



Sugar and Sweeteners Outlook

Andrew Sowell, coordinator

Ron Lord, contributor

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U.S. Sugar Supplies Raised as Larger Imports More Than Offset Reduced Beet Sugar Production

Sugar production is lowered in 2020/21, driven by a downward revision to beet sugar production, based on processors' survey. Cane sugar production is unchanged this month. Imports are raised sufficiently to more than offset the reduction in output. Imports under the raw sugar Tariff-Rate Quota (TRQ) are raised on a revised figure for the October shipments from the extended 2019/20 TRQ. High-tier imports are revised higher on pace of trade. Imports from Mexico are also adjusted higher as a residual to achieve the 13.50 percent stocks-to-use ratio, as dictated by the U.S.-Mexico Suspension Agreements. U.S. sugar deliveries are unchanged this month. Mexico's 2020/21 production is not changed this month. Furthermore, projected deliveries of sugar and high-fructose corn syrup (HFCS) are both unchanged this month. Imports and total exports are both raised slightly.

Global production is projected higher in 2020/21, primarily driven by a larger crop in Brazil. Sugarcane processors in Brazil are diverting a larger portion of the sugarcane crop into sugar instead of ethanol based on stronger sugar prices and diminished fuel use. Global exports are projected to be record high, propelled by large shipments from Brazil. Most other exporting countries are forecast to have exports roughly similar to the previous year. Global consumption is seen recovering slightly from diminished levels in 2019/20.

United States Outlook

Production Down and Stocks Raised with Larger Imports

In the USDA's December *World Agricultural Supply and Demand Estimates (WASDE)*, U.S. supplies of sugar in 2020/21 totaled 14.006 million short tons, raw value (STRV), a 358,000-STRV increase from the previous month as larger imports more than offset a small reduction to beet sugar production. Beginning stocks were adjusted marginally lower on a slight revision to 2019/20 data. Projected food and beverage deliveries for 2020/21 are unchanged from last month at 12.200 million STRV, which is down from 12.235 million in 2019/20, but would still be the second largest on record. Projected ending stocks are raised 358,000 STRV to 1.666 million residually in order for the U.S. stocks-to-use ratio to be set at 13.50 percent in accordance with the U.S.-Mexico Suspension Agreements.

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

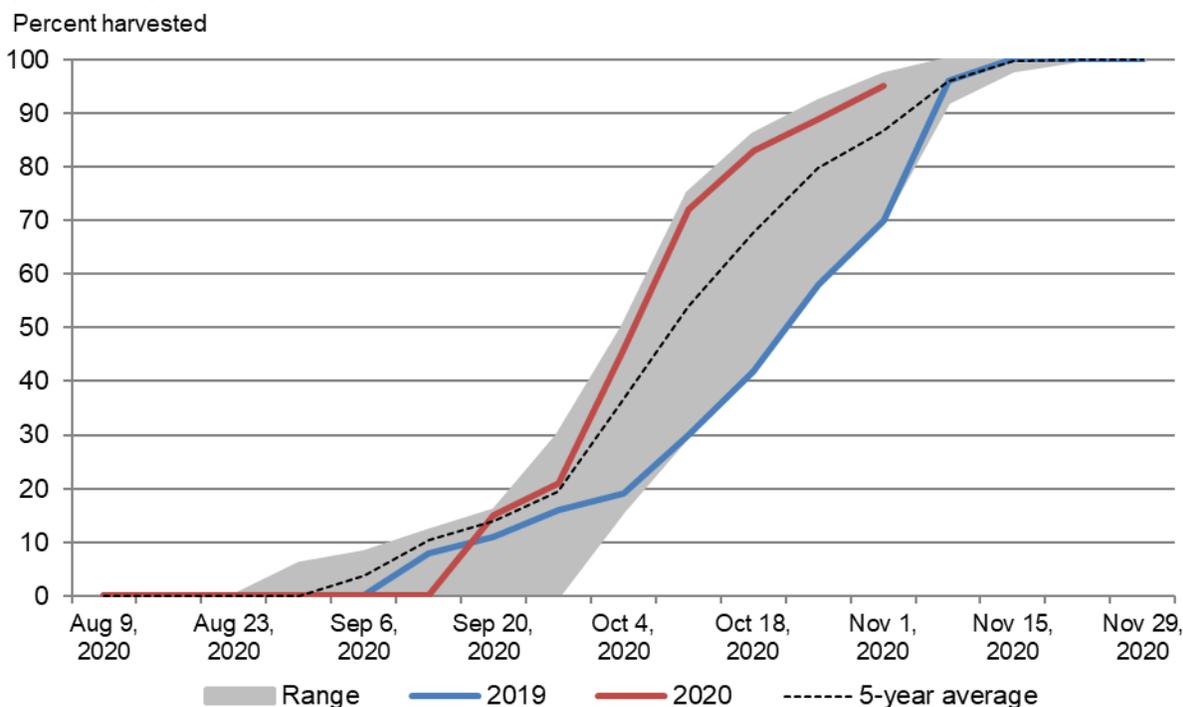
Items	2018/19	2019/20	2020/21 (forecast) November	2020/21 (forecast) December	2020/21 (forecast) Change
	1,000 Short tons, raw value				
Beginning stocks	2,008	1,783	1,623	1,618	-6
Total production	8,999	8,149	9,001	8,960	-40
Beet sugar	4,939	4,351	4,899	4,859	-40
Cane sugar	4,060	3,798	4,101	4,101	0
Florida	2,005	2,106	2,135	2,135	0
Louisiana	1,907	1,566	1,824	1,824	0
Texas	147	126	142	142	0
Hawaii	0	0	0	0	0
Total imports	3,070	4,154	3,025	3,428	404
Tariff-rate quota imports	1,541	2,071	1,711	1,808	97
Other program imports	438	432	350	350	0
Non-program imports	1,092	1,651	963	1,270	307
Mexico	1,000	1,376	888	1,160	272
High-duty	91	275	75	110	35
Total supply	14,077	14,085	13,649	14,006	358
Total exports	35	61	35	35	0
Miscellaneous	28	74	0	0	0
Deliveries for domestic use	12,231	12,333	12,305	12,305	0
Transfer to sugar-containing products for exports under re-export program	98	78	80	80	0
Transfer to polyhydric alcohol, feed, other alcohol	27	20	25	25	0
Commodity Credit Corporation (CCC) sale for ethanol, other	0	0	0	0	0
Deliveries for domestic food and beverage use	12,106	12,235	12,200	12,200	0
Total use	12,294	12,468	12,340	12,340	0
Ending stocks	1,783	1,618	1,309	1,666	358
Private	1,783	1,618	1,309	1,666	358
Commodity Credit Corporation (CCC)	0	0	0	0	0
Stocks-to-use ratio	14.50	12.97	10.60	13.50	2.90

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

Beet Sugar Production Reduced on Processors' Forecast

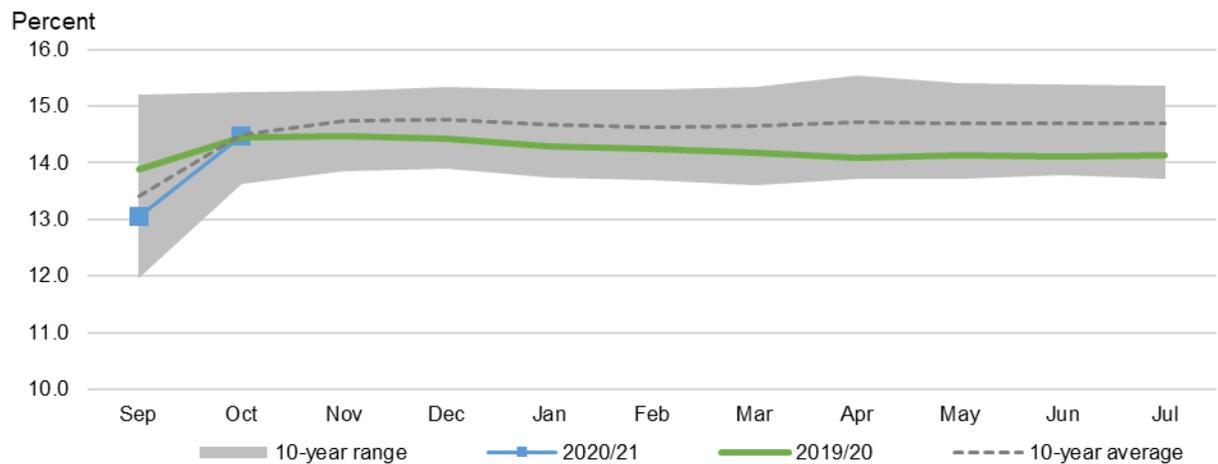
U.S. 2020/21 sugar production from beets was reduced this month by 40,000 STRV to 4.859 million. USDA's National Agricultural Statistics Service (NASS) did not revise sugar beet production this month. This month's production revision is attributable to a lower forecast for sugar production from beet processors in the Sweetener Market Data (SMD) report, which is published by USDA's Farm Service Agency (FSA). This survey reflects lower sugar beet supplies in Minnesota, North Dakota, and Montana. NASS has not updated the weekly progress of the sugar beet harvest in recent weeks, but the data shown in figure 1 do suggest that the sugar beet harvest is done, as it was 95 percent complete as of early November and the harvest was running ahead of a normal schedule. The cumulative sugar extraction rate from beets through the month of October, at 14.48 percent, is in line with previous years, as indicated in figure 2.

Figure 1
United States sugar beet harvest progress, 2019, 2020, and 5-year average (2015-2019)



Source: USDA, National Agricultural Statistics Service.

