



Sugar and Sweeteners Outlook: June 2022

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U.S. Sugar Production for 2022/23 Lower Based on Sugarbeet Planting Pace

In the June 2022 *World Agricultural Supply and Demand Estimates*, U.S. sugar production is lowered for 2022/23 as delayed planting of sugarbeets is forecast to translate to lower yields. Beet sugar production is also reduced for 2021/22 on lower expected early-season production—also an implication of late planting. Cane sugar production is down in both years but at a lesser magnitude. Imports are marginally increased for 2022/23 on revised import data and for 2021/22 on additional raw sugar high-tier imports that entered the U.S. No changes were made to total use for either year. The implied stocks-to-use ratio is 7.6 percent for 2022/23 and 13.6 percent for 2021/22.

Mexico sugar production in 2021/22 is raised 41,000 metric tons (MT), actual weight to 6.208 million on strong pace that is expected to continue in the remaining weeks of the campaign. Production in 2023/23 is unchanged. Domestic deliveries in 2021/22 are increased 135,000 MT to 4.050 million based on stronger pace relative to last year, and this estimate is carried over to 2022/23.

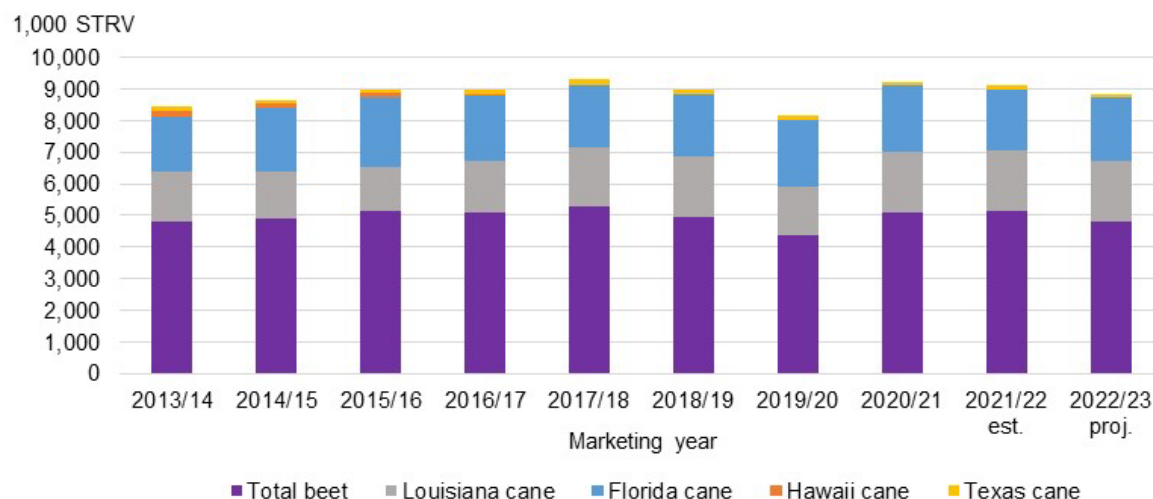
In 2021, U.S. honey consumption reached a new record high while production was the lowest since 1991 mostly due to lower yield per colony. Imports of honey surged to fill the supply deficit and continued to account for most of the domestic supply.

U.S. Outlook Summary

U.S. Sugar Supplies Reduced in 2021/22 and 2022/23

In the June 2022 *World Agricultural Supply and Demand Estimates (WASDE)*, U.S. total sugar supply for 2022/23 is reduced 303,000 short tons, raw value (STRV) from the previous month to 13.553 million as lower beginning stocks and sugar production more than offset the upward revision in imports (table 1). The lower supply is largely attributed to the beet sector’s 191,000-STRV reduction as national sugarbeet yield is expected to be down due to delayed planting, particularly in the Red River Valley. Cane sugar production for 2022/23 is lowered 27,062 STRV solely on smaller expected sugarcane area harvested in Texas. If realized, the 2023/23 beet and cane sugar production of 8.822 million STRV would be one of the lowest in the past decade (figure 1). For 2021/22, U.S. total sugar supply is reduced 96,000 STRV to 14.307 million. The 100,000-STRV reduction in expected beet sugar early production (August and September)—also an implication of late planting—is only partially offset by the 13,014-STRV increase in high-tier raw sugar imports that entered in June. Cane sugar production for 2021/22 is marginally down 8,864 STRV to 1.906 million reflecting Florida and Texas processors’ adjustments as they ended their campaigns. No changes were made to total use for either year. The implied stocks-to-use ratio is 7.6 percent for 2022/23 and 13.6 percent for 2021/22.

Figure 1
U.S. beet and cane sugar production, crop year 2013/14 to 2021/22



STRV = short tons, raw value; est. = estimated; proj. = projected.
 Source: USDA, Farm Service Agency; USDA, World Agricultural Outlook Board.

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

Items	2020/21		2021/22			2022/23		
		May (estimate)	June (estimate)	Monthly change	May (forecast)	June (forecast)	Monthly change	
	1,000 short tons raw value							
Beginning stocks	1,618	1,705	1,705	0	1,813	1,717	-96	
Total production	9,234	9,229	9,120	-109	9,040	8,822	-218	
Beet sugar	5,092	5,254	5,154	-100	5,000	4,809	-191	
Cane sugar	4,142	3,976	3,967	-9	4,040	4,013	-27	
Florida	2,090	1,942	1,938	-3	2,000	2,000	0	
Louisiana	1,918	1,906	1,906	0	1,910	1,910	0	
Texas	134	128	122	-6	130	103	-27	
Total imports	3,195	3,469	3,482	13	3,003	3,013	11	
Tariff-rate quota imports	1,749	1,727	1,727	0	1,379	1,390	11	
Other program imports	292	300	300	0	250	250	0	
Non-program imports	1,154	1,442	1,455	13	1,373	1,373	0	
Mexico	968	1,220	1,220	0	1,323	1,323	0	
High-duty	186	221	235	13	50	50	0	
Total supply	14,047	14,403	14,307	-96	13,856	13,553	-303	
Total exports	49	35	35	0	35	35	0	
Miscellaneous	40	0	0	0	0	0	0	
Total deliveries	12,251	12,555	12,555	0	12,555	12,555	0	
Domestic food and beverage use	12,135	12,450	12,450	0	12,450	12,450	0	
To sugar-containing products re-export program	89	80	80	0	80	80	0	
For polyhydric alcohol, feed, other alcohol	27	25	25	0	25	25	0	
Commodity Credit Corporation (CCC) sale for ethanol	0	0	0	0	0	0	0	
Total use	12,340	12,590	12,590	0	12,590	12,590	0	
Ending stocks	1,707	1,813	1,717	-96	1,266	963	-303	
Private	1,707	1,813	1,717	-96	1,266	963	-303	
Commodity Credit Corporation	0	0	0	0	0	0	0	
Stocks-to-use ratio (percent)	13.8	14.4	13.6	-0.8	10.1	7.6	-2.4	

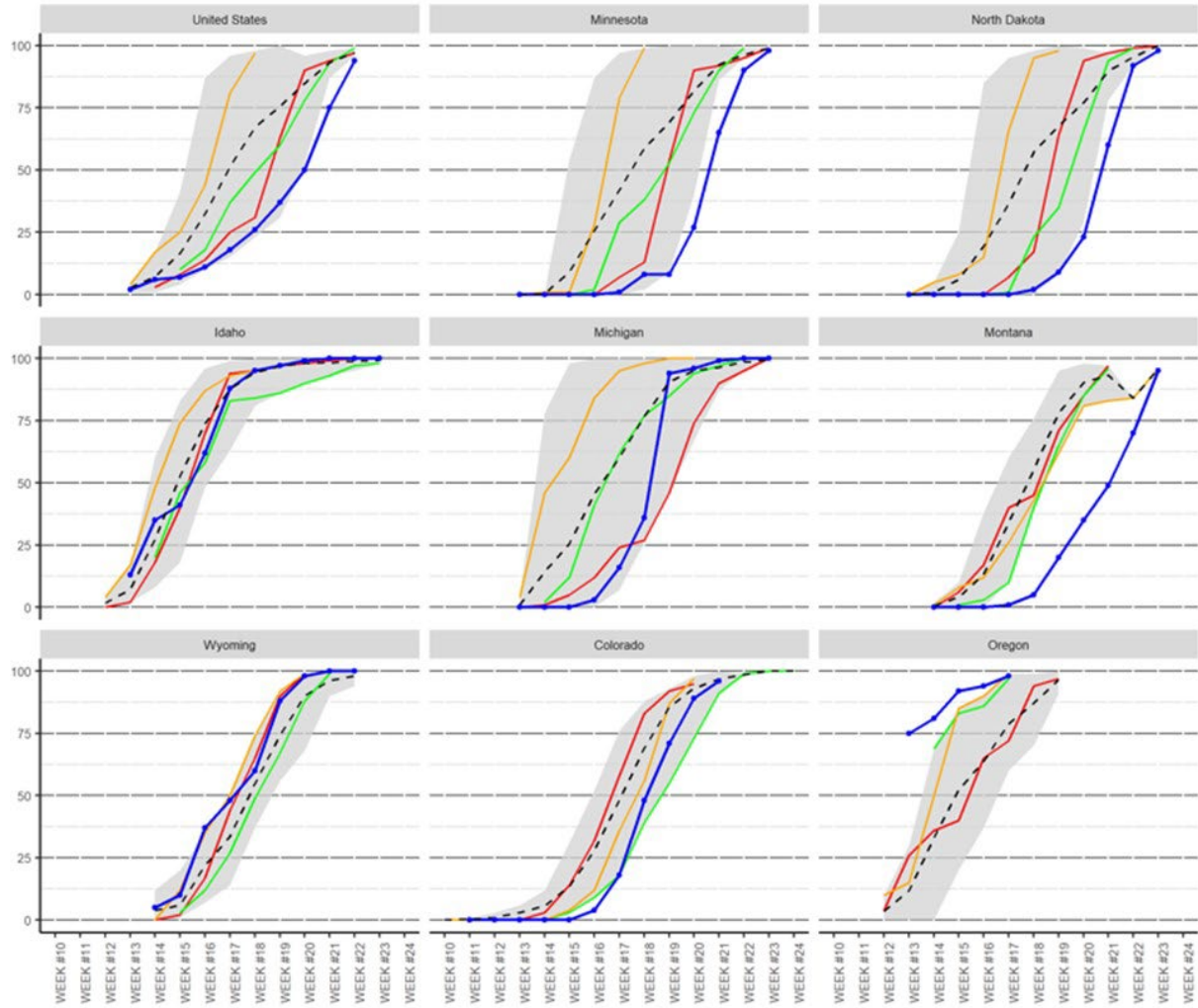
Source: USDA, World Agricultural Outlook Board, *World Agricultural Supply and Demand Estimates (WASDE)*.

