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Sugar and Sweeteners Outlook

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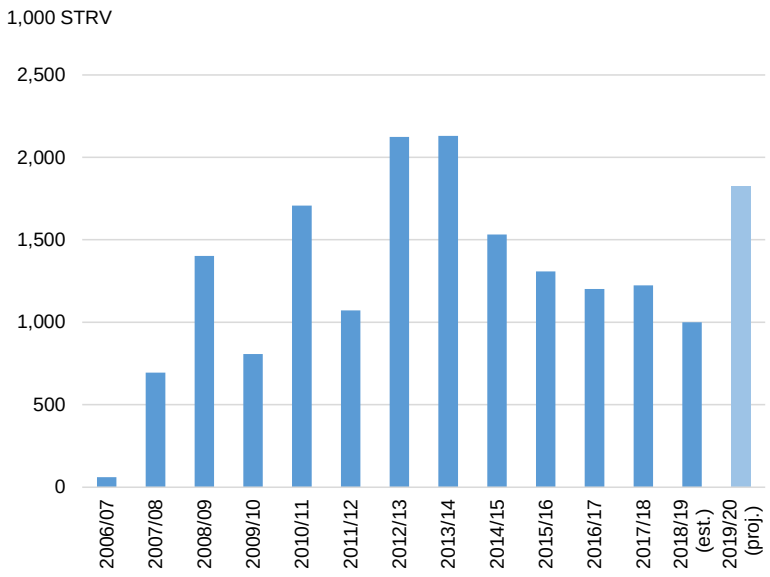
Domestic Sugar Production Lowered Further, Projected Imports From Mexico Raised for 2019/20

U.S. sugar production for 2019/20 is lowered in the December *World Agricultural Supply and Demand Estimates* as both the cane sugar and beet sugar sector saw deteriorating conditions. Imports are raised, with the increase largely coming from imports from Mexico. Projections for total use and domestic deliveries are unchanged from the previous month.

Mexico is projected to export slightly more sugar in 2019/20 than was expected the previous month. There is expected to be a large increase in exports going to the United States rather than other countries, however. Production forecasts are unchanged, although the harvest season has just begun, as Mexico processors work through this season's drought-affected sugarcane crop.

U.S. sugar imports, from Mexico, 2006/07 to 2019/20



Source: USDA, Foreign Agricultural Service; USDA, World Agricultural Outlook Board.

U.S. Domestic Outlook

Lower Sugarcane Yields Reduce Cane Sugar Projections for 2019/20

The conditions for the U.S. sugarbeet and sugarcane crops continued to decline in the December *World Agricultural Supply and Demand* Estimate. U.S. sugar production for 2019/20 is projected to be 8.280 million short tons, raw value—a 331,000-STRV reduction from the November report. The reduction is attributed to both the beet and cane sector as the implications of the abbreviated sugarbeet harvest and the less favorable growing conditions in Louisiana's sugarcane-growing regions are fully realized.

Table 1: U.S. sugar: supply and use, by fiscal year (Oct./Sept.), December 2019

Items	2017/18	2018/19 (estimate)	2019/20 (forecast)	2017/18	2018/19 (estimate)	2019/20 (forecast)
	1,000 Short tons, raw value			1,000 Metric tons, raw value		
Beginning stocks	1,876	2,008	1,780	1,702	1,822	1,615
Total production	9,293	8,996	8,280	8,430	8,161	7,512
Beet sugar	5,279	4,939	4,367	4,789	4,480	3,962
Cane sugar	4,014	4,057	3,913	3,641	3,680	3,550
Florida	1,983	2,005	2,069	1,799	1,819	1,877
Louisiana	1,862	1,904	1,712	1,689	1,728	1,553
Texas	169	147	131	153	134	119
Hawaii	0	0	0	0	0	0
Total imports	3,277	3,070	3,860	2,973	2,785	3,502
Tariff-rate quota imports	1,663	1,541	1,614	1,509	1,398	1,464
Other program imports	326	438	350	296	397	318
Non-program imports	1,287	1,092	1,897	1,168	990	1,721
Mexico	1,223	1,000	1,827	1,110	908	1,657
High-duty	64	91	70	58	83	64
Total supply	14,445	14,074	13,920	13,105	12,768	12,628
Total exports	170	35	35	154	31	32
Miscellaneous	82	28	0	75	26	0
Deliveries for domestic use	12,185	12,231	12,230	11,054	11,096	11,095
Transfer to sugar-containing products for exports under re-export program	110	98	80	100	89	73
Transfer to polyhydric alcohol, feed, other alcohol	28	27	25	25	25	23
Commodity Credit Corporation (CCC) sale for ethanol, other	0	0	0	0	0	0
Deliveries for domestic food and beverage use	12,048	12,106	12,125	10,930	10,982	11,000
Total use	12,438	12,294	12,265	11,283	11,153	11,127
Ending stocks	2,008	1,780	1,655	1,822	1,615	1,502
Private	2,008	1,780	1,655	1,822	1,615	1,502
Commodity Credit Corporation (CCC)	0	0	0	0	0	0
Stocks-to-use ratio	16.14	14.48	13.50	16.14	14.48	13.50