Figure 2
Cumulative sugar extraction rate, beet sugar produced per sugarbeet sliced, by crop year, 2010/11-2019/20



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

Table 2: Beet sugar production projection calculation, 2019/20 and 2020/21

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2020/21
						November	December
Sugar beet production (1,000 short tons) 1/	35,371	36,881	35,325	33,282	28,600	33,958	33,660
Sugar beet shrink (percent)	6.52	8.26	7.31	5.17	5.34	6.58	6.58
Sugar beet sliced (1,000 short tons)	33,066	33,834	32,742	31,561	27,072	31,723	31,444
Sugar extraction rate from slice (percent)	14.58	13.72	15.18	14.77	14.14	14.51	14.51
Sugar from beets slice (1,000 STRV) 2/	4,820	4,643	4,970	4,660	3,828	4,603	4,563
Sugar from molasses (1,000 STRV) 2/	380	352	368	352	341	360	360
Crop-year sugar production (1,000 STRV) 2/	5,201	4,995	5,338	5,012	4,169	4,963	4,923
August-September sugar production (1,000 STRV)	688	606	715	655	582	765	765
August-September sugar production of subsequent crop (1,000 STRV)	606	715	655	582	765	665	665
Sugar from imported beets (1,000 STRV) 3/	--	--	--	--	--	36	36
Fiscal year sugar production (1,000 STRV)	5,119	5,103	5,279	4,939	4,351	4,899	4,859

1/ USDA, National Agricultural Statistics Service for historical data. 2/ August-July basis. 3/ Sugar from imported beets split out for projections only, included in total once full crop-year slice is recorded. Sugar from imported beets is incorporated into total production in historical data.

Note: STRV = short tons, raw value.

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

Cane Sugar Production for 2020/21 Unchanged

The projection for cane sugar production in 2020/21 is unchanged at 4.101 million STRV. NASS did revise Louisiana's sugarcane production upward on higher yields, but cane sugar production for that State was not changed. The pace of harvesting and processing was slowed by the hurricanes in the early weeks of the season, and harvest end dates are being extended to accommodate the large crop.

Table 3: U.S. sugarcane and cane sugar production, by State, 2015/16 to 2020/21

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	Annual change Percent
Florida							
Sugarcane harvested for sugar (1,000 acres)	398	392	397	397	397	400	0.8
Sugarcane yield (short tons per acre)	42.5	40.3	40.9	41.7	42.8	44.1	3.0
Sugarcane production (1,000 short tons)	16,915	16,120	16,237	16,555	16,992	17,648	3.9
Recovery rate (percent)	12.8	12.7	12.2	12.1	12.4	12.1	-2.4
Sugar production (1,000 STRV)	2,173	2,055	1,983	2,005	2,106	2,135	1.4
Louisiana							
Sugarcane harvested for sugar (1,000 acres)	385	400	414	425	442	456	3.2
Sugarcane yield (short tons per acre)	29.6	28.8	32.5	35.3	27.7	32.0	15.5
Sugarcane production (1,000 short tons)	11,396	11,520	13,455	15,003	12,243	14,596	19.2
Recovery rate (percent)	12.5	14.2	13.8	12.5	12.8	12.5	-2.3
Sugar production (1,000 STRV)	1,428	1,632	1,862	1,875	1,566	1,824	16.5
Texas							
Sugarcane harvested for sugar (1,000 acres)	35	38	41	38	31	34	8.8
Sugarcane yield (short tons per acre)	31.4	37.0	36.8	36.6	33.6	33.2	-1.2
Sugarcane production (1,000 short tons)	1,105	1,395	1,490	1,376	1,052	1,131	7.5
Recovery rate (percent)	10.5	9.9	11.3	10.7	12.0	12.6	4.7
Sugar production (1,000 STRV)	116	138	169	148	126	142	12.5

Note: STRV = short tons, raw value.

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

2020/21 Imports Raised on Revised TRQ Shipments and Larger Expected Trade from Mexico

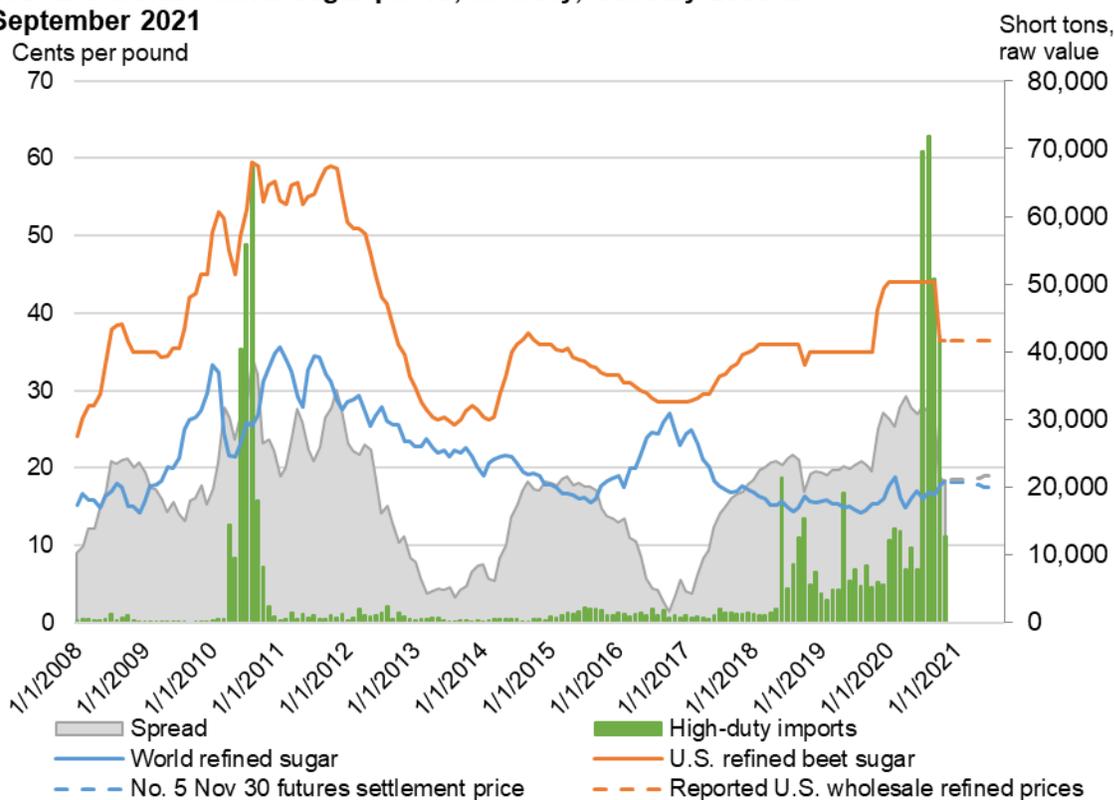
Total projected 2020/21 imports are raised by about 404,000 STRV to 3.428 million with a boost to TRQ shipments, an upward revision to high-tier imports, and a larger calculated amount of imports from Mexico. On September 10, 2020, USDA increased the FY 2020 U.S. World Trade Organization (WTO) raw sugar TRQ by 100,000 STRV and extended the quota period by 1 month, to October 31, 2020. Along with the April 2020 increase of 350,000 STRV, this action brought the total TRQ to 1.681 million STRV. Imports during October under the 2019/20 raw sugar TRQ have now been revised upward by 96,956 STRV to 248,854. Consequently, 2020/21 raw sugar TRQ imports are raised by the same amount to 1.381 million STRV. Imports from Mexico are raised by 272,000 to a level of 1.160 million STRV, equal to U.S. Needs as defined in the U.S.-Mexico sugar suspension agreement and residually calculated as the level of imports consistent with a U.S. ending stocks-to-use ratio of 13.50 percent.

High-Tier Imports Raised on Strong Pace of Trade

High-tier imports for 2020/21 are boosted by 35,000 STRV to 110,000 based on the strong pace of this trade. High-tier trade is still down significantly from 2019/20 and slowing, as the gap between U.S. and world prices has narrowed in recent months. U.S. sugar production is up

substantially from last year, when the sugar beet harvest was impeded by cold and wet weather in some locations. With U.S. production up significantly this year, domestic prices have subsided, while world sugar prices have increased recently, reducing the incentive for high-tier trade. The majority of the 275,313 STRV high-tier imports in 2019/20 were imported during July-September. That trade has continued into the early months of 2020/21, with October high-tier shipments totaling 42,360 STRV and November shipments estimated at nearly 13,000 STRV. That said, this is likely a carryover effect from the strong trade of the previous year; the pace of high-tier imports is expected to wane for the duration of 2020/21 based on the relatively narrow gap between U.S. and world prices, as indicated in figure 3 below. There may also be more high-tier imports of organic sugar this year, as the FY 2021 specialty sugar TRQ was lowered by about 33,000 STRV, sharply restricting the supply of organic sugar.

Figure 3
U.S. and world refined sugar prices, monthly, January 2008 to September 2021

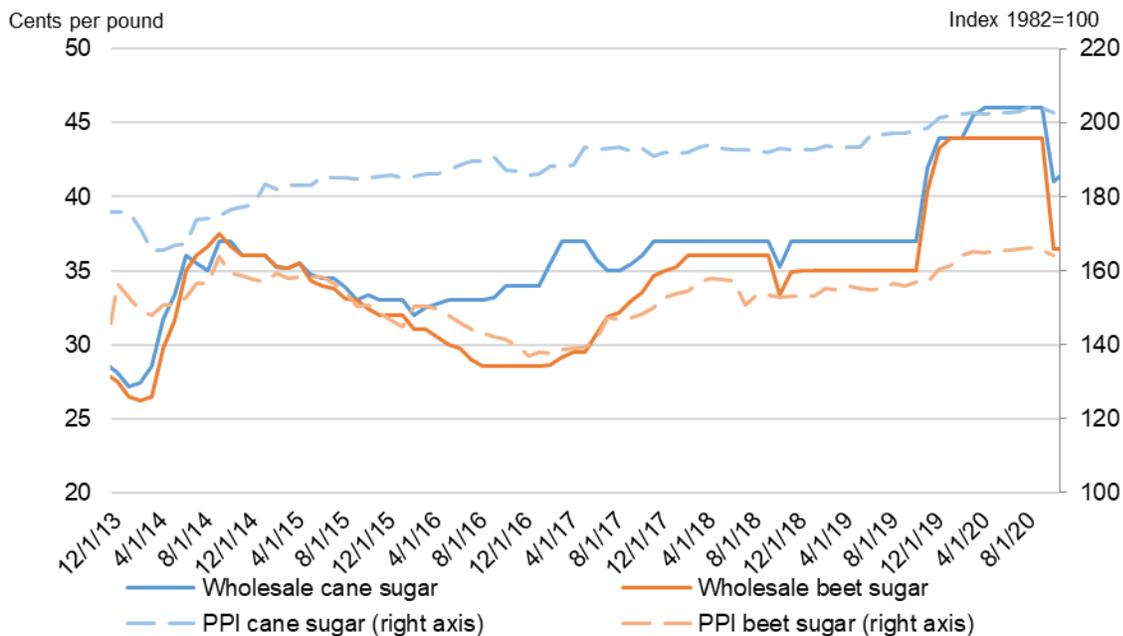


Source: USDA, Economic Research Service.