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

The sugarbeet planting seasons in Minnesota, North Dakota, Montana, and Michigan were significantly delayed by cold and excessive moisture. The National Agricultural Statistics Service (NASS) *Crop Progress* report shows that this planting season is one of the slowest since 2000 (figure 2). The majority of sugarbeets in these States were planted 3 weeks later than mid-May (weeks 18 and 19) that growers see as a critical cut-off point for the crop to produce optimal tonnage. 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. Yields tend to be higher when a larger percentage of total acreage is planted in weeks 18 and 19 (figure 3).

Figure 2

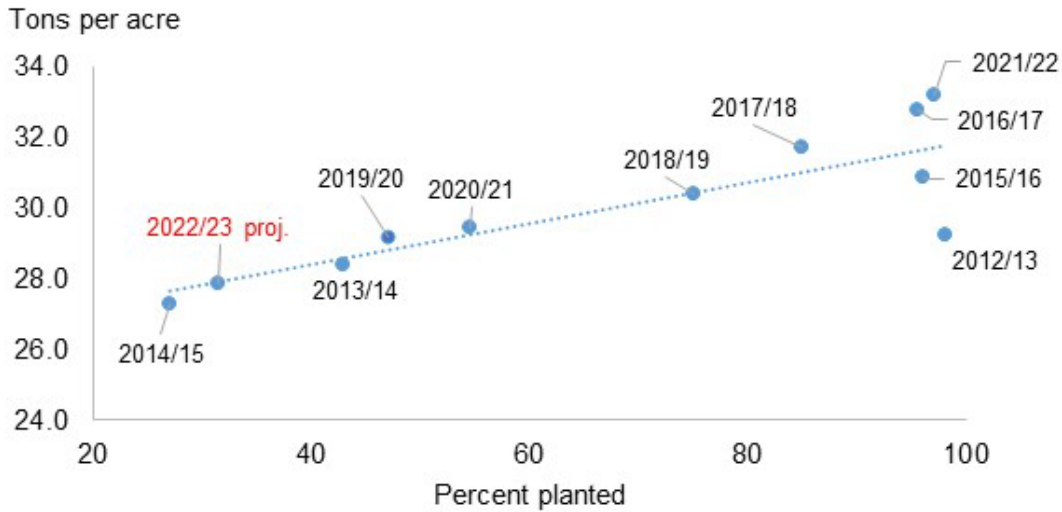
Planting progress by State, 2019 (red), 2020 (green), 2021 (orange), 2022 (blue), average, and range, since 2000
 Percent complete



Source: USDA, National Agricultural Statistics Service.

Figure 3

Correlation of average planting progress at weeks 18 and 19, and sugarbeet yields, 2012/13–2022/23



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

Considering the late planting, the national yield forecast for 2022/23 is estimated at 27.88 tons per acre, the second lowest behind 27.33 tons per acre in 2014/15 when a similar slow pace of planting occurred during weeks 18 and 19 (figure 4). The yield forecast is combined with the planted area forecast from the NASS March 2022 *Prospective Plantings* report (1.143 million acres), along with a 10-year Olympic¹ average harvest-to-planted ratio (97 percent), to forecast 2022/23 harvested area (1.113 million acres). The result is a sugarbeet production forecast for 2022/23 totaling 31.032 million short tons, down 2.6 million from last month (table 2). There are anecdotal reports from *Sosland Sweetener Report* that affected processors have expanded their acreage to offset the yield reduction. The forecast will be revisited next month after the first NASS forecast for 2022/23 planted and harvested acreage becomes available from its June 30 *Acreage* report.

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

Figure 4
Sugarbeet harvested area and yields, 2013/14 to 2021/22



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

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

	2021/22	2021/22	Monthly change	2022/23	2022/23	Monthly change
	May	June		May	June	
Area planted (1,000 acres)				1,143	1,143	
Planted/Harvested ratio				0.97	0.97	
Area harvested (1,000 acres)	1,108	1,108	0	1,113	1,113	0
Yield (tons per acre)	33.2	33.2	0	30.23	27.88	-2
Sugarbeet production (1,000 short tons) 1/	36,751	36,751	0	33,652	31,032	-2,620
Sugarbeet shrink (percent)	8.47	8.47	0.0	7.37	6.58	-0.8
Sugarbeet sliced (1,000 short tons)	33,639	33,639	0	31,173	28,991	-2,181
Sugar extraction rate from slice (percent)	14.69	14.69	0.0	14.63	14.63	0.0
Sugar from beets sliced (1,000 STRV) 2/	4,941	4,941	0	4,562	4,241	-321
Sugar from molasses (1,000 STRV) 2/	360	360	0	360	360	0
Crop-year sugar production (1,000 STRV) 2/	5,301	5,301	0	4,922	4,601	-321
August-September sugar production (1,000 STRV)	676	676	0	600	500	-100
August-September sugar production of subsequent crop (1,000 STRV)	600	500	-100	678	678	0
Sugar from imported beets (1,000 STRV)	28	28	0.0	N/A	30	
Fiscal year sugar production (1,000 STRV)	5,254	5,154	-100	5,000	4,809	-191

1/ USDA, National Agricultural Statistics Service.

2/ August–July.

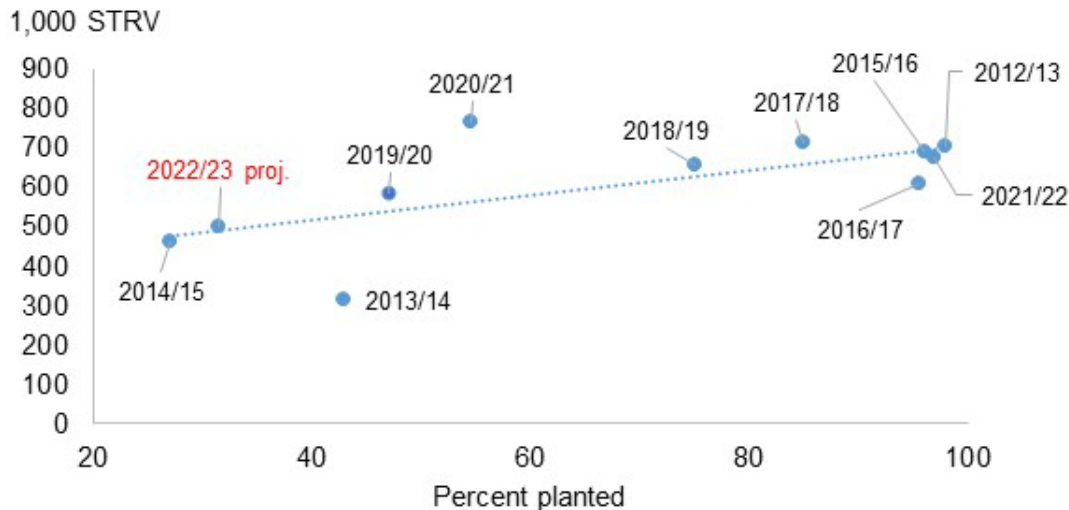
Source: USDA, Economic Research Service; USDA, World Agricultural Outlook Board; USDA, Farm Service Agency.

Shrink is reduced to 6.576 percent based on processors' first forecast reported to the Farm Service Agency's *Sweetener Market Data (SMD)* report. Expected sucrose recovery from sliced beets (14.63 percent) and sugar from molasses (360,000 STRV) are the same as last month. Thus, the 2022/23 August-July crop year beet sugar production is projected to be 4.601 million STRV, down 321,000 from last month.

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 accounted for in fiscal year (FY) 2021/22—is also strongly correlated with planting progress (figure 5). As such, sugar

production in August-September 2022 is reduced 100,000 STRV to 500,000, which aligns with the 461,000-STRV of early season production in 2014/15, a comparable year in terms of slow planting progress at weeks 18 and 19. Incorporating the 5-year average of 678,000 STRV for August-September 2023 production implies a beet sugar production of 4.809 million STRV for FY 2023, a reduction of 191,000 STRV from last month.

