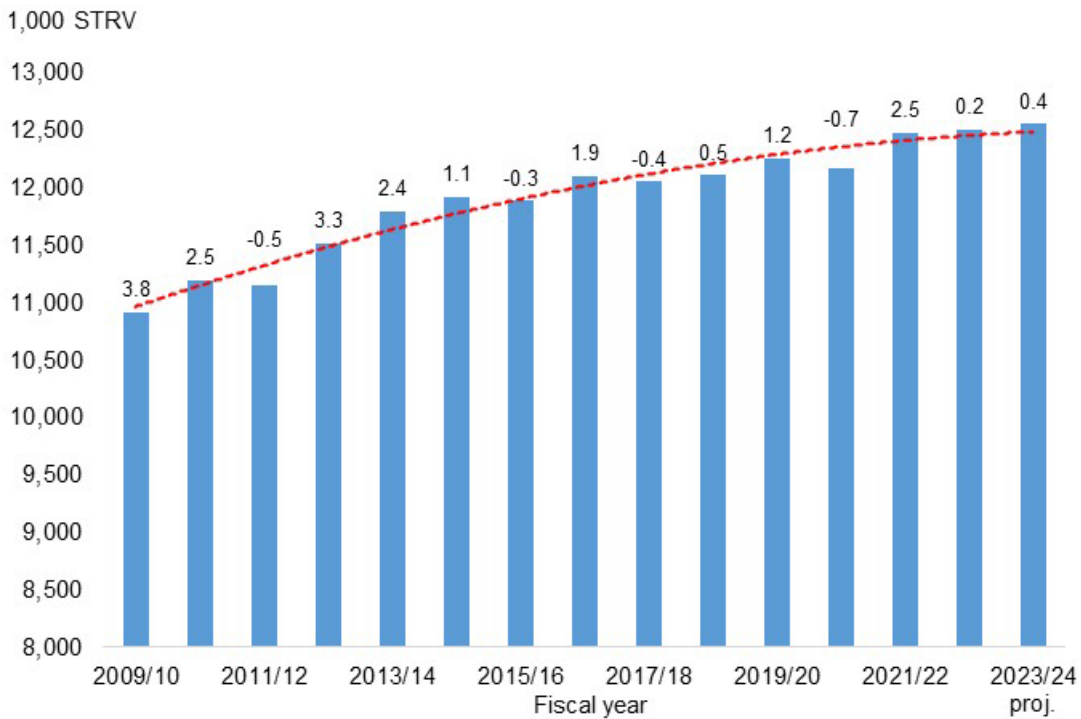
Similarly, the 2023/24 sugar delivery for human consumption is lowered by 50,000 STRV to 12.550 million in concurrence with the observed delivery slowdown in 2022/23; there were no changes this month for the other delivery categories. Correspondingly, U.S. sugar use is lowered by 50,000 STRV to 12.655 million, which is 50,000-STRV higher (0.4 percent) than 2022/23’s 12.615 million.

SMD data indicate that the 4.132 million-STRV beet sugar deliveries through July are lower by 301,000 STRV (7 percent) than the same period last year (table 5). While cumulative delivery of cane sugar (5.419 million STRV) and direct-consumption sugar (750,000) are



larger than last year by 3 percent and 9 percent, respectively, these increases do not completely offset the slowdown in beet sugar delivery. To meet the 12.5 million-STRV estimate for 2022/23, the combined food use deliveries from these 3 categories in the remaining months of the fiscal year (August–September) would need to be at least 2.192 million STRV (table 6). This implies that delivery in the last 2 months would need to match the 5-year record of 2.197 million STRV in 2019/20, which is about 100,000-STRV more than the 5-year average (2.098 million)

Figure 13  
**U.S. sugar deliveries for food and beverage use, 2009/10–2023/24**



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

Note: The dashed red line represent the long-term trend line. Numbers on top of the bars represent the annual growth rates (percent).

Source: USDA, Economic Research Service calculations using data from USDA, Farm Service Agency.

**Table 5: Food and beverage deliveries, October–July, 2017/18–2022/23**

	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23 est.	Annual change	
	1,000 short tons, raw value (STRV)						1,000 STRV	Percent
Beet sugar processors	4,364	4,173	3,662	4,079	4,432	4,132	-301	-7
Cane sugar refiners	5,032	5,203	5,450	5,197	5,248	5,419	170	3
Total reporters	9,397	9,376	9,112	9,276	9,681	9,550	-130	-1
Non-reporter (direct consumption)	591	633	941	845	695	758	63	9
Total	9,988	10,008	10,053	10,121	10,375	10,308	-67	-1
	Percent share in total						5-year average	
Beet sugar processors	44	42	36	40	43	40	41	
Cane sugar refiners	50	52	54	51	51	53	52	
Non-reporter (direct consumption)	6	6	9	8	7	7	7	
Total	100	100	100	100	100	100	100	

est. = estimated.