The figure shows that during 2019/20, the spread between U.S. and world sugar prices was wider than what is observed in the early part of 2020/21. Note that for raw sugar, the tariff is set at 33.87 cents per kilogram or 15.4 cents per pound; for refined sugar, it is set at 35.74 cents per kilogram or 16.21 cents per pound. Depending upon the country of origin, the usual cost of freight and associated logistics can be as low as 2-4 cents per pound for raw sugar, and 5-6

cents per pound for refined sugar. High-tier imports reached a monthly peak in August at more than 70,000 STRV but have declined each month since as the tighter 2020/21 spread has reduced the incentive for this trade to occur.

Figure 4
Refined sugar prices, wholesale and Producer Price Indexes, monthly



Note: Producer Price Index (PPI).
 Source: USDA, Economic Research Service.

Ending Stocks Boosted for 2020/21 on Revised December Calculation of U.S. Needs

U.S. ending stocks in 2020/21 are revised up by about 358,000 STRV to 1.666 million. With domestic use unchanged, this is the level of stocks needed to bring the U.S. stocks-to-use ratio to 13.50 percent, which is the benchmark used for the calculation of U.S. imports from Mexico, in accordance with the U.S.-Mexico Sugar Suspension Agreements. This level is a slight boost from 2019/20, when the ending stocks-to-use ratio settled at 12.97 percent.

Mexico Outlook

Production Forecast Unchanged

The USDA's December *World Agricultural Supply and Demand Estimates (WASDE)* projection for Mexico's sugar production in 2020/21 is unchanged at 5.95 million metric tons (MT). Mexico's National Committee for the Sustainable Development of Sugarcane (CONADESUCA) published an updated official production forecast for 2020/21 on November 19, once again estimating the crop at 6.14 million MT. The *WASDE* forecast continues to be about 3 percent lower because of a lower area harvested at about 785,000 hectares (compared to CONADESUCA's estimate of 811,148). The Government of Mexico has announced an investment of 25 million pesos into a control effort against locusts in several states. The Mexico sugarcane campaign is still in its early stages, with only 31 of the 49 sugar mills beginning operation for the year as of December 5, 2020. So far, 35,595 hectares have been harvested, 2,955,241 tons of sugarcane have been milled, and 267,466 tons of sugar have been produced. These accumulated harvest figures are well ahead of this same point last year, but it bears mentioning that Mexico's production season is still in a relatively early phase. The Mexico harvest usually begins its peak period by early January, which should provide a better perspective on the performance of the 2019/20 sugarcane crop.

Table 4: Mexico sugar supply and use 2018/19 - 2019/20 and projected 2020/21, December 2020

Items	2018/19	2019/20	2020/21 (forecast) November	2020/21 (forecast) December	2020/21 (forecast) Change
	1,000 metric tons, actual weight				
Beginning stocks	1,395	1,169	858	858	0
Production	6,426	5,278	5,950	5,950	0
Imports	85	77	86	105	19
Imports for consumption	22	55	21	40	19
Imports for sugar-containing product exports, IMMEX 1/, other	63	23	65	65	0
Total supply	7,905	6,524	6,894	6,913	19
Disappearance					
Human consumption	4,092	4,101	4,073	4,073	0
For sugar-containing product exports (IMMEX)	460	352	415	415	0
Other deliveries and end-of-year statistical adjustment	-20	1	0	0	0
Total	4,532	4,455	4,488	4,488	0
Exports	2,204	1,212	1,471	1,490	19
Exports to the United States and Puerto Rico	856	1,177	760	993	233
Exports to other countries	1,348	35	710	497	-214
Total use	6,737	5,667	5,959	5,978	19
Ending stocks	1,169	858	935	935	0
	1,000 metric tons, raw value				
Beginning stocks	1,478	1,239	909	909	0
Production	6,811	5,595	6,307	6,307	0
Imports	90	82	91	111	20
Imports for consumption	23	58	22	42	20
Imports for sugar-containing product exports (IMMEX)	67	24	69	69	0
Total supply	8,380	6,916	7,307	7,327	20
Disappearance					
Human consumption	4,337	4,347	4,317	4,317	0
For sugar-containing product exports (IMMEX)	488	373	440	440	0
Other deliveries and end-of-year statistical adjustment	-21	1	0	0	0
Total	4,804	4,722	4,757	4,757	0
Exports	2,337	1,285	1,559	1,579	20
Exports to the United States and Puerto Rico	908	1,248	806	1,052	247
Exports to other countries	1,429	37	753	527	-226
Total use	7,141	6,007	6,316	6,336	20
Ending stocks	1,239	909	991	991	0
Stocks-to-human consumption (percent)	28.6	20.9	23.0	23.0	0.0
Stocks-to-use (percent)	17.3	15.1	15.7	15.6	0.0
High-fructose corn syrup (HFCS) consumption (dry weight)	1,528	1,388	1,377	1,377	0

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

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

Sugar and HFCS Use Unchanged

At 4.073 million MT, deliveries for human use are unchanged from the previous month's projection. Deliveries for the *Industria Manufacturera, Maquiladora y de Servicios de Exportación* program (IMMEX) are also unchanged at 415,000 MT. IMMEX is a program that allows for the importation of goods intended to be processed for re-export. The program is financially advantageous for authorized participating companies, as it allows them to forego some import taxes. Total sugar use in 2020/21 is projected slightly higher with larger exports.

HFCS consumption in 2020/21 is unchanged from the previous month at 1.377 million, down slightly from the previous year. With both sugar and HFCS use down in 2020/21, per capita sweetener consumption is projected at 41.94, declining for the fourth consecutive year. The Mexican Federal Government, along with several State governments, continues with efforts to curb obesity by reducing consumption of high-calorie foods. These policies target sweetener consumption and may dampen demand overall. Also affecting demand of HFCS are COVID-19 related consumption effects, and a somewhat weak peso relative to the U.S. dollar.

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

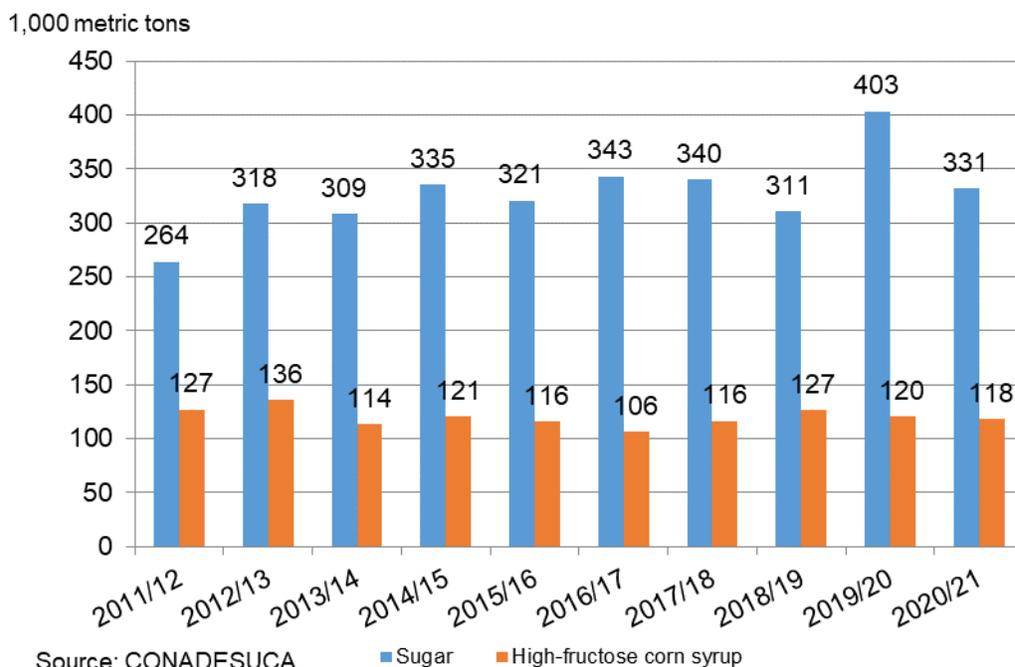
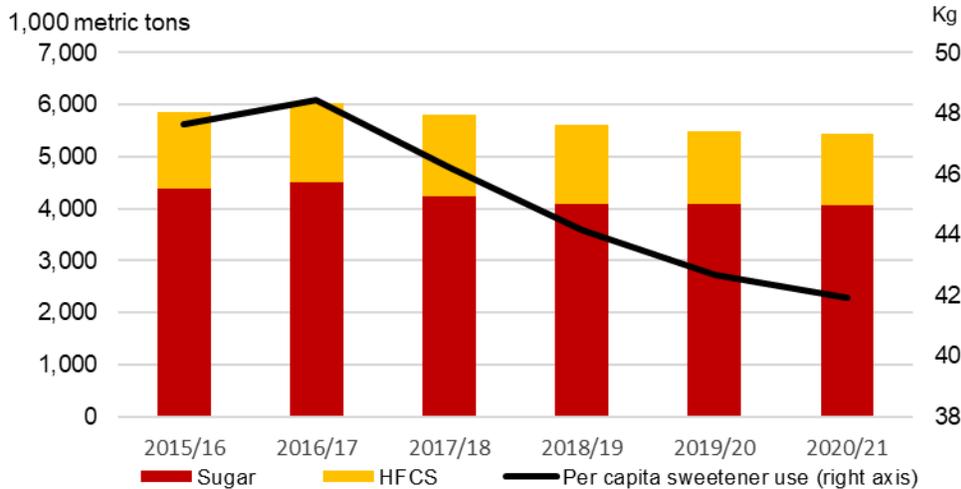
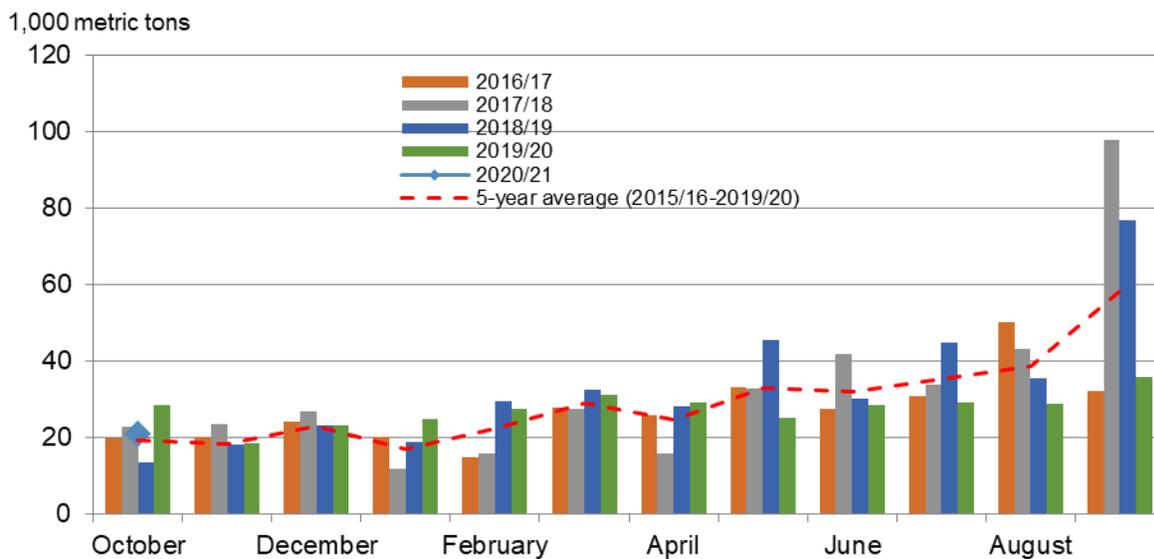