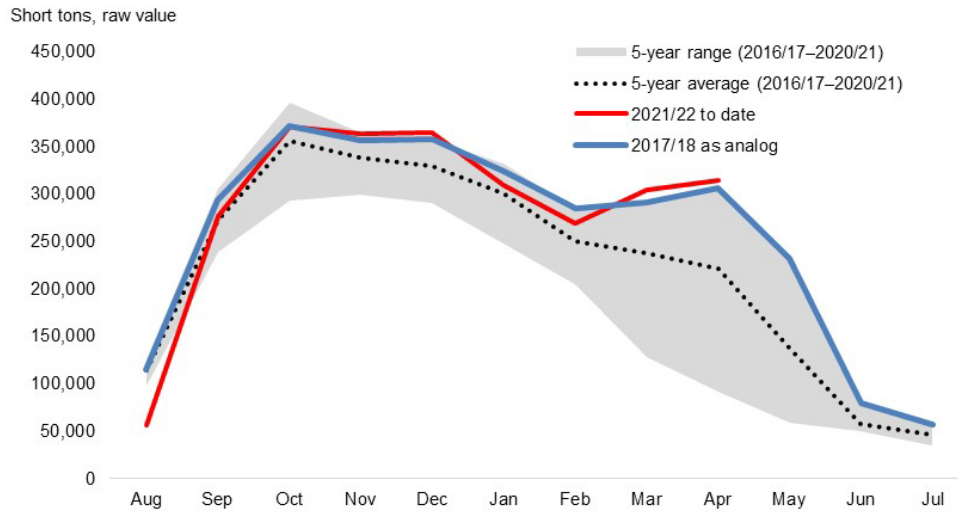
Figure 5
Correlation of average planting progress at weeks 18 and 19, and early season beet sugar production, 2012/13–2022/23



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

For 2021/22, there were no changes to the beet sugar production variables except for the 100,000-STRV reduction in August-September 2022, which brought down the FY 2022 estimate to 5.154 million STRV (table 2). In terms of crop year 2021/22, the three beet processors in the Red River Valley region—where more than half of the beet sugar is produced—are on track to a strong late-season campaign into June, such as in 2017/18, to process most of the frozen beet piles. Production in March and April surpassed the prior record high in 2017/18 (figure 6) and output to date is at 2.623 million STRV or 88 percent of their 2.993 million-STRV crop year sugar production estimate submitted to SMD (figure 7).

Figure 6
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 7
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

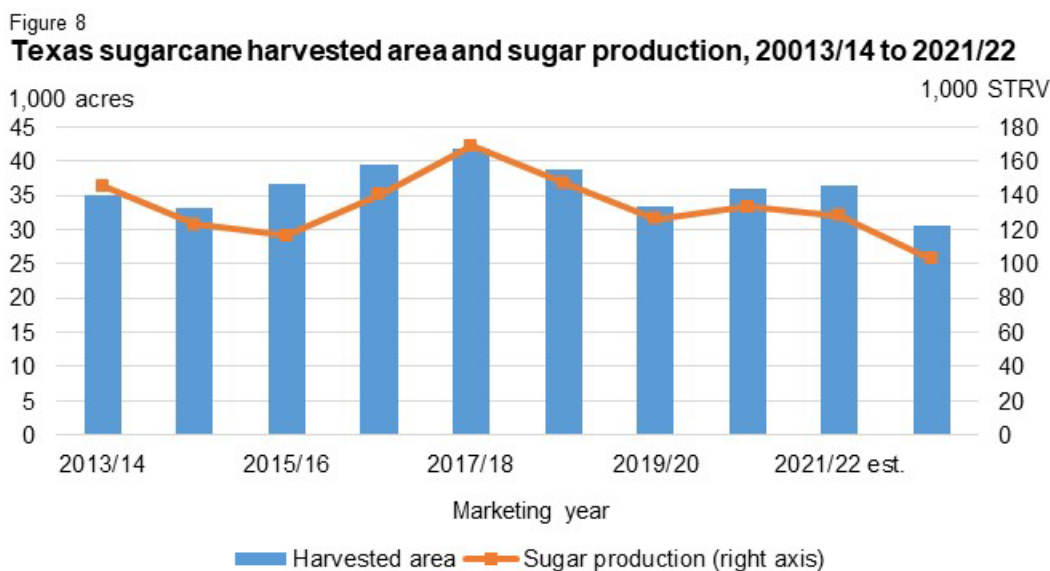


Note: The numbers inside the bars represent the percent of actual production in total crop year estimate.
 Sources: USDA, Economic Research Service; USDA, Farm Service Agency.

Cane Sugar Production 2022/23 Forecast Down

Cane sugar production for 2022/23 is lowered 27,062 STRV to 4.013 million from last month solely on smaller expected production in Texas (figure 8). The reduction is based on the Texas processor forecast in the *Sweetener Market Data* that indicated smaller harvested acreage at 28,600 acres. Rains during the August-October 2021 planting season prevented growers from entirely replacing the less-than-ideal cane acres that were ploughed up because they had old crop and poor irrigation. If realized, both acreage and production in Texas would be the lowest since 2013/14. There were no changes made to either the 2022/23 Florida or Louisiana production forecast.

For 2021/22, cane sugar production for 2021/22 is marginally down 8,864 STRV to 1.906 million reflecting Florida and Texas processors' adjustments as they wrapped their campaigns. There were no changes to the 2021/22 Louisiana production estimate. As with the sugarbeet crop, the first crop data reported by the NASS for the upcoming sugarcane crop in the three cane-producing States will be released at the end of the month in the *Acreage* report.



STRV = Short tons raw value; est. = estimated.
 Source: USDA, Economic Research Service; USDA National Agricultural Statistics Service.

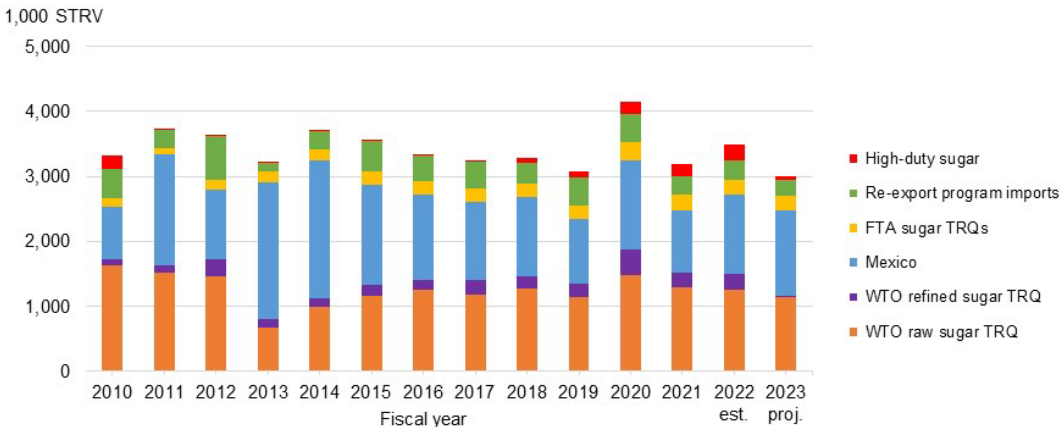
Marginal Changes for 2021/22 and 2022/23 Imports

Imports are marginally increased for 2022/23 on revised import data and for 2021/22 on more raw sugar high-tier imports that entered the U.S. There were no changes to the other import categories for either year.

For 2022/23, total U.S. sugar imports are increased 10,582 STRV on USDA, Foreign Agricultural Service (FAS) data revision to include the Canadian Free Trade Agreement quota. The additional Specialty Sugar tariff rate quota (TRQ) for 2022/23 has yet to be announced by the USDA Secretary and is not included in the forecast. While the amount was announced prior to the July *World Agricultural Supply and Demand Estimates* (WASDE) in the past years, for 2021/22, the notice came out in September 2021 and was established at 220,462 STRV. The first fiscal year 2023 U.S. Department of Commerce (DOC) calculation to determine U.S. Needs based on a 13.5 percent stocks-to-use ratio and Mexico's Export Limit will be announced after the July WASDE. Note that the initial July Export Limit as a percent of the U.S. Needs is 50 percent.

Total U.S. sugar imports for 2021/22 are raised 13,014 STRV to 3.482 million, solely reflecting the additional high-tier raw sugar imports that entered in June based on the FAS *Sugar Monthly Import and Re-Export Data* report (figure 9). If realized, 2021/22 would have the second largest imports in the last 5 years behind 2019/20, which saw record-high imports in response to the weather-reduced beet sugar production. Two sugar actions in April play a part in the relatively significant 2021/22 import volume. The first action was on April 15, when the U.S. Office of Trade Representative reallocated 222,170 STRV of World Trade Organization (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". This was in addition to USDA's first USDA request for 150,000 STRV of the less-than-99.2 polarity "Other Sugar" on November 23, 2021.