Source: USDA, Economic Research Service calculations using data from USDA, Farm Service Agency.

**Table 6: Pace of U.S. food and beverage deliveries, Oct.–Jul., 2010/11–2022/23**

	Oct.–Jul.	Remaining Aug.–Sep.	Fiscal year total	Oct.–Jul. share of total
	1,000 short tons, raw value			Percent
2010/11	9,110	2,082	11,193	81.4
2011/12	9,157	1,983	11,141	82.2
2012/13	9,470	2,041	11,511	82.3
2013/14	9,716	2,070	11,786	82.4
2014/15	9,821	2,100	11,921	82.4
2015/16	9,759	2,121	11,881	82.1
2016/20	10,012	2,090	12,102	82.7
2017/18	9,988	2,061	12,048	82.9
2018/19	10,008	2,097	12,106	82.7
2019/20	10,053	2,197	12,250	82.1
2020/21	10,121	2,040	12,161	83.2
2021/22	10,375	2,095	12,470	83.2
<b>2022/23 est.</b>	<b>10,308</b>	<b>2,192</b>	<b>12,500</b>	<b>82.5</b>
5-year average	10,109	2,098	12,447	82.8
5-year maximum	10,375	2,197	12,470	83.2

est. = estimated.

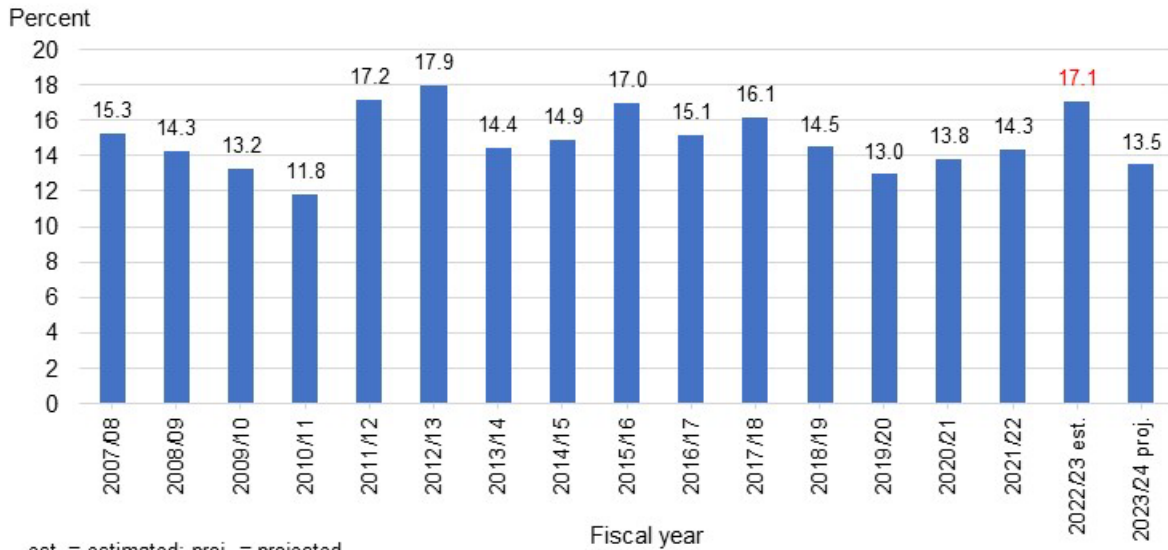
Source: USDA, Farm Service Agency.

## Stocks-to-use Ratio in 2022/23 Increased to 17.1 Percent

With the September *WASDE* estimate of higher fiscal year 2022/23 total supply (14.819 million STRV) but lower use (12.660 million STRV), ending stocks are up from last month by 146,000 STRV to 2.159 million. The resulting stocks-to-use ratio is 17.06, larger by 1.22 percentage points from last month's 15.84 percent and the largest since 2013/14 (figure 14).

Figure 14

**U.S. stocks-to-use ratio, by fiscal year, 2007/08–2023/24**



est. = estimated; proj. = projected.