Figure 6
Mexico sweetener consumption by year



Source: USDA, World Agricultural Outlook Board.

Figure 7
Mexico domestic IMMEX deliveries, monthly, 2016/17 to 2020/21

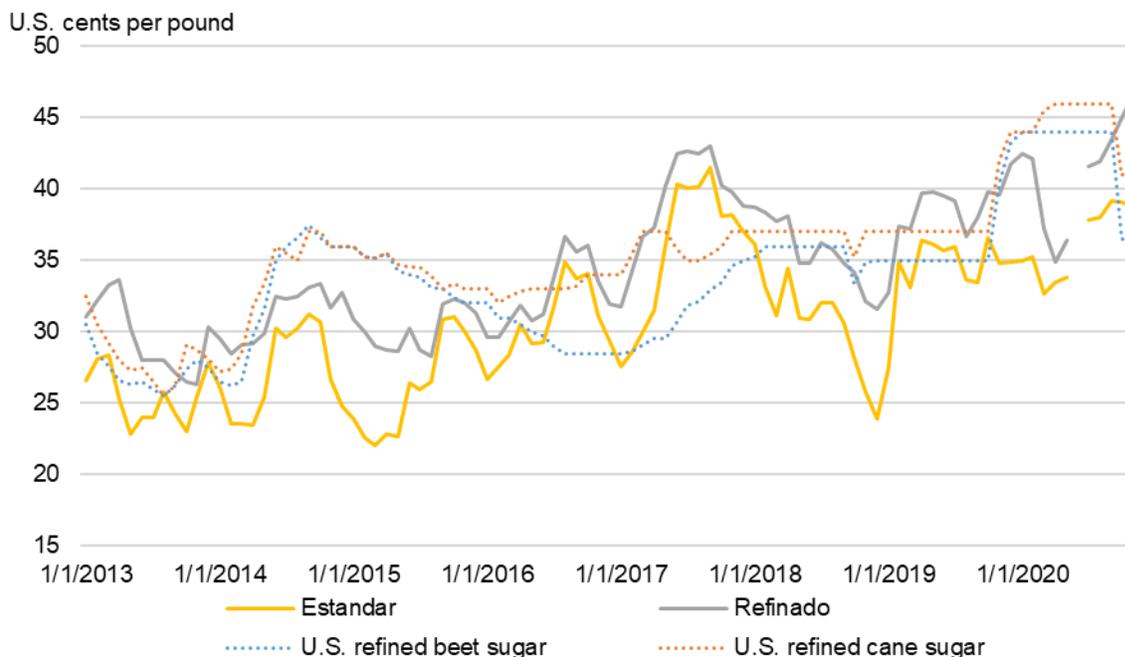


Source: CONADESUCA.
 IMMEX = Industria Manufacturera, Maquiladora y de Servicios de Exportación.

Imports and Exports Raised Slightly

Imports for consumption in 2020/21 are projected 19,000 MT higher at 40,000 based on a strong early pace of imports. Relatively high domestic prices have created an incentive to import sugar, with imports during October alone totaling more than 8,000 MT. This price incentive is evident in figure 8 below, which shows surging prices for Mexico's Refinado (refined) sugar in October and November, while U.S. prices dropped during the same period.

Figure 8
Mexico Estandar and Refinado sugar prices, monthly, January 2013 to Nov 2020



Source: USDA, Economic Research Service.

Total exports in 2020/21 are projected up 19,000 MTRV to 1.490 million in order to arrive at the typical estimated level of Mexico’s ending stocks. Forecast exports to the United States are raised 232,573 MTRV to 992,683 as a result of the expected calculation of U.S. Needs by the Commerce Department, while exports to other countries are lowered 213,573 MTRV to 496,824 as a residual.

Ending Stocks for 2020/21 Unchanged

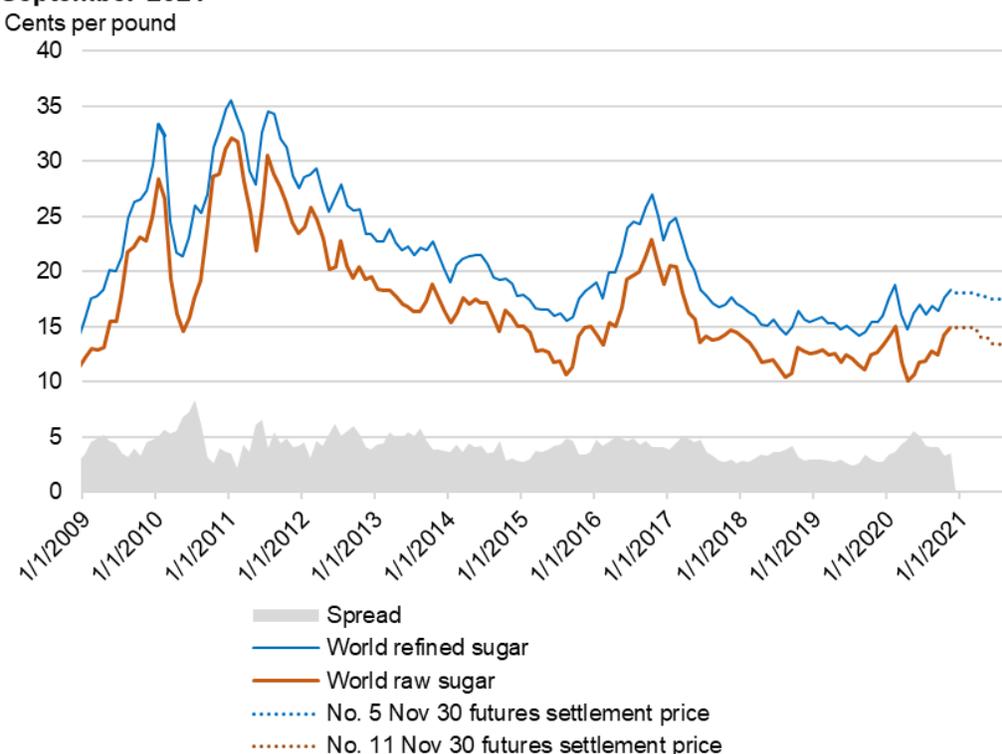
Mexico’s 2020/21 ending stocks are unchanged at 935,000 MT based on the calculated stock level needed to arrive at 2.5 months of consumption. This level is the target that domestic authorities use to monitor and manage the domestic program. This is up 9 percent from the ending stock level observed in 2019/20 and down 20 percent from the level of 2018/19.

Global Sugar Outlook

Global Supply and Use of Sugar Keeps World Sugar Futures Prices in a Narrow, Low Range

World sugar prices, as represented by the price of futures contracts for both raw sugar and refined sugar, have shown a small upward motion in the past year fueled by production concerns in several major producing countries such as Thailand, the European Union, and Mexico. However, prices have remained relatively low by historical terms, partly due to pressure from large supplies in Brazil. Prices have mainly been in a relatively narrow range since the summer of 2017. This is particularly notable, since world sugar markets have historically been characterized by volatility and large price swings caused by dramatic swings in global production over the past 10 years. Since July 2017, world raw sugar prices, as measured by the average daily settlement price of the nearby futures contract (the ICE No. 11 contract), has remained within a range of 10.46 cents per pound and 15.07 cents per pound. Likewise, the world refined sugar price (commonly referred as the No. 5 contract) has been within a range of 14.18 cents per pound and 18.75 cents per pound (roughly \$313-\$413/MT).