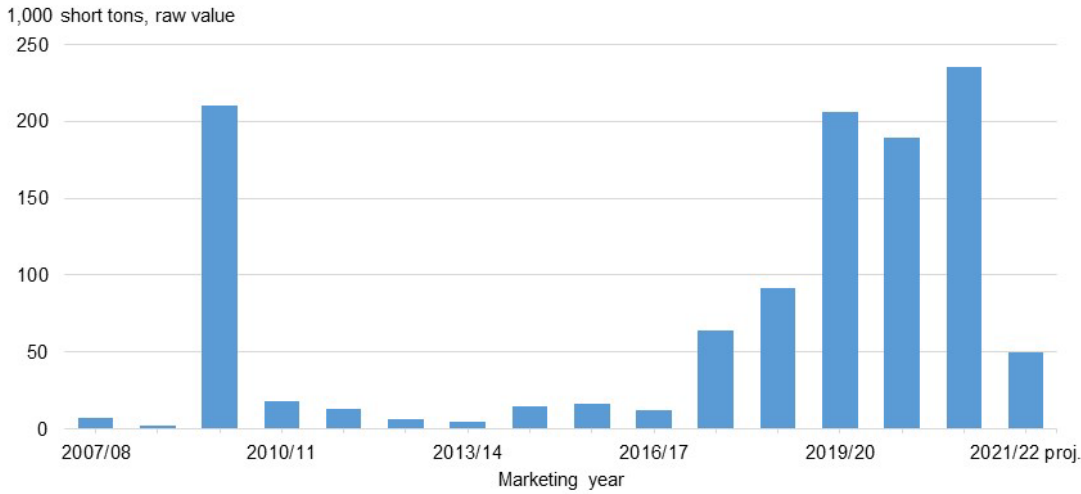
Figure 9
U.S. sugar imports, fiscal years 2008–2023



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

High-tier tariff imports for 2021/22 is increased 13,000 STRV to 235,000 STRV, surpassing the prior record-high of 207,000 STRV in 2009/10 (figure 10). As noted above, the estimated increase is based on pace-to-date entries of high-tier raw sugar imports through June. The FAS report, which breaks down high-tier tariff imports through April by port and country of origin, showed that 53 percent entered in Savannah, GA and 8 percent in San Francisco, CA (table 4). This implies that more than half of the total may have been imported by import-dependent cane refiners in those areas, which is out of norm. The last time high-tier raw sugar was imported in significant quantity was in 2009/10. Even with the upward revision, 88 percent of the estimated 2021/22 total high-tier imports has already been imported through May, which is double the 5-year average pace (table 3). In terms of country of origin, the majority (59 percent) of the high-tier sugar imports to date has come from Brazil, followed by Guatemala (12 percent).

Figure 10
U.S. imports of high-tier tariff sugar, 2007/08 to 2022/23



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

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 estimated	5-year average
Short tons, raw value							
October to May							
Mexico	879,898	797,748	610,613	883,228	620,279	816,143	758,353
WTO raw sugar TRQ	813,212	974,149	823,686	874,202	1,024,726	826,782	901,995
WTO refined sugar TRQ	185,873	153,852	166,640	364,061	172,989	192,681	208,683
FTA sugar TRQ	136,337	102,573	124,247	155,913	153,764	153,089	134,567
Re-export program	185,430	187,727	272,011	282,336	117,089	217,219	208,918
High-duty sugar	6,221	10,733	64,859	75,146	114,953	203,428	54,383
Total	2,206,971	2,226,782	2,062,055	2,634,886	2,203,799	2,409,342	2,266,899
Share of fiscal year total							
Mexico	73	65	61	64	64	67	66
WTO raw sugar TRQ	69	77	72	60	79	66	71
WTO refined sugar TRQ	85	81	80	89	80	80	83
FTA sugar TRQ	65	51	65	56	65	66	61
Re-export program	44	58	62	65	40	72	54
High-duty sugar	51	17	71	41	62	87	48
Total	68	68	67	64	69	69	67

WTO = World Trade Organization; TRQ = tariff rate quota; FTA = free trade agreement.
 Source: USDA, Foreign Agricultural Service.

Table 4: U.S. high-duty sugar imports, October to April 2022

	Oct-Dec 2021	Jan-Mar 2022	Apr 2022	Total	Share of total
Top five ports:	Short tons, raw value				Percent
Savannah, GA	62,749	498	30,893	94,139	53
Seattle, WA	8,832	8,461	3,103	20,395	11
Philadelphia, PA	5,060	10,131	1,367	16,558	9
San Francisco, CA	1,174	13,626	79	14,878	8
Los Angeles, CA	3,102	2,292	921	6,315	4
Rest of ports	10,009	10,558	4,832	25,399	14
Total	90,925	45,566	41,194	177,684	100
Top five origins:					
Brazil	72,033	18,112	14,898	105,043	59
Colombia	4,578	5,103	22,512	32,193	18
Costa Rica	368	12,237	0	12,605	7
Guatemala	5,744	6,004	742	12,490	7
China	1,161	1,367	524	3,052	2
Rest of countries	7,040	2,743	2,517	12,301	7
Total	90,925	45,566	41,194	177,684	100

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

Note: The numbers in the total column may not be exactly the same due to rounding.

Source: USDA, Foreign Agricultural Service.

Re-export program imports also show a strong entry pace to date. 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. Through the 8 months of the fiscal year, October to May, re-export program imports amounted to 217,219 STRV, implying that 72 percent of the estimated 300,000 STRV has entered the U.S., versus the 5-year average of 54 percent during the same period (table 3). Given the relative high price of the No. 16 raw cane sugar—normally 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.

U.S. Sugar Prices Remain Elevated Through 2022

The persistent high U.S. prices have provided an opportunity to import sugar economically, despite paying the high-tier duty rates. Even after the recent USDA actions mentioned earlier, the U.S. No. 16 raw sugar price remained at multi-year highs and above 36 cents per pound (figure 11). High-tier raw sugar imports have been entering in the past months despite the margins between the U.S. No. 16 and the world No. 11 raw cane sugar—15-16 cents per

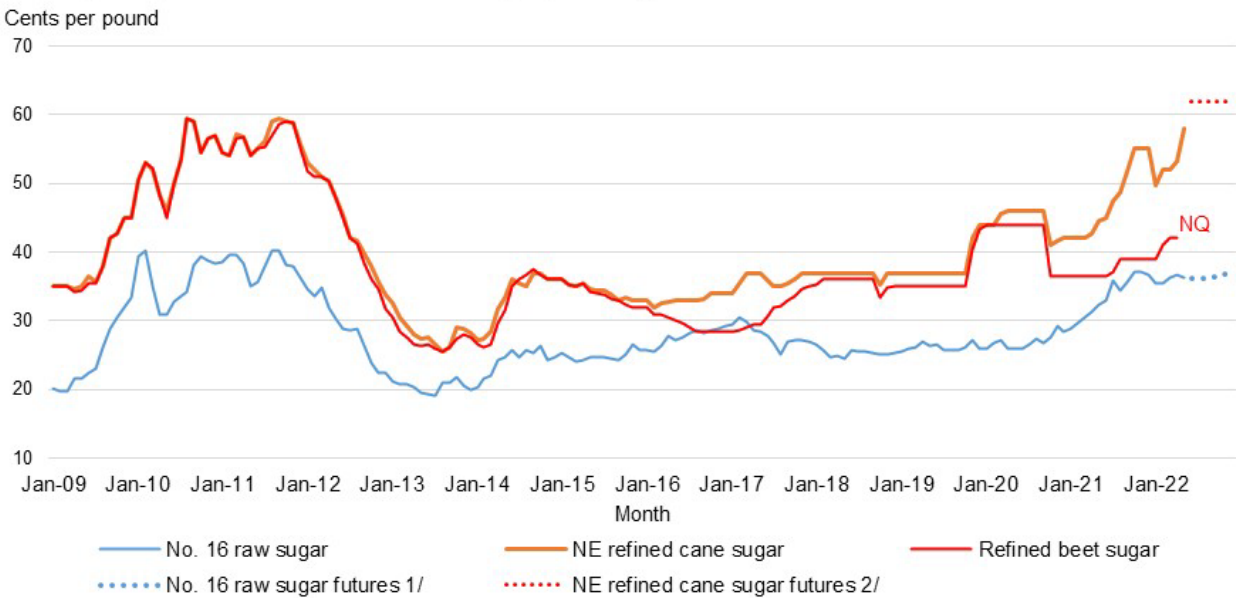
pound—being below the presumed 18.6-cent level where high-tier raw sugar imports would be economical. Given that refined cane sugar prices have been persistently high, it can be the case that import-dependent refiners may have contracted the raw sugar at an earlier time when the margin was more attractive. It can also imply 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.

Northeast refined cane sugar prices through the end of December are increased to 62 cents per pound since June 1 (figure 11). If prices remain at this level or rise in the remaining weeks, the refined cane sugar price in June will average at 62 cents per pound, thus would surpass the prior record high of 59.5 cents per pound in August 2010. 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 beet sugar price is in uncharted territory in the aftermath of several events: Michigan Sugar's *force majeure*—a situation causing inability to fulfill contracts; late planting that reduced expectation for the new crop production; and strong pace of sugar deliveries. Since April 13, when the last quoted price was 42 cents per pound, beet processors have not been offering sugar in the remainder of the 2021-22 nor the 2022-23 seasons. As a result, Midwest refined beet sugar prices have been unquoted in the *Sosland Sweetener Report* for an unprecedented 9 weeks. Consequently, because Sosland is the main source of the refined beet sugar prices, no price information for May 2022 was reported in the USDA, Economic Research Service *Sugar and Sweetener Yearbook Tables*, causing a break in the beet sugar price time series since 1960.

Figure 11

Monthly U.S. prices for raw and refined sugar, January 2009 to December 2022



NE = Northeast; NQ = no quote.

Note: Refined beet sugar spot and future price were unquoted in May-December 2022 due to lack of supplies.

1/ No. 16 raw sugar contract futures settlement prices futures on 6/15/2022 through December 2022.

2/ Northeast refined cane sugar future price as quoted in *Sosland Sweetener Report* on 6/15/2022 through December 2022.

Sources: *Sosland and Sweetener Report*; Intercontinental Exchange, Inc.