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

# Mexico Outlook

## Imports in 2022/23 Raised Based on Strong Pace

In the September 2023 *WASDE*, Mexico's 2022/23 total imports are raised from last month by 54,000 metric tons (MT) to 254,000. The additional 54,000-MT is assumed to be imported for domestic consumption; therefore, this import subcategory is also increased by 54,000 MT to 229,000 MT (table 7). The remaining 25,000 MT—unchanged from last month—is assumed to be imported for the subcategory *Industria Manufacturera, Maquiladora y de Servicios de Exportación (IMMEX)* program.

If realized, the current 254,000-MT import estimate for 2022/23 would be 223,000-MT higher (723 percent) than last year's 31,000 MT and would overtake 2017/18's 220,000 MT as the largest imported volume since 2012/13 (figure 15). This upward revision in the estimate was based on Mexico's National Committee for the Sustainable Development of Sugarcane's (CONADESUCA) July 2023 *Balance Nacional de Azúcar mensual, ciclo 2022/23* (Monthly National Sugar Balance, cycle 2022/23) which shows relatively large imports between October–July of 169,608 MT.

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

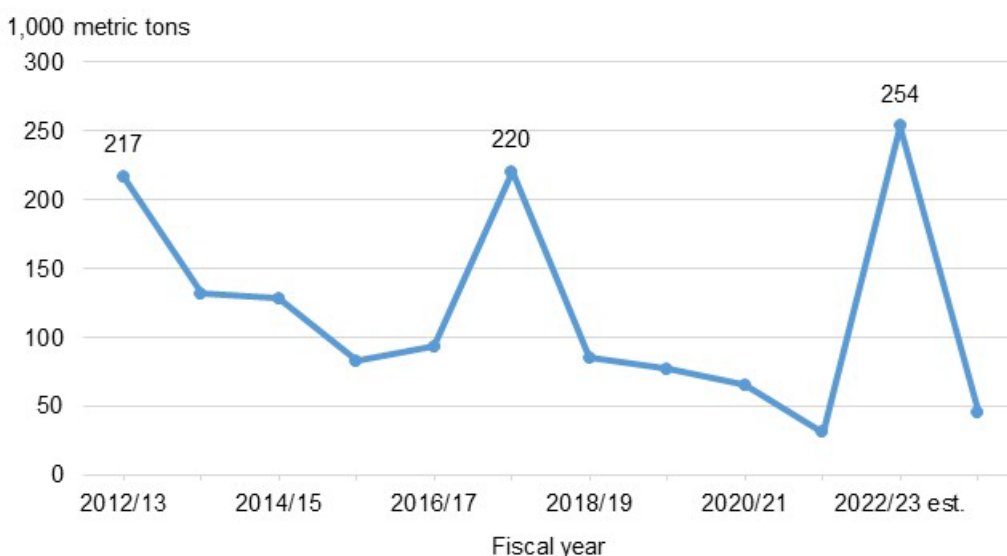
Items	2021/22	2022/23			2023/24		
		August (estimate)	September (estimate)	Monthly change	August (forecast)	September (forecast)	Monthly change
1,000 metric tons, actual weight							
Beginning stocks	1,053	964	964	0	880	880	0
Production	6,185	5,224	5,224	0	5,900	5,800	-100
Imports	31	200	254	54	45	45	0
Imports for consumption	7	175	229	54	20	20	0
Imports for sugar-containing product exports (IMMEX) 1/	24	25	25	0	25	25	0
Total supply	7,269	6,389	6,442	54	6,825	6,725	-100
Disappearance							
Human consumption	4,113	4,085	4,085	0	4,139	4,139	0
For sugar-containing product exports (IMMEX)	532	359	413	54	450	450	0
Other deliveries and end-of-year statistical adjustment	-16	0	0	0	0	0	0
Total	4,629	4,444	4,498	54	4,589	4,589	0
Exports	1,676	1,065	1,065	0	1,348	1,248	-100
Exports to the United States and Puerto Rico	1,180	1,043	1,043	0	1,272	1,099	-173
Exports to other countries 2/	495	22	22	0	76	149	73
Total use	6,305	5,509	5,563	54	5,936	5,836	-100
Ending stocks	964	880	880	0	888	888	0
Stocks-to-human consumption (percent)	23.4	21.5	21.5	0	21.5	21.5	0
Stocks-to-use (percent)	15.3	16.0	15.8	0	15.0	15.2	0
High-fructose corn syrup (HFCS) consumption (dry weight)	1,291	1,407	1,407	0	1,407	1,407	0

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

2/ Includes exports participating in the U.S. re-export programs.

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

Figure 15

**Mexican total sugar imports, by fiscal year, 2012/13–2023/24**

est. = estimated.