Figure 9
World raw and refined sugar prices, monthly, January 2009 to September 2021

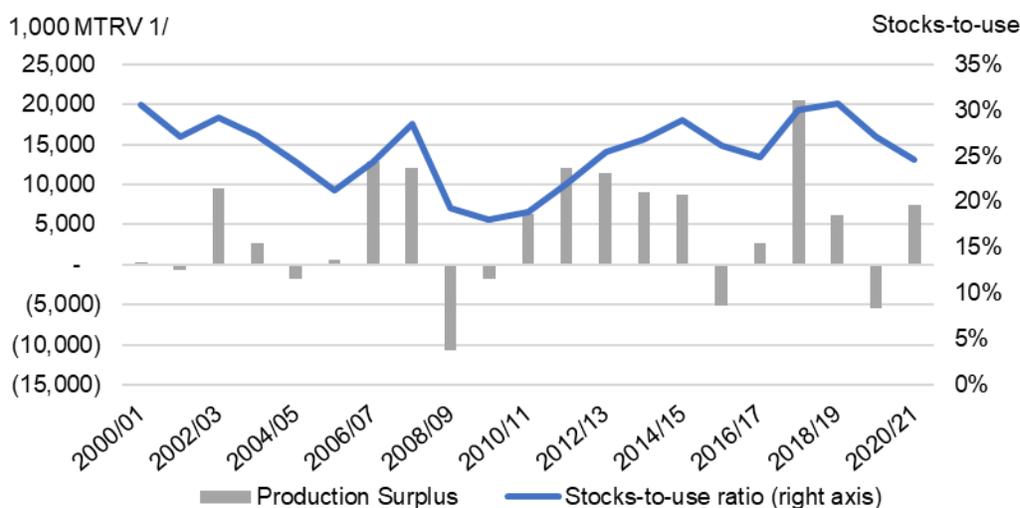


Global Production Surplus Projected in 2020/21

On November 24, 2020, the Foreign Agricultural Service (FAS) released the semi-annual *Sugar: World Markets and Trade*, updating USDA world sugar market estimates for 2019/20 and projections for 2020/21. The update is based on information and reports provided by FAS Attachés around the globe.

The global sugar market is estimated to have a production surplus of more than 7 million metric tons, raw value (MTRV) in 2020/21. The surplus is the result of a 10-percent increase in global sugar production, which more than offsets a 2-percent growth in total disappearance. In spite of the production surplus this year, global stocks are projected smaller, partly due to differences in the timing of trade; thus the global stocks-to-use ratio for 2020/21 is projected to decline from 27.1 percent to 24.5 percent.

Figure 10
World sugar production surplus and stocks-to-use, 2000/01 to 2020/21



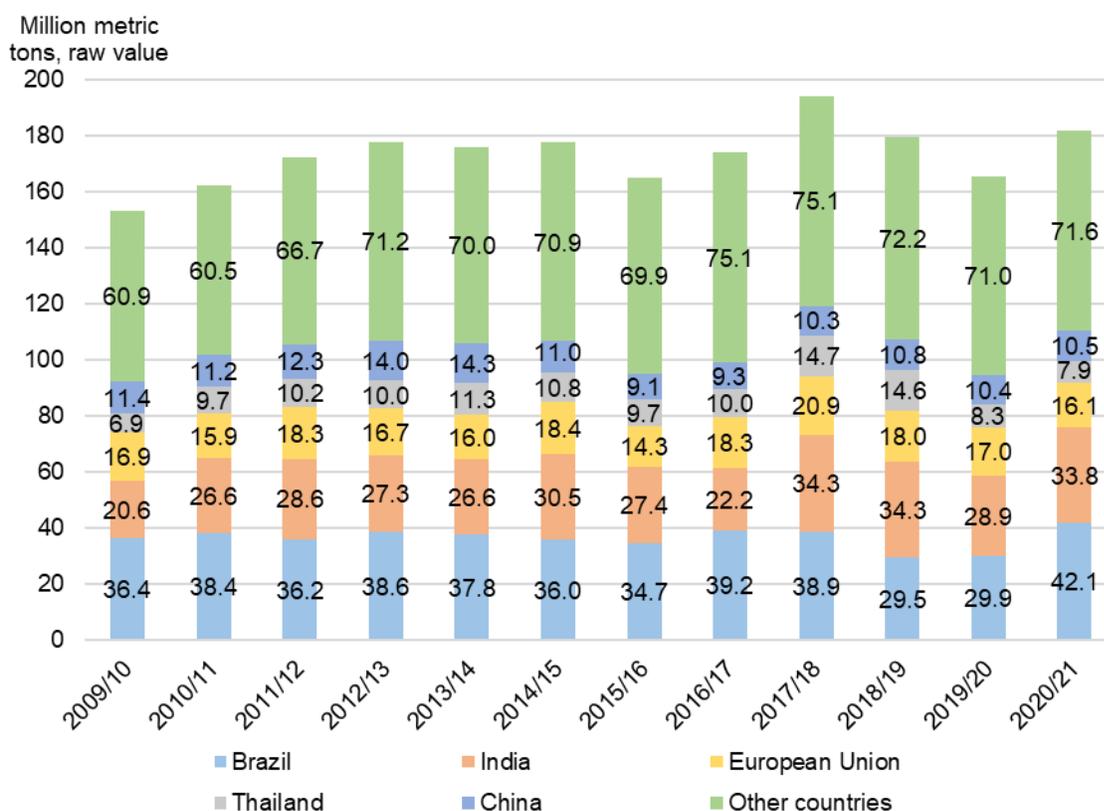
Source: USDA, Foreign Agricultural Service.
 1/ Metric tons, raw value

Globally, stronger production is more than accounted for by Brazil and India. Less significant increases for countries such as the United States, Pakistan, and Mexico are largely offset by reduced output for Russia, the European Union, and Thailand. Global consumption is expected to reach a record, driven by year-on-year growth for India, Iran, Indonesia, China, and others.

Production Seen Rebounding in 2020/21

Global production is projected to rebound 10 percent to 181.9 million MTRV in 2020/21, with Brazil alone accounting for nearly three quarters of the year-to-year boost. In light of reduced fuel use and low oil prices, a larger portion of its sugarcane crop has been diverted toward sugar production instead of ethanol (discussed in greater detail in next section). India also saw significant growth in sugar production due to increased sugarcane area and yields, after last year's setbacks due to poor weather conditions in certain important producing areas.

Figure 11
World sugar production, 2009/10 to 2020/21

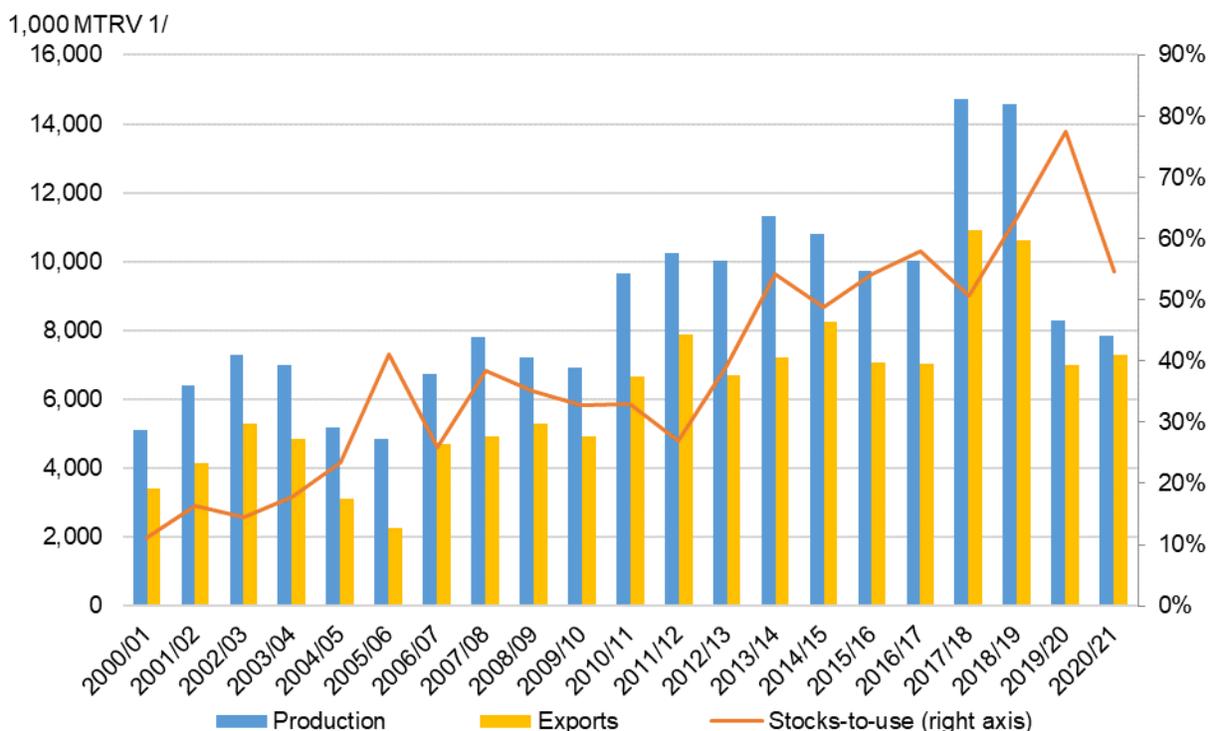


Source: USDA, Foreign Agricultural Service.

In Thailand, however, severe drought has affected sugarcane and sugar production for the second consecutive year. Thailand's 2020/21 sugar output is down only 5 percent from 2019/20 but is down a whopping 46 percent relative to its pre-drought production in 2018/19. Thailand's short crop in 2019/20 was largely responsible for that year's global production deficit, but global production this year is not similarly impacted due to rebounding Brazilian output. Thailand's sugar industry is primarily export-oriented, typically shipping nearly three quarters of its production to foreign markets. Thailand's production shortfalls have resulted in a substantial

drawdown in domestic stocks to keep export levels relatively stable. Thailand's exports in 2019/20 are estimated at 7.0 million tons, down from 10.6 million MTRV in 2018/19, while stocks are estimated to decline from around 8.3 million to 7.3 million tons. For 2020/21, this is expected to continue as exports are projected up slightly to 7.3 million tons and stocks are forecast downward once again to 5.3 million tons. While this stock level is significantly below the high mark seen in 2018/19, it still represents a stocks-to-use ratio of 55 percent and is in line with most recent years. Note that stocks-to-use was actually at its highest in 2019/20, mainly due to reduced exports and domestic use.