Outlook for U.S. Deliveries Unchanged for 2021/22 and 2022/23; Strong Pace Continues in Current Year

Sugar deliveries for food use are unchanged from last month’s 12.450 million STRV for both 2021/22 and 2022/23. Total sugar deliveries at 12.555 million STRV from last month are also carried over for both years. Based on the latest release of the USDA, *FSA Sweetener and Market Data* report, food and beverage deliveries through the first 7 months of 2021/22 are 7.236 million STRV (table 5). This represents a 4.9-percent increase during the same period in 2020/21 and would be a new record high for the October-April period, surpassing the 7.161 million STRV set in 2019/20. The October 2021 to April 2022 deliveries represent 58.1 percent of the 2021/22 deliveries. This pace is faster than the 10-year average’s 56.8 percent and just below the record-high share of 58.5 percent in 2019/20 (table 6).

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

	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Annual change	
	1,000 short tons, raw value (STRV)						1,000 STRV	Percent
Beet sugar processors	3,032	3,060	2,886	2,696	2,836	3,108	272	9.6
Cane sugar refiners	3,473	3,426	3,611	3,765	3,605	3,575	-30	-0.8
Total reporters	6,505	6,486	6,497	6,460	6,441	6,683	242	3.8
Non-reporter, direct consumption	455	374	504	700	459	553	94	20.5
Total	6,960	6,860	7,001	7,161	6,900	7,236	336	4.9

Source: USDA, Farm Service Agency.

Table 6: Pace of U.S. food and beverage deliveries, October–April, fiscal year 2011–2022

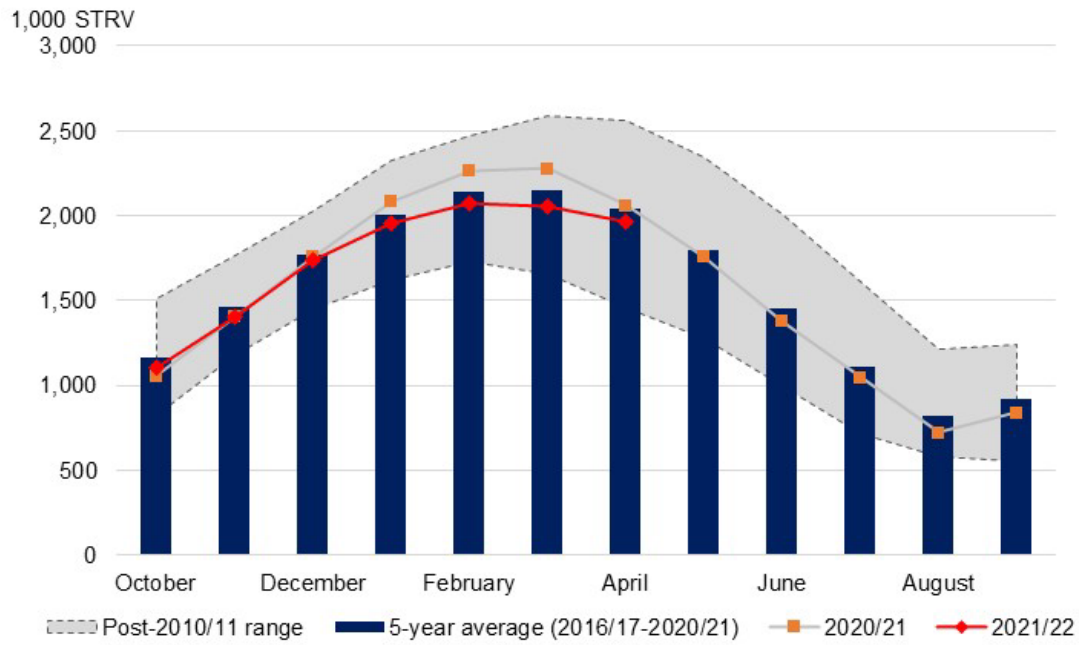
	Oct.–Apr.	Fiscal year (FY)	Percent of total
	1,000 short tons, raw value		
2010/11	6,265	11,193	56.0
2011/12	6,175	11,141	55.4
2012/13	6,482	11,511	56.3
2013/14	6,670	11,786	56.6
2014/15	6,588	11,921	55.3
2015/16	6,738	11,881	56.7
2016/20	6,960	12,102	57.5
2017/18	6,860	12,048	56.9
2018/19	7,001	12,106	57.8
2019/20	7,161	12,246	58.5
2020/21	6,900	12,135	56.9
2021/22 estimate	7,236	12,450	58.1
10-year average	6,753	11,888	56.8

Source: USDA, Farm Service Agency.

Deliveries of beet processors through April are 3.108 million STRV, 272,000 higher (or 9.6 percent) than the same period last year and more than offset the over-the-year 30,000-STRV decline (or -0.8 percent) in cane refiners' cumulative deliveries (table 5). The current situation—sugar beet processors not offering sugar since April 13—signals that beet processors have fully contracted their 2021/22 sugar and still assessing the sugar expected from the considerably delayed new crop planting. As such, beet sugar inventories are likely to be drawn down to below average levels to fulfill contracts. Refined beet sugar stocks in April were 4 percent smaller than the 5-year average (figure 12).

Non-reporter, direct consumption imports through April are 94,000 STRV larger than the same period as last year, translating to a 20.5 percent yearly increase (table 5). The 2021/22 cumulation of non-reporter imports through April totaling 553,000 STRV is second largest behind 2019/20.

Figure 12
Sugarbeet processors' total sugar inventories, monthly, 2010/11 to 2021/22



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

Mexico Outlook

2021/22 Sugar Production Raised

The June 2022 *World Agricultural Supply and Demand Estimates (WASDE)* report raised Mexican 2021/22 production by 41,000 metric tons (MT) to at 6.208 million, while the 2022/23 production forecast is unchanged at 6 million MT (table 7). The increase for 2021/22 from last month is based on larger expected harvested area (from 791,383 hectares to 797,405) and higher extraction rate (11.29 percent to 11.34) as the strong pace is expected to continue into the final stretch of the season. The expected yield is lowered from 69.04 MT per hectare to 68.62.

Table 7: Mexican sugar: supply and use by fiscal year (October/September), June 2022

Items	2020/21	2021/22			2022/23		
		May (estimate)	June (estimate)	Monthly change	May (forecast)	June (forecast)	Monthly change
		1,000 metric tons, actual weight					
Beginning stocks	858	1,053	1,053	0	921	947	26
Production	5,715	6,167	6,208	41	6,000	6,000	0
Imports	65	50	50	0	50	50	0
Imports for consumption	32	15	15	0	15	15	0
Imports for sugar-containing product exports, IMMEX 1/	33	35	35	0	35	35	0
Total supply	6,638	7,270	7,311	41	6,971	6,997	26
Disappearance							
Human consumption	3,935	3,915	4,050	135	3,925	4,050	125
For sugar-containing product exports (IMMEX)	485	497	497	0	497	497	0
Other deliveries and end-of-year statistical adjustment							
Total	4,420	4,412	4,547	135	4,422	4,547	125
Exports	1,165	1,937	1,817	-120	1,628	1,503	-125
Exports to the United States and Puerto Rico	828	1,044	1,044	0	1,133	1,133	0
Exports to other countries	337	892	772	-120	496	370	-125
Total use	5,585	6,349	6,364	15	6,050	6,050	0
Ending stocks	1,053	921	947	26	921	947	26
Stocks-to-human consumption (percent)	26.8	23.5	23.4	0	23.5	23.4	0
Stocks-to-use (percent)	18.9	14.5	14.9	0	15.2	15.7	0
High-fructose corn syrup (HFCS) consumption (dry weight)	1,320	1,310	1,310	0	1,317	1,317	0

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

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

As of June 4, which corresponds to week 36, Mexico's total sugar produced is 6.101 million MT, up from 5.681 million at the same time last year (table 8). Area harvested still trails last year's pace—780,000 hectares have been harvested to date compared with last year's pace of 782,400 hectares. Cumulative sugarcane yields and sucrose recovery are ahead of last year

(table 8). Sugarcane yields tend to decline while sucrose recovery gradually rise as the season progresses (figure 13).

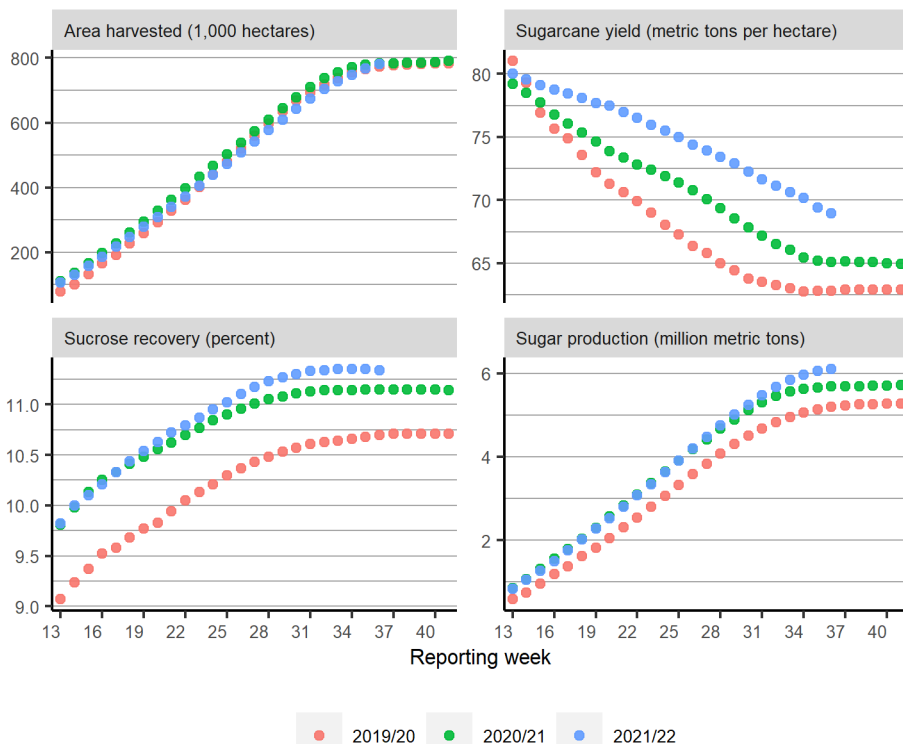
Table 8: Mexican sugar production as of week 36, 2020/21 and 2021/22