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

After the September *WASDE* was published, CONADESUCA released its September 2023 *Balance Nacional De Azúcar* (National Sugar Balance), which estimates the full fiscal year 2022/23 imports at 225,000 MT. The *WASDE* estimate (254,000 MT) is larger because it includes the estimated 25,000 MT of imports for IMMEX. CONADESUCA excludes imports for the IMMEX subcategory in its “*Importaciones Totales*” line.

Note that CONADESUCA’s reported 169,608 MT imports through July is relatively lower than the countries’ reported exports to Mexico that is available in the Trade Data Monitor (TDM) database. TDM data through July 2023—as of September 14—show that countries exported about 192,000 MT to Mexico, which is about 23,000 more (13 percent) than CONADESUCA’s 169,608 (table 8). To date, Brazil’s reported exports to Mexico are now the largest (55,902 MT or 29 percent). India, not a past regular origin, shipped a comparable volume of 52,600 MT (27 percent), followed by Guatemala’s 41,520 MT (22 percent).

**Table 8: Countries' reported sugar exports to Mexico, October 2022–July 2023**

Origin	Quantity (metric tons)	Share in total (percent)
Brazil	55,902	29
Canada	0	0
China	5	0
Colombia	601	0
El Salvador	7,040	4
EU 27 External Trade (Brexit)	15	0
Guatemala	41,520	22
Honduras	24,296	13
India	52,600	27
Indonesia	110	0
Paraguay	12	0
South Korea	0	0
Taiwan	0	0
Thailand	2,990	2
United States	7,313	4
<b>Total</b>	<b>192,404</b>	<b>100</b>

EU = European Union.

Note: Brexit refers to the to the United Kingdom's decision in a June 23, 2016 referendum to leave the European Union.

Source: Trade Data Monitor.

## Government of Mexico Lowers Target Ending Stocks from 2.3-Months' Worth to 2 Months

In the September *WASDE*, ending stocks in 2022/23 are unchanged at 880,000 MT, which is equivalent to 2.3-months' worth of total domestic deliveries (domestic market and IMMEX). The Government of Mexico typically targets ending stocks to equal to 2.5-months' worth of domestic consumption. This was changed to 2.3-months' worth in CONADESUCA's April 20 publication of an updated (third estimate) sugar balance for Mexico. If realized, the current year's 880,000-MT inventory would be 85,000-MT lower (9 percent) than 2021/22, and would represent the second tightest market since 2014/15, behind 2019/20's 858,000 MT. The tight supply situation has contributed to historically high prices for refined and standard sugar (figure 17), which in turn incentivize imports into Mexico (including high-tier duty sugar) to meet domestic demand and fulfill U.S. and IMMEX contracts.

However, in CONADESUCA's September 2023 *Balance Nacional De Azúcar* (National Sugar Balance)—released after the September 12 *WASDE*—the Government of Mexico further lowered the targeted stocks from 2.3-months' worth to 2 months. Two-months' worth of stocks translate to a 16.7 percent stocks-to-consumption ratio, which if realized would be the lowest since 2008/09 (table 9). In the CONADESUCA balance sheet, the 2-months' worth of target stocks equate to 721,288 MT, which would also be the lowest since 2011/12.

CONADESUCA's latest stocks estimate for 2022/23 reflects the tight supply situation as evidenced by the ending stocks in July (1.481 million MT) that are the lowest for this month in the past decade (figure 18). As such, Mexico may have to continue importing more sugar in the next fiscal year (2023/24) to have adequate supply available through mid-December 2023 before the harvest campaign starts in earnest.

Figure 17

**Mexican and U.S. sugar prices, monthly, January 2013–August 2023**

U.S. cents per pound



U.S. = United States.

Note: The breaks in the Mexican sugar price series on June 2020 and January 2021 are due to data unavailability.

Source: USDA, Economic Research Service calculations using data from Intercontinental Exchange, Inc. (U.S. prices), Servicio Nacional de Información e Integración de Mercados (Mexican prices), and U.S. Federal Reserve Bank (exchange rates).