Figure 12
Thailand sugar production, exports, and stocks-to-use, 2000/01 to 2020/21



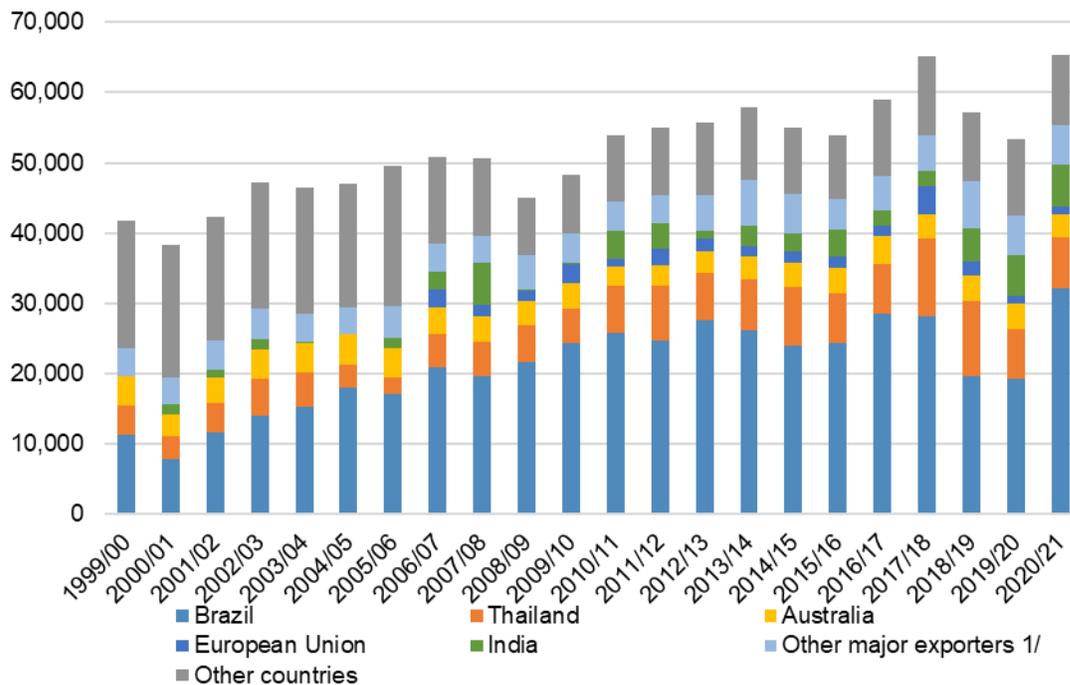
Source: USDA, Foreign Agricultural Service.
 1/ Metric tons, raw value

Global Exports and Use Projected to Rebound with Larger Supplies

With both production and use projected up in 2020/21, global exports are forecast to surge 23 percent to a record 65.3 million tons. Leading the charge is Brazil, with its exports projected up 12.7 million tons to a record 32.0 million. Brazil alone accounts for nearly half of global exports. Exports for the rest of the world are actually down year-to-year as most of the other countries have relatively stable export levels.

Figure 13
World sugar exports 1999/00 to 2020/21

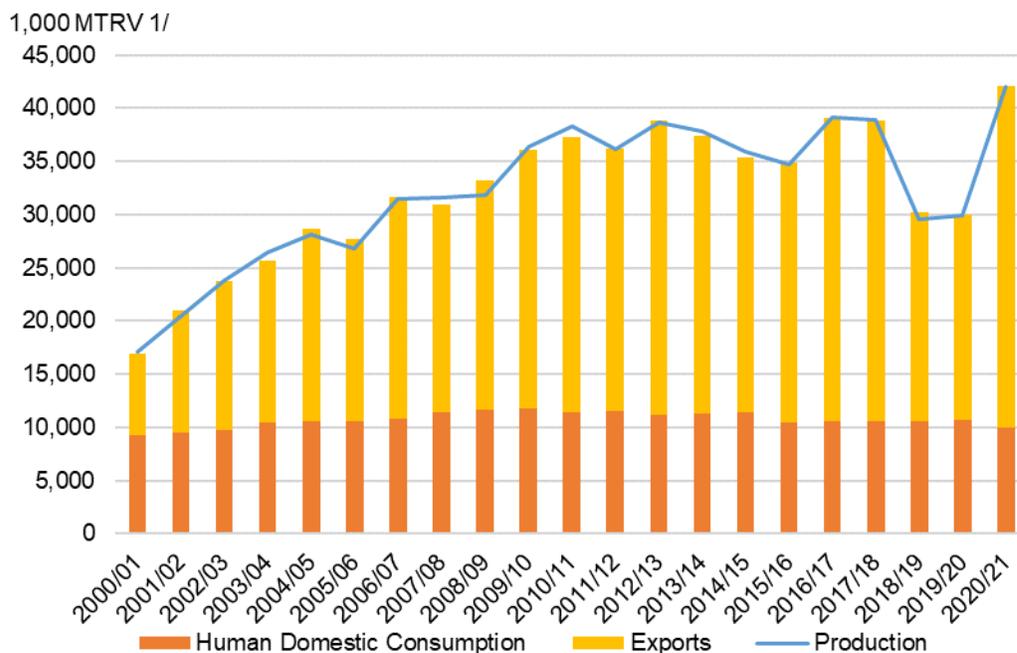
1,000 metric tons,
 raw value



1/ Includes: Guatemala, Mexico, Ukraine, Colombia, and South Africa.
 Source: USDA, Foreign Agricultural Service.

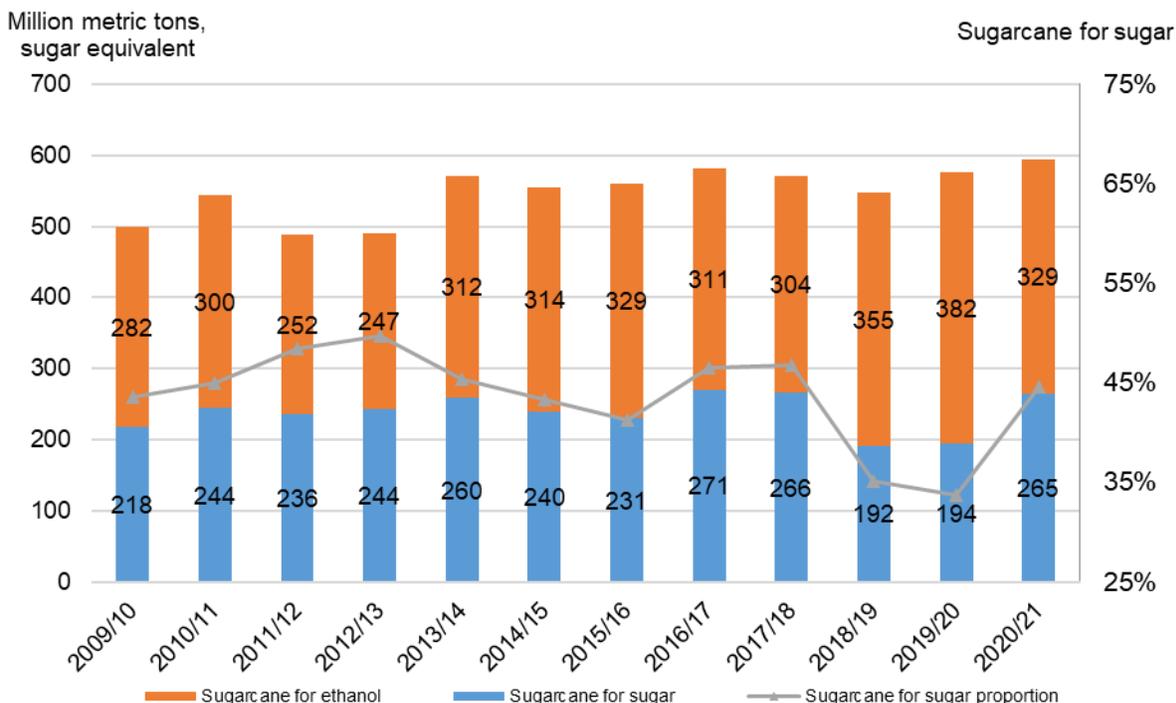
Brazil is expected to continue as the world’s largest sugar producer and exporter in 2020/21. In 2018/19 and 2019/20, Brazil’s production and exports were smaller as a result of low global prices, which resulted in a larger share of Brazilian sugarcane being diverted into ethanol. In those 2 years, the proportion of the sugarcane crop being used for sugar production fell to the lowest level in at least a decade. This situation changed drastically in 2020/21, mainly due to reduced fuel demand, although slightly higher global sugar prices and a weak currency also contributed. With oil prices depressed and fuel demand diminished in 2020/21 based on policy responses to the COVID-19 pandemic, sugarcane processors have had incentive to divert a greater portion of the sugarcane crop into sugar production in lieu of ethanol. With that in mind, as indicated in figure 15, the proportion of the Center-South sugarcane production that is diverted into ethanol is 44.6 percent so far this year (April-March local marketing year), up significantly from about 33.7 percent at the same point last year. Higher sugar prices, weak domestic demand for fuel, and a depreciated currency are all expected to continue driving stronger production and exports for 2020/21.

Figure 14
Brazil sugar production, exports, and domestic consumption 2000/01 to 2020/21



Source: USDA, Foreign Agricultural Service.
 1/ Metric tons, raw value

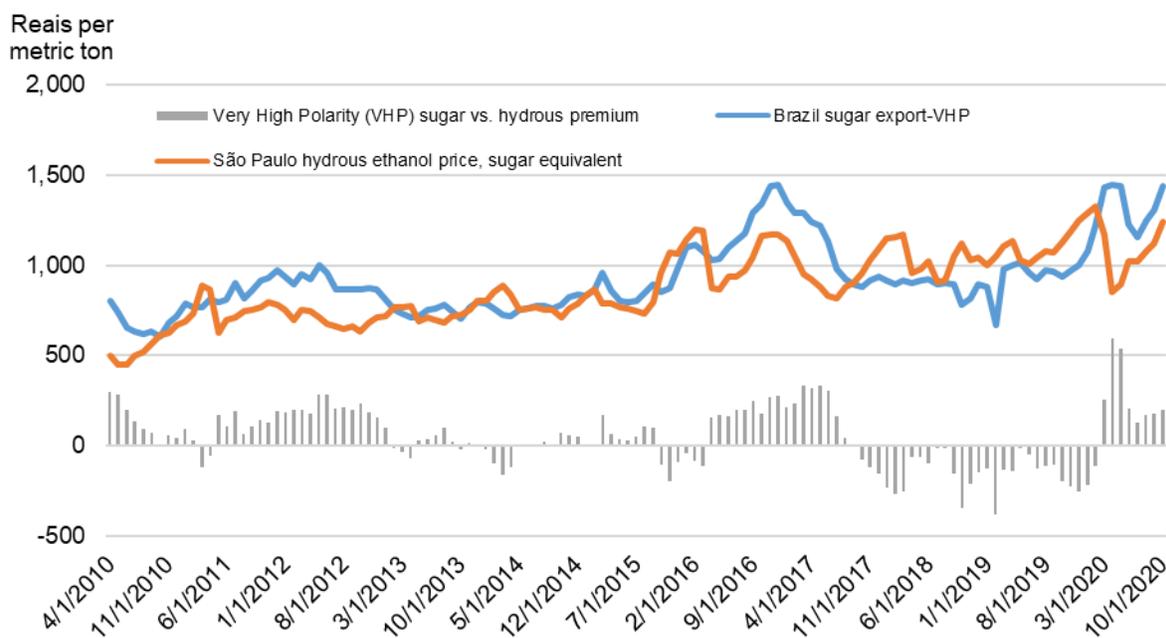
Figure 15
Brazil Center-South sugarcane production and use, through December 1, April-to-March marketing year



Source: Brazilian Sugarcane Industry Association (UNICA).