	As of week 36		Difference	
	2020/21	2021/22	Level	Percent
Area harvested (hectares)	782,400	780,282	-2,118	0
Sugarcane processed (metric tons)	50,940,986	53,796,858	2,855,872	6
Sugarcane yield (metric tons per hectare)	65.11	68.95	3.84	6
Number of mills in operation	4	12	8	200
Extraction rate (percent)	11.15	11.34	0.19	2
Total factory yield (metric tons sugar per hectare)	7.26	7.82	0.56	8
Sugar production (metric tons)	5,680,980	6,100,995	420,015	7

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

Figure 13

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

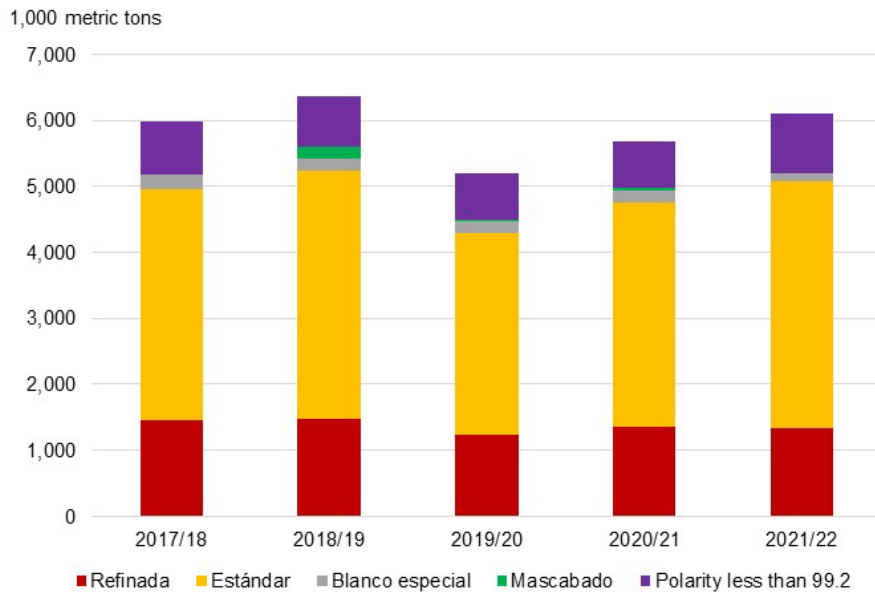


Source: Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA).

To date, production pace for less-than 99.2 polarity sugar continues to be strong. As of week 36, 903,631 MT were produced, which corresponds to 15 percent of total cumulative Mexican sugar production (figure 14). This amount would be the largest in the last 5 years and up 196,505 MT from last year. It has also surpassed CONADESUCA's third estimate for less-than 99.2 polarity

sugar at 861,209 MT and 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). Most of Mexico's sugar produced to date remains estándar (standard) sugar, which is the most-used sugar in Mexico. Through June 4, production of this type of sugar is 3.729 million MT (61 percent of Mexico's total sugar production), compared with 3.407 million MT (60 percent) at the same time last year.

Figure 14
Mexican sugar production, by type of sugar, as of week 36



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

Sugar Deliveries Increased in 2021/22 and 2022/23

Sugar deliveries for human consumption in 2021/22 is raised 135,000 MT from last month to 4.050 million MT on increased pace compared with last year (table 9). Through April 2021, sugar deliveries amounted to 2.493 million MT, which is higher than last year's 2.299 million MT during the same period. The other sugar delivery component—497,000 MT (432,000 MT from domestic production and 65,000 MT from imports) that are destined for the *Industria Manufacturera, Maquiladora y de Servicios de Exportación* (IMMEX) program in 2021/22—is unchanged from May. The 2021/22 consumption of high-fructose corn syrup (HFCS) also remained at 1.310 million MT, dry basis. The 2021/22 estimates for sugar and IMMEX deliveries are carried over in 2022/23, while HFCS is increased marginally to 1.317 million MT,

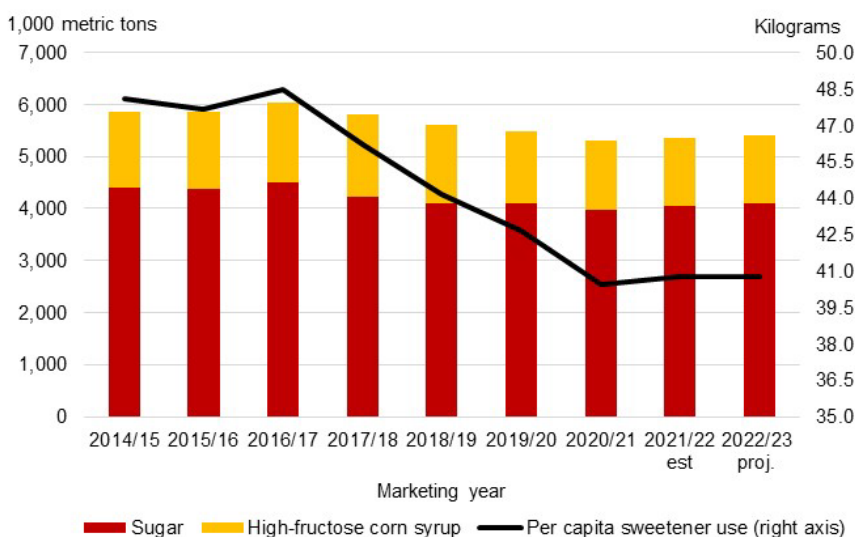
dry basis. This implies a flattening of the per capita consumption of sweetener at 40.75 kilograms for 2021/22 and 2022/23 (figure 15).

Table 9: Pace of Mexican sweetener deliveries, October–April, 2010/11–2021/22

	Sugar, 1,000 metric tons (MT)			High-fructose corn syrup, 1,000 MT, dry weight		
	Oct.–Apr.	Fiscal year	Percent of total	Oct.–Apr.	Fiscal year	Percent of total
2010/11	2,440	3,950	61.8	894	1,635	54.7
2011/12	2,447	4,135	59.2	977	1,721	56.8
2012/13	2,436	4,287	56.8	922	1,567	58.8
2013/14	2,457	4,098	60.0	773	1,372	56.3
2014/15	2,824	4,408	64.1	806	1,444	55.8
2015/16	2,737	4,387	62.4	805	1,482	54.3
2016/20	2,710	4,515	60.0	830	1,522	54.5
2017/18	2,567	4,228	60.7	903	1,593	56.7
2018/19	2,475	4,092	60.5	860	1,528	56.2
2019/20	2,682	4,101	65.4	795	1,388	57.3
2020/21	2,299	3,935	58.4	756	1,320	57.2
2021/22 estimate	2,493	4,050	61.6	726	1,310	55.4
10-year average	2,577	4,219	61.1	856	1,525	56.1

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

Figure 15
Mexican total and per capita sweetener consumption by year, 2014/15–2022/23



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

Exports to Other Countries Residually Lowered in 2021/2022 and 2022/23

The 2021/22 higher production and deliveries, and the 2022/23 higher beginning stocks and deliveries resulted in the reduction of exports such that the Mexican government's target ending stock levels are achieved. Mexican ending stocks in 2021/22 are marginally raised 26,140 MT to

947,000 MT in 2021/22. The same level of ending stocks is forecast for 2022/23.

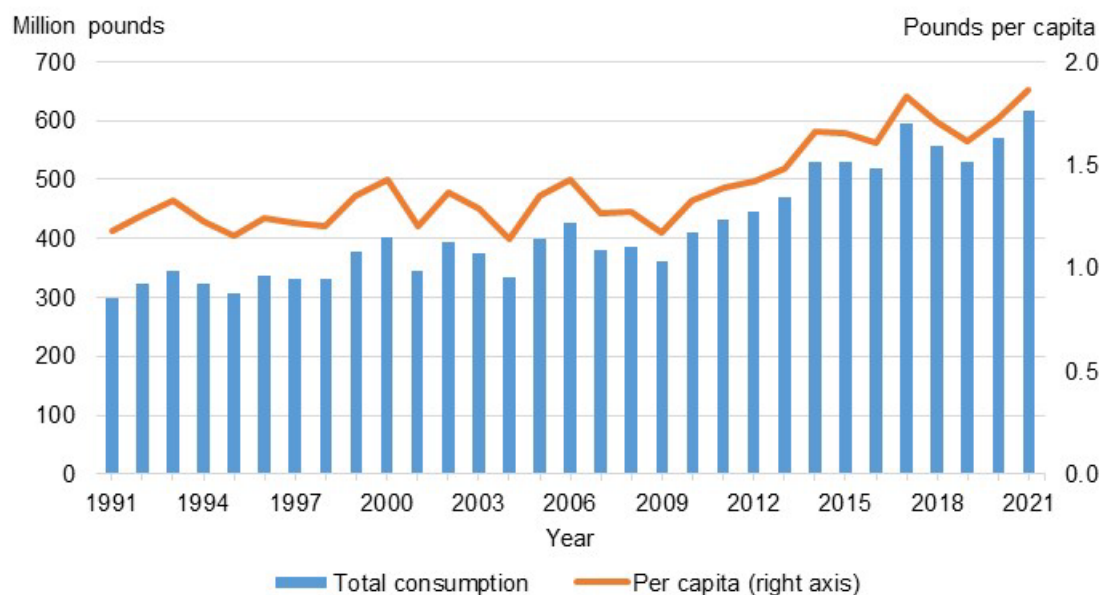
To maintain supply-use balance, 2021/22 exports to countries other than the U.S. are residually lowered by 121,000 MT to 772,000, and by 125,000 MT to 370,000 MT in 2022/23. In both years, export to the U.S. under the suspension agreements are not affected—1,044 million MT and 1.133 million MT in 2021/22 and 2022/23, respectively. The first fiscal year 2023 U.S. Department of Commerce (DOC) calculation to determine U.S. Needs based on a 13.5 percent stocks-to-use ratio and Mexico's Export Limit will be announced after the July WASDE. Note that the initial July Export Limit as a percent of the U.S. Needs is 50 percent.