**Table 9: Mexican sugar ending stocks and stocks-to-consumption ratio, by fiscal year, 2008/09–2022/23**

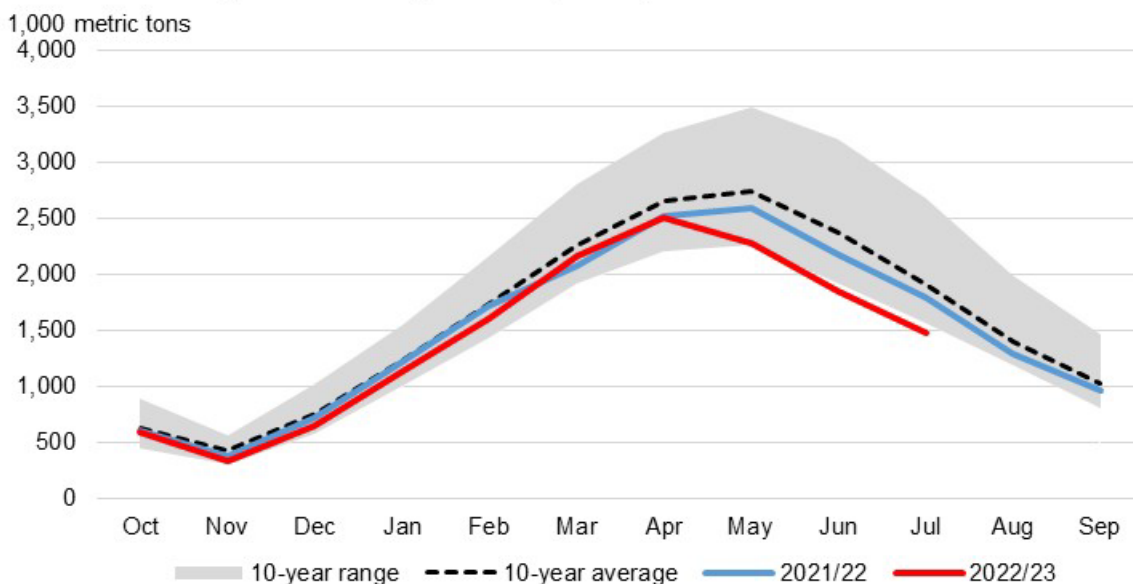
Fiscal year	Ending stocks	Stocks-to-human
	1,000 MT, actual weight	consumption ratio
		Percent
2008/09	588	11.8
2009/10	918	21.1
2010/11	760	19.2
2011/12	966	23.3
2012/13	1,460	34.1
2013/14	831	20.3
2014/15	811	18.4
2015/16	1,037	23.6
2016/17	1,002	22.2
2017/18	1,395	33.0
2018/19	1,169	28.6
2019/20	858	20.9
2020/21	1,053	26.7
2021/22	964	23.4
2022/23 (CONADESUCA's September 2023 estimate)	721	16.7

MT = metric tons.

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



Figure 18  
**Mexican monthly available sugar stocks, fiscal years 2012/13–2022/23**



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

## Additional Supply from Imports Translates to Increased Delivery for IMMEX in 2022/23

The extra 54,000-MT of imported sugar expected in 2022/23 for domestic consumption is assumed to free up sugar that mills can redirect to companies participating in the IMMEX program. As such, the *WASDE's* delivery to IMMEX is likewise raised from last month by 54,000 MT to 413,000 (figure 16). This would still be lower than last year (532,000 MT) and the 5-year average (462,000 MT). This implies that deliveries in August and September would each need to average 59,000 MT to meet the 413,000-MT estimate.

Figure 16

**Mexican domestic IMMEX deliveries, 2010/11–2022/23**



IMMEX = Industria Manufacturera, Maquiladora y de Servicios de Exportación; est. = estimated.  
 Note: USDA includes Mexican imports for IMMEX into its IMMEX deliveries data. In contrast, CONADESUCA excludes imports of sugar for IMMEX in the “Ventas a IMMEX” line on its monthly sugar balance publication.  
 Source: USDA, Economic Research Service calculations using data from Mexico’s National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

## Sugar Production in 2023/24 Lowered Due to Drought

The 2023/24 cane sugar production forecast for Mexico is lowered from last month by 100,000 MT to 5.8 million MT amid the ongoing drought conditions, following the information provided by the USDA, Foreign Agricultural Service’s post in Mexico City. There are concerns that the drought, particularly in the Pacific region, presents further downside risk to production. This region includes Jalisco, one of Mexico’s top three producing States. The months-long drought during last year’s growing season was one of the factors that led to poor sugarcane yields and sucrose recovery. However, softening prices for fertilizer and other inputs are expected to encourage higher application and improvements in crop management compared with last year. Timely rainfall before the start of harvest in November has the potential to lessen drought-related yield reduction. CONADESUCA usually publishes its initial production forecast in November.

## Suggested Citation

Abadam, V. (2023). *Sugar and sweeteners outlook: September 2023* (Report No. SSS-M-421). U.S. Department of Agriculture, Economic Research Service.

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