Significant market uncertainties remain, however. Fuel use in Brazil fell steeply in March, according to local government data. This affected both gasoline (which is blended with at least 27 percent anhydrous ethanol) and hydrous ethanol sales at the pump. As a result, the relative prices for Very High Polarity (VHP) sugar (marketed for export) and domestic hydrous ethanol switched substantially beginning in March and continued into the subsequent months. This has supported substantial Brazilian sugar production and exports in the Brazilian 2020/21 April-March Marketing Year. Figure 16 below shows that export prices for sugar continue to be lucrative compared with ethanol, although sugar's price premium has narrowed as ethanol prices have posted some recovery after hitting a low point in April. While there is still a great deal of uncertainty regarding the COVID-19 pandemic and its ongoing impact on fuel and sugar markets, it is clear that sugar continues to hold a significant price premium over ethanol, and there is no clear indication that this will change in the near term.

Figure 16
Brazil sugar export and domestic ethanol prices, 2010/11 to 2020/21



Source: Brazilian Ministry of Agriculture.

Global sugar use for human consumption is projected at 173.8 million MTRV in 2020/21, a 2-percent boost from the previous year and a record high. After sugar use declined in the past 2 years, this represents a reversion to the long-term trend of rising consumption. India represents the largest year-to-year boost in sugar consumption, with use up by 1.5 million MTRV to 28.5 with large domestic supplies and expectations of economic growth, although government policies directed at encouraging consumers to reduce sugar use may constrain growth potential.

Globally, significant uncertainty surrounding consumption exists due to both governmental policies aimed at changing consumer habits as well as COVID-19. Sudden disruptions in economies, sectors, or supply chains that alter consumers' eating or consumption patterns will likely continue to pose a source of volatility in 2020/21.

EU Sugar Market Analysis

In addition to referencing figures from USDA's Sugar: World Markets and Trade report, many details from this section are drawn from the USDA/FAS *European Union: Sugar Semi-Annual Report*; the report is dated October 5, 2020, and is available through the FAS Global Agricultural Information Network (GAIN) database. Note: Unless otherwise noted, "EU" in this report refers to EU-27+UK, the current EU Customs Union.

Table 5: EU sugar: supply and use by marketing year (October/September), November 2020

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21 1/
	<i>Thousand metric tons, raw value</i>					
Beginning stocks	4,151	1,241	2,238	1,997	1,417	1,020
Beet sugar production	14,017	18,042	20,667	17,763	16,730	15,800
Industrial sugar production 2/	2,176	391	2,318	2,320	2,290	2,000
Cane sugar production	266	272	271	219	273	250
Total sugar production	16,459	18,705	23,256	20,302	19,293	18,050
Raw sugar imports	2,251	1,920	966	1,365	1,300	2,000
Refined sugar imports	804	1,022	375	622	800	1,000
Total imports	3,055	2,942	1,341	1,987	2,100	3,000
Total supply	19,514	21,647	24,597	22,289	21,393	21,050
Raw sugar exports	5	5	5	6	5	5
Refined sugar exports	1,543	1,504	3,915	1,943	1,195	995
Total sugar exports	1,548	1,509	3,920	1,949	1,200	1,000
Human domestic consumption	18,700	18,750	18,600	18,600	18,300	18,300
Industrial sugar use 2/	2,176	391	2,318	2,320	2,290	2,000
Total domestic disappearance	20,876	19,141	20,918	20,920	20,590	20,300
Ending stocks	1,241	2,238	1,997	1,417	1,020	770
Ending stocks-to-use ratio (percent)	5.9	11.7	9.5	6.8	5.0	3.8

Source: USDA, Foreign Agricultural Service: *Sugar: World Markets and Trade*, November 2020; USDA, Foreign Agricultural Service, *European Union: Sugar Semi-Annual*.

1/ USDA Forecast.

2/ Includes sugar for bio-ethanol or on-farm biogas production. These industrial sugar production and use figures specifically are derived from the *European Union: Sugar Semi-Annual* report from the Foreign Agricultural Service Office in Brussels, Belgium. Total sugar production, total supply, and total disappearance statistics differ from the figures in the *Sugar: World Markets and Trade* publication based on inclusion of these industrial figures.

EU beet sugar production for marketing year (MY) 2020/21 is forecast at 15.8 million metric tons raw value (MTRV) from 1.6 million hectares (ha) of sugar beets harvested. This forecast is a 1.6 million MTRV decrease from the USDA May 2020 forecast because of drought in the major sugar beet growing areas leading to below average yields, primarily in France, Germany, Poland, and the United Kingdom (UK). Further dampening the production forecast have been severe sugar beet yellows virus (BYV) attacks in France and, to a somewhat lesser extent, in Austria, Germany, and the UK. Beet acreage is also revised down by another 10,000 ha. Farmers blame the BYV attack on the ban on neonicotinoids; the French government has

already announced that it will install a derogation from the neonicotinoid ban for the coming years.

Last year, difficult MY 2019/20 beet harvesting conditions caused by wet weather in northern European member states (MS) resulted in a disappointing beet sugar production of 16.7 million MTRV, following a dry growing season in much of the European beet growing area.

Regardless of a UK-EU agreement on their trade relationship after the end of the transition period, which ends on December 31, 2020, the UK 2020 sugar beet harvest belongs to the UK's post-Brexit balance for MY 2020/21. Despite a 5-percent increase in sugar beet acreage, the UK MY 2020/21 sugar production is forecast to decrease 10-15 percent compared to MY 2019/20, lowering the UK's self-sufficiency for sugar. This will have consequences for both the EU internal trade as well as imports from the world.

Total EU beet sugar production for MY 2020/21, including 2 million MTRV for industrial use, is forecast at 17.8 million MTRV. This level of industrial use of raw sugar juice for fermentation and bio-ethanol production is a decrease from MY 2019/20 as processors favor sugar production over bioethanol production given the lower fuel prices and consumption because of COVID-19.

EU Sugar Consumption

EU sugar consumption is suffering from the SARS CoV-2 outbreak as COVID-19 measures have decreased away-from-home eating, and this loss in sugar consumption is not fully compensated by increased sugar consumption in home cooking. Apart from early logistical issues provoked by the COVID-19 lockdown, the food industry has reportedly not been significantly affected by the COVID-related measures. Early reports about increased snacking as people work from home in response to the COVID-19 related lockdowns proved to be temporary. Consequently, EU sugar consumption for MY 2019/20 is expected to decrease by 0.3 million MTRV to 18.3 million MTRV, with a stable forecast for MY 2020/21, as the COVID-19 situation is expected to continue. EU sugar consumption has been stable in recent years, with the strengthening trend for lower sugar consumption being offset by the increase in population. Food processors across the EU are responding to consumer and health authorities' pressure to reduce sugar content in food through reformulating products.

The difference in sugar availability in the EU market between the core producing MS (Belgium, France, Germany, the Netherlands, and the UK) and the net importing MS (Bulgaria, Romania,

Greece, Croatia, Italy, Spain, and Portugal) leads to price differentiation. Prices have continued to increase in the net importing MS. The price difference allows EU sugar refiners, as well as less efficient beet sugar processors in region 3, to generate a larger margin.

EU Sugar Imports and Exports

The forecast for EU sugar imports in MY 2020/21 is increased from 2.1 million MTRV to 3 million to supplement the forecast 2020 production shortfall. As the EU-27 and the UK will compete for preferential sugar, it seems unlikely that enough imports at zero duty under the Everything-But-Arms (EBA) agreement and from Free Trade Agreement (FTA) quotas will be available, and importers may need to use the CXL quotas (negotiated as part of the EU's GATT concessions) that carry a €98/MT duty.

The MY 2019/20 import estimate is revised down to 2.1 million (from 2.3 million in the May forecast) because of the fall in consumption but remains above the MY 2018/19 import level. The increase in imports compared to the previous year is fully for refined sugar, while imports of raw sugar are likely to end below the MY 2018/19 level. Imports into tariff rate quotas (TRQs) under FTAs are expected to remain stable, as the only new FTA in 2020 is the EU-Vietnam FTA, which entered into force on August 1, 2020, and provides for a sugar TRQ of 20,000 MTRV.

While this report covers EU-27+UK, MY2020/21 falls beyond the Brexit transition period, and the forecast numbers in this report's Production, Supply, and Distribution (PSD) assume business as usual if the UK and EU reach a free trade deal with zero duties for sugar. Under a no-deal Brexit scenario, EU sugar exports to the UK will be subject to duty of £350/MT for white sugar, while the UK Most Favored Nation (MFN) tariff for raw sugar is set at £280/MT. Under this scenario, EU white sugar will not be competitive with white sugar imports from duty-free origins, leaving this sugar available for the EU-27 markets or for exports to the world. This could lead to an increased sugar price difference across the North Sea Channel, which could likely enhance the post-Brexit UK sugar market attractiveness over the EU-27 market. If implemented, the UK's new 260,000 MTRV TRQ for raw sugar for refining would allow the replacement of roughly half of the EU-origin imports. For the remaining import gap, UK importers will have to compete on the world market alongside the EU-27 and other importers. In MY2019/20, sugar trade between the EU-27 and the UK was halved, but that was probably more the result of a

high sugar production in the UK, while EU-27 production was down 1 million MTRV compared to MY 2018/19.