Special Article: U.S. Honey Market

U.S. Demand for Honey on the Rise

Over the last 30 years, U.S. demand of honey and honey-sweetened products continues to grow. The United States is the second largest honey consumer behind China according to the latest data available from the United Nations Food and Agriculture Organization (FAO) in 2019. In 2021, consumption reached a new record high of 618 million pounds, up 8 percent from the previous year (figure 16). The previous record was 596 million pounds in 2017. Between 1991 to 2021, the average rate of growth is 10.7 million pounds per year. This translates to about 1.9 pounds per capita of honey consumption in 2021 compared with 1.2 pounds per capita in the early 1990s. The growth in demand, in part due to the growing population, has also been attributed to consumers' association of honey as a “superfood”— along with garlic, ginger, and turmeric— and perception of honey being a healthy sweetener.

Figure 16
U.S. honey consumption, 1991–2021

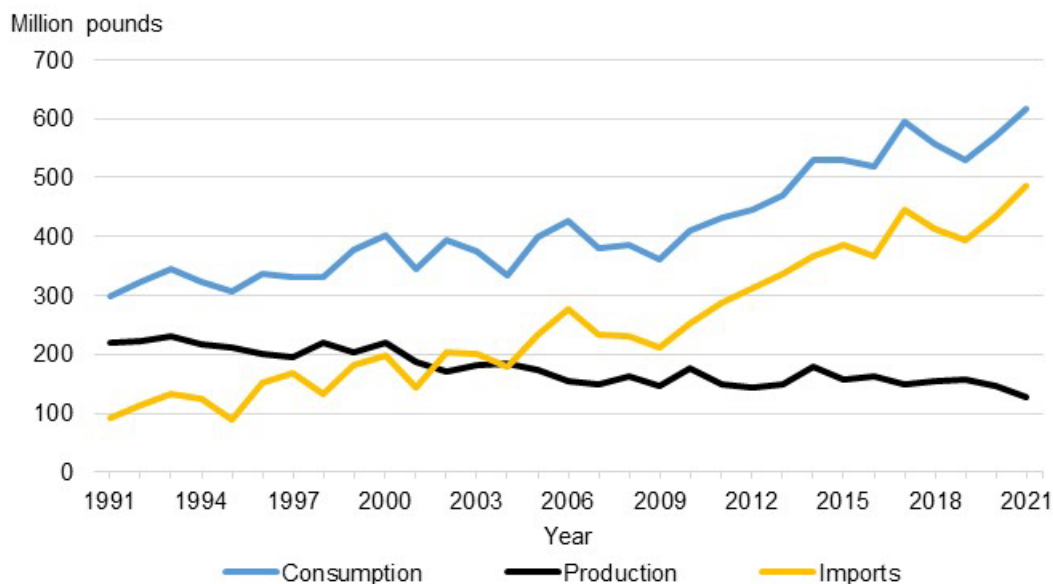


Sources: USDA, National Agricultural Statistics Service; U.S. Department of Commerce, Bureau of the Census.

Domestic Honey Production Lags Demand

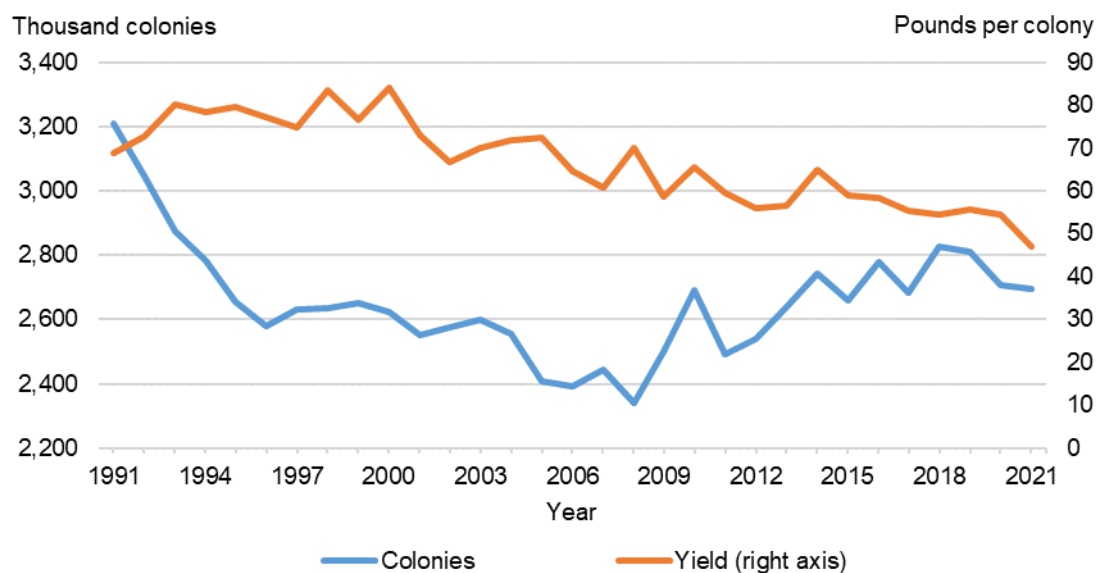
Honey is produced across the country and the United States is the sixth-leading honey producer in the world according to the 2019 FAO data. On average, domestic honey production declined by around 1.4 percent per year or 700,000 pounds in the last 3 decades (figure 17). Production in 2021 totaled 126 million pounds, down 14 percent from 2020 and the lowest since 1991, mostly due to lower yield per colony (figure 18). With the number of honey-producing colonies only modestly reduced, the marked decline in 2021 production was mainly due to decreased output per colony. Average honey production per hive fell from 55 pounds in 2020 to 47 pounds in 2021, the lowest since the early 1990s. The prior record-low yield in the last 30 years was 54 pounds in 2018. In 2021, widespread drought in key honeybee foraging grounds reduced floral resources available to make honey, contributing to lower honey production compared with 2020. A shifting focus among commercial beekeepers away from honey production towards providing pollination services for revenue—particularly for almonds— contributed to the trend of lower output per hive.

Figure 17
U.S. honey production, consumption, and imports, 1991–2021



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

Figure 18
U.S. honey bee colonies and honey yields, 1991–2021

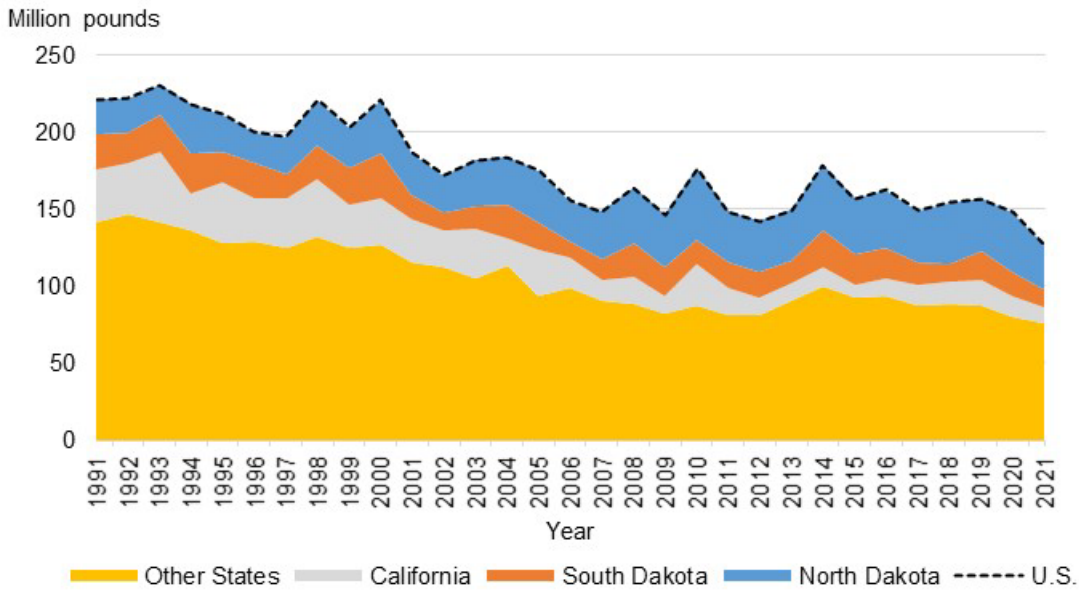


Note: Data include only beekeepers with five or more colonies.
 Source: USDA, National Agricultural Statistics Service.

Domestic production in 2021 was down from 2020 for all 3 major producing States—North Dakota, South Dakota, and California (figure 19). These three States contributed 40 percent of the total U.S. production in 2021. Production from California, which used to be the largest honey-producing State, has been shrinking and was surpassed by North Dakota since 2004. Production in the rest of the States also declined compared with 2020 and has been cut by half during the last decade, from as high as 150 million pounds in 1991 to 76 million in 2021.

Figure 19

Honey production: U.S. and top three producing States, 1991–2021



Source: USDA, National Agricultural Statistics Service.

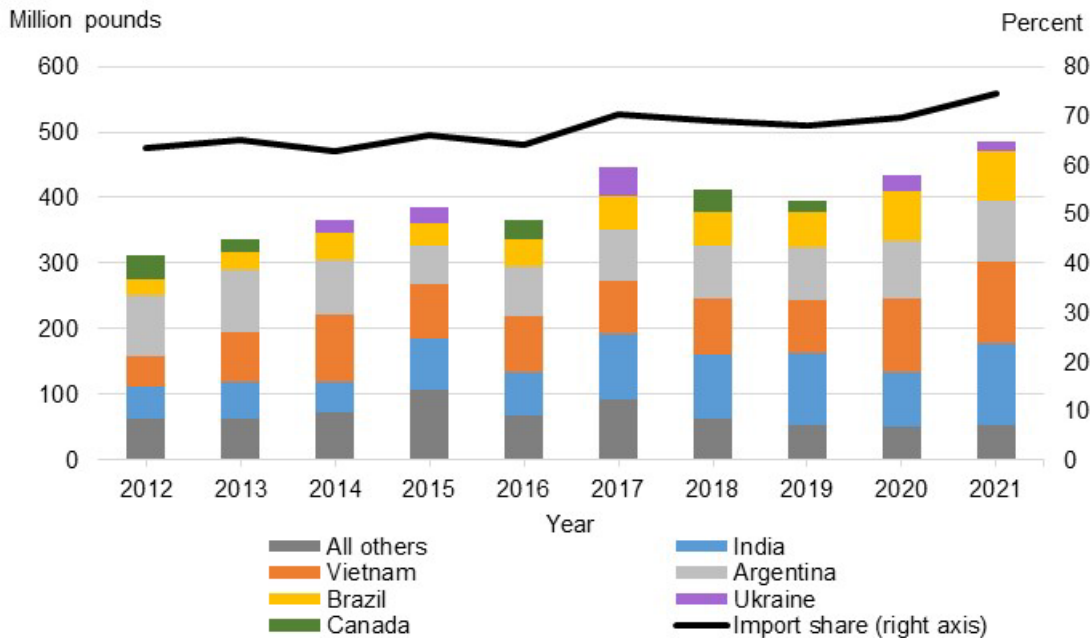
Honey Imports Surged to Meet U.S. Demand

Since 1991, imports of honey grew by an average 7.5 percent per year, or 17 million pounds, to fill the supply deficit from the declining domestic honey production. Imports have exceeded domestic honey production since 2005 (figure 17) and accounted for 74 percent of total U.S. honey supplies in 2021 (figure 20), up from 27 percent in 1991.

U.S. honey imports come from different countries. Over the years, the mix of top honey exporters to the United States has changed, partly due to trade-related cases. In the last 10 years, the top 4 foreign suppliers are India, Vietnam, Argentina, and Brazil. In 2021, 86 percent of U.S. honey imports came from these countries. The fifth largest supplier was either Ukraine or Canada; in the last two years, it was the former (figure 20). As with its major agricultural products, such as wheat and oilseeds, Ukraine’s honey production and exports may likely be reduced due to the ongoing Russia-Ukraine conflict.

Figure 20

U.S. honey imports by country and import share of total supplies, 2012–21



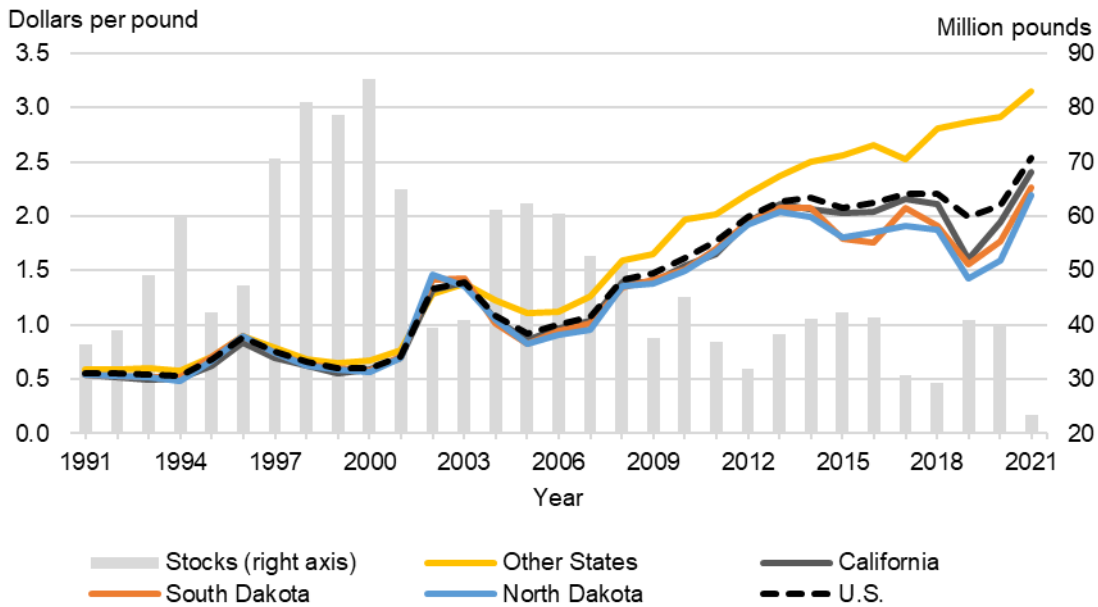
Source: USDA, National Agricultural Statistics Service.

Honey Prices are Rising

The national average price paid to honey producers in 2021 was \$2.54 per pound, up from last year’s \$2.10. This is now the highest price, surpassing 2018’s record-high price of \$2.21 (figure 21). Prices in 2021 were higher than 2020 by 23 to 28 percent in the top 3 producing States and by 8 percent in the rest of the States. Over the years, honey producers across the country experienced a sustained, upward trend in prices attributed to strong demand capping available supplies. In 2021, carryout stocks were 24 million pounds, down 41 percent from 2020, and the lowest since 1991 (figure 6). The prior record-low stocks were 29 million pounds in 2018, which also saw a record-high price.

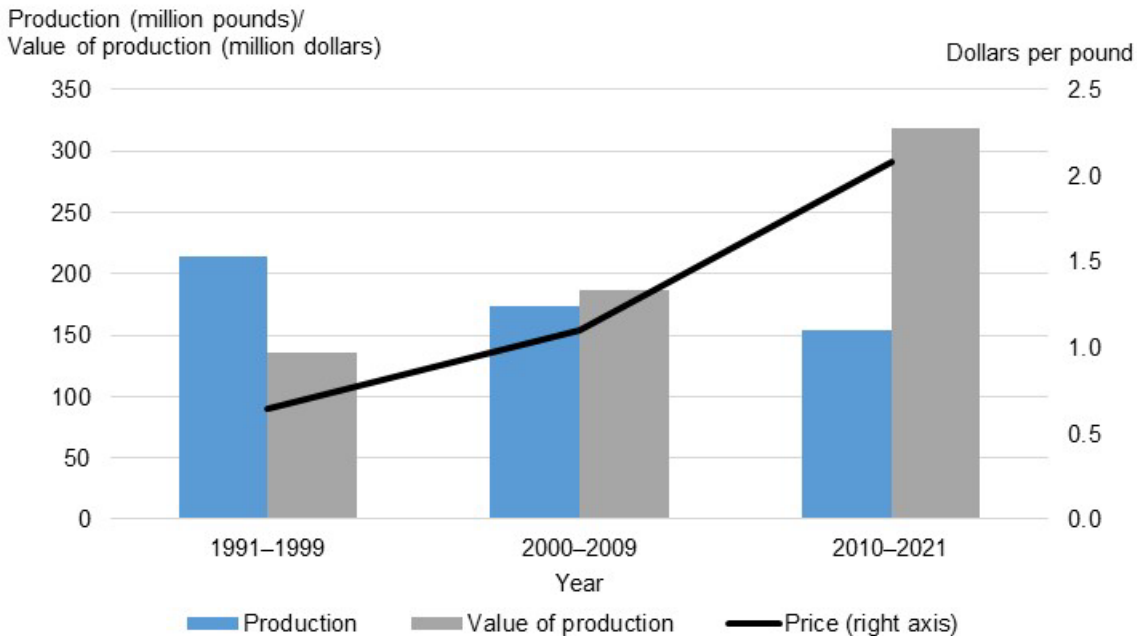
Up until 2004, prices received by producers across States were uniform and thus, were in line with the national average. Since 2005, prices tend to be lower in the top 3 producing States and markedly higher in other States with lower output (figure 6). The increase in honey price makes up for the lower domestic production. As such, the overall value of honey production has been increasing (figure 22).

Figure 21
U.S. average honey producer price, 1991–2021



Note: Data include only beekeepers with five or more colonies.
 Source: USDA, National Agricultural Statistics Service.

Figure 22
U.S. honey production, price, and value of production, 1991–2021



Source: USDA, National Agricultural Statistics Service.

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