The EU sugar export forecast for MY 2020/21 is revised from 1.5 million MTRV to 1.0 million, which is down from 1.2 million MTRV in MY 2019/20. This low MY 2020/21 export level reflects the production deficit and will only allow the EU to supply its traditional buyers. If realized, this would be the lowest EU sugar export figure ever (the sugar PSD covers the EU as a region back to 2006/07) and the second largest EU deficit in a decade.

EU Sugar Stocks

EU sugar stocks at the end of MY 2020/21 are forecast to fall further, below the 1 million MTRV estimated at the end of MY 2019/20. In the case of a no-deal Brexit outcome, this MY 2020/21 ending stock number will likely have to be reviewed.

Isoglucose production in the EU is stagnating in 2020 compared to 2019. There was a short-lived increase in production after the end of the EU sugar quota regime, but isoglucose has a hard time competing with low EU sugar prices. As a result, since 2017 a new Hungarian plant has had difficulties coming online. It remains to be seen if isoglucose production will be able to benefit from the EU sugar shortfall in MY 2020/21.

Note: Isoglucose is a generic term for “high-fructose corn syrup” as the sweetener can be made from many starch sources such as wheat and potatoes in addition to corn.

COVID-19 Mitigation Measures

As the COVID-19 outbreak in Europe largely arrived in between sugar beet processing seasons, the EU sugar sector was barely affected by it, except that some enhanced labor protection measures slightly delaying the inter-seasonal refining of thick juice stocks. Therefore, no special market measures were made available for sugar at the EU level, but the sector could access MS-provided state aid for mitigating the economic fall-out from COVID-19. Most MS provide generic aid measures such as flexible loans or delayed taxation to their whole economy.

New CAP, Green Deal, Farm to Fork (F2F), and Biodiversity Strategy

Uncertainty about Brexit and the EU's future budgetary situation prevented the outgoing Juncker Commission from properly preparing the next Common Agricultural Policy (CAP), which should have started from 2021, as the current CAP expires at the end of 2020. The European Commission (EC) published its new CAP proposals on June 1, 2018, but it was evident from the start that, given the European elections in May 2019, it would be up to the incoming institutions to finalize the agreement and that an extension of the current CAP would be needed to bridge the gap. As Brexit became a fact at the end of January 2020, the new Von der Leyen Commission prepared a new Multi-annual Financial Framework 2021-2027 (MFF) proposal (€1,074.3 billion) in combination with an extraordinary recovery effort known as the Next Generation EU (€750 billion). The €1.8 trillion package, which gained European Council approval on July 21, 2020, aims at helping the EU rebuild after the COVID-19 pandemic and support investment in the green and digital transitions. The new MFF proposal includes €356.4 billion for the new CAP and Fisheries policy, of which €239.9 billion is for direct payments, €19.7 billion for market measures (together, Pillar I), and €77.9 billion for rural development (Pillar II) for the 2021-2027 period. However, this MFF and COVID-19 mitigation package must be approved by the European Parliament (EP) that already has vented its disagreement with several cuts from the EC's original proposal.

On May 20, 2020, the EC announced both the Farm to Fork Strategy and the EU Biodiversity Strategy as roadmaps for enhancing food and agricultural sustainability by 2030 under the European Green Deal. The Strategies mark the beginning of a multi-step legislative development process that aims to fundamentally change the way EU agriculture operates and food is produced for, and provided to, EU consumers. The goal is that MS tailor their new CAP programs toward achieving and enforcing the different strategy targets through enhanced conditionality measures. The stated goal is that 40 percent of CAP funding goes toward climate change mitigation measures. Specific goals are a 50-percent reduction in pesticide use, a 50-percent reduction of nutrient leakage in groundwater through a 20-percent reduction in fertilizer use, an increase in nature conservation areas to 30 percent, 10 percent of environmental set-aside, and 25 percent of land for organic farming. ERS has recently published an analysis of the economic and food security impacts of the EU's Farm to Fork Strategy.

The EU sees its Green Deal and accompanying strategies as its way of achieving its Paris Climate Agreement and other UN Sustainable Development Goal commitments. No legislative

proposals to convert the above strategies have been made yet to the Council and the EP, which will need to approve them through joint compromises. Both legislative bodies have already requested that impact assessments be available before legislative initiatives are proposed. Given the level of ambition in the strategies, the EU legislative process can be expected to be arduous and lengthy, especially as the number of implementing acts specifying the details of the different policies will likely run into the tens, if not hundreds, of specific acts. Therefore, the EC has proposed a 1-year extension to the current CAP, but both Council and EP requested a 2-year transition as they don't think that such a massive legislative undertaking can be finalized within 1 year, especially as finalizing and approving the COVID-19 Next Generation EU mitigation package takes precedence.

Brexit

The United Kingdom (UK) formally left the European Union on January 31, 2020, and is in a transition period until December 31, during which it continues to fully comply with EU rules and legislation. During this transition period, the UK is negotiating an agreement with the remaining EU-27 on its future relationship, particularly on trade. Because the UK government notified the EU that it will not extend the transition period, it remains uncertain whether an agreement will be concluded or whether the UK will sail off with no deal (hard Brexit), meaning that its trade relationship with the EU would fall back to WTO rules, with full border controls, including on the Irish island and on the border between Spain and Gibraltar. As of early December 2020, the chance of a so-called "hard Brexit" was looking increasingly likely.

The UK government published its post-Brexit tariff schedule that will apply from January 1, 2021. The MFN tariff for refined sugar is £350/MT (€419/MT), while the MFN tariff for raw sugar for refining will carry a £280/MT (€339/MT) duty. The UK mulls providing a duty-free TRQ of 260,000 MTRV annually for raw cane sugar for refining. The UK further published the full list and details of the TRQs that it intends to operate as agreed with the EU on splitting EU quotas.

England plans to replace the EU farm policy with a new system named Environmental Land Management. As opposed to the EU's CAP, which tended to favor larger farmers since it was based on acreage, the ELM will pay farmers if they prevent floods, plant woods, and help wildlife. The plan is to cut in half the old area-based subsidies by 2024 and abolish them by 2028. The cash saved will be transferred into the new environmental ELM system. English farmers would get grants for protecting "heritage" farm buildings and stone walls, expanding

hedger, capturing carbon in soils and cutting pesticides, natural flood management including restoring river bends, landscape recovery, restoring peatland and planting new woods, reducing antibiotics, and improving animal health and welfare. The Department for Environment, Food and Rural Affairs has also created what it calls the Sustainable Farming Incentive (SFI). This will reward farmers for basic activities such as crop rotation, soil conservation, and stopping chemicals from polluting waterways. Wales, Scotland, and Northern Ireland are devising their own plans.

Attacks on EU-Mercosur Trade “Agreement in Principle” Intensify

On June 28, 2019, the EU reached a trade “Agreement in Principle” with the four member countries of Mercosur (Argentina, Brazil, Paraguay, and Uruguay). This agreement provides for a new 10,000 MTRV duty-free sugar import quota for Paraguay, while Brazil would see the in-quota duty eliminated on 180,000 MTRV of its WTO quota. However, the details of the agreement need to be elaborated and its implementation, even on a provisional basis, is years away. Many EU farmers, MS, and members of the EP are critical of any Mercosur agreement in light of last summer’s fires in the Amazon forest, as many believe the government of Brazil to be complicit in behavior inconsistent with the EU Biodiversity strategy. Several MS have already clearly stated that they will not ratify the EU-Mercosur agreement if it ever gets finalized.

Other EU FTA Updates

Additional EU market access for sugar as part of new FTAs is continuing. The EU-Vietnam FTA, in which Vietnam receives a duty-free sugar quota of 20,000 MTRV plus 400 MTRV for specialty sugars was implemented on August 1, 2020, as agreed. In the spring of 2018, the EU and Mexico agreed to grant a 30,000 MTRV quota for Mexican sugar imports at a €49/MT duty to be phased in over 3 years. The provisional implementation of the EU-Mexico agreement is awaiting EP approval. Ongoing negotiations for an FTA between the EU and Australia are also widely expected to include an agreement for sugar.

EU Preferential Sugar Market Access

Despite the removal of all limitations to EU sugar production in 2017, EU farmers remain protected against competition from non-preferential raw cane sugar by high tariffs and import quotas. Preferential duty-free market access for sugar has been available for former European colonies under Economic Partnership Agreements (EPA) and for least developed countries (LDCs) under the Everything-But-Arms (EBA) agreement. A safeguard on preferential duty-free imports from EPA and EBA countries continues to limit potential imports to 3.5 million MT (white sugar equivalent). After the Balkan war, EU duty-free sugar quota access was also part of the Western Balkan Stabilization and Association Agreement. In recent years, additional country-specific quotas have been agreed upon as part of an EU FTA with Peru, Colombia, Panama, and Central America, totaling some 260,000 MTRV. Ukraine was also allocated a 20,000 MTRV quota, while the Southern African Development Community (SADC) EPA from October 2016 is granting South Africa duty-free quotas for 150,000 MTRV of sugar.

Pesticide Policy – Neonicotinoids

In 2018, the European Commission banned the use of three neonicotinoids (clothianidin, imidacloprid, thiamethoxam), except for use in greenhouses, because of their harmful effect on wild bees and honey bees. These neonic pesticides are important for sugar beet production; they previously were applied to seed to prevent aphid infestations in sugar beets. Aphids spread many diseases including viruses such as the BYV that leads to sugar beet dwarf jaundice, a disease that can cut yields by half. Since the ban in 2018, about 15 MS have requested 74 emergency derogations for their use, of which more than 50 percent was for use on sugar beets. This procedure allows individual MS to apply for a 3-month emergency authorization for the use of a banned substance if they can prove that its use is safe for their particular case and if there is no alternative available.

In 2020, Austria, Belgium, Croatia, Denmark, Finland, Lithuania, Poland, Romania, and Spain had exemptions on the neonicotinoid ban in place for use in sugar beet seed coating for one or more of the banned active substances. After the severe BYV attacks in 2020, France is also planning for an exemption for 2021.

Suggested Citation

Sowell, Andrew R. and Ronald C. Lord. *Sugar and Sweeteners Outlook*, SSS-M-388, U.S. Department of Agriculture, Economic Research Service, December 16, 2020.

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