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

Beet sugar production for 2019/20 is projected at 4.367 million STRV, a 221,000-STRV decline from the previous month. The reduction is due to updated estimates of the sugarbeet crop, based on processor forecasts provided in the Farm Service Agency's *Sweetener Market Data* (SMD). The National Agricultural Statistics Service's (NASS) *Crop Production* report did not include updated forecasts for the sugarbeet crop in December. Following its normal publication schedule, NASS produces its last sugarbeet production forecast in the November report before

publishing its final data in the January summary report. The 2019/20 sugarbeet harvest was notable for its slow progress and the cold weather that forced growers to end harvesting with a substantial amount of the planted crop still in the ground. As a result, the December WASDE projection adjusted the data from the November *Crop Production* report based on the change in the processors' forecasts reported in the December SMD. The reduction in beet sugar production is due to the reduced outlook for sugarbeet production, combined with adjustments to expected shrink—making shrink more in line with historical levels, but also accounting for an earlier expected end to processors' slicing season and minor revisions to production during the early-harvest period this fall.

Table 2: Beet sugar production projection calculation, 2018/19 and 2019/20

	2015/16	2016/17	2017/18	2018/19 November	2018/19 December	2019/20 November	2019/20 December
Sugarbeet production (1,000 short tons) 1/	35,371	36,881	35,325	33,145	33,145	29,498	28,051
Sugarbeet shrink	6.5%	8.3%	7.3%	4.8%	4.8%	3.6%	4.0%
Sugarbeet sliced (1,000 short tons)	33,066	33,834	32,742	31,561	31,561	28,422	26,928
Sugar extraction rate from slice	14.58%	13.72%	15.18%	14.77%	14.77%	14.58%	14.58%
Sugar from beets slice (1,000 STRV) 2/	4,820	4,643	4,970	4,660	4,660	4,144	3,926
Sugar from molasses (1,000 STRV) 2/	380	352	368	352	352	350	350
Crop-year sugar production (1,000 STRV) 2/	5,201	4,995	5,338	5,012	5,012	4,494	4,276
August-September sugar production (1,000 STRV)	688	606	715	655	655	580	582
August-September sugar production of subsequent crop (1,000 STRV)	606	715	655	580	582	633	633
Sugar from imported beets (1,000 STRV) 3/	--	--	--	--	--	40	40
Fiscal year sugar production (1,000 STRV)	5,119	5,103	5,279	4,937	4,939	4,588	4,367

Notes: 1/ USDA, National Agricultural Statistics Service for historical data; USDA WAOB for 2019/20 December estimate. 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 are incorporated into total production in historical data.
Source: USDA, Economic Research Service and World Agricultural Outlook Board.

NASS provided updated forecasts for the 2019/20 sugarcane crop in the December *Crop Production* report, lowering sugarcane production in all three sugarcane-producing States. That translated to lower cane sugar production for each State in the WASDE. The most substantial decrease for both sugarcane and sugar production is in Louisiana. Freezing conditions in October, combined with other challenging growing conditions going back to a wet planting season in the fall of 2018, have lowered Louisiana sugarcane production. This reduction is particularly stark relative to the notably productive crops of 2017/18 and 2018/19. The current projections for 2019/20 are reduced from the recent record-setting levels but are still strong in the context of a longer historical perspective. The current projection of 1.712 million STRV for 2019/20 is an 82,000-STRV reduction from the previous month.

Table 3: U.S. sugarcane and cane sugar production, by State, 2015/16 to 2019/20

	2015/16	2016/17	2017/18	2018/19	2019/20	Annual change
						Percent
Florida						
Sugarcane harvested for sugar (1,000 acres)	398	392	397	397	393	-1.0
Sugarcane yield (short tons per acre)	42.5	40.3	40.9	41.7	42.5	1.9
Sugarcane production (1,000 short tons)	16,915	16,120	16,237	16,555	16,709	0.9
Recovery rate (percent)	12.8	12.7	12.2	12.1	12.4	2.2
Sugar production (1,000 STRV)	2,173	2,055	1,983	2,005	2,069	3.2
Louisiana						
Sugarcane harvested for sugar (1,000 acres)	385	400	414	425	446	4.9
Sugarcane yield (short tons per acre)	29.6	28.8	32.5	35.3	30.0	-15.0
Sugarcane production (1,000 short tons)	11,396	11,520	13,455	15,003	13,373	-10.9
Recovery rate (percent)	12.5	14.2	13.8	12.5	12.8	2.4
Sugar production (1,000 STRV)	1,428	1,632	1,862	1,875	1,712	-8.7
Texas						
Sugarcane harvested for sugar (1,000 acres)	35	38	41	38	33	-13.4
Sugarcane yield (short tons per acre)	31.4	37.0	36.8	36.6	36.6	0.0
Sugarcane production (1,000 short tons)	1,105	1,395	1,490	1,376	1,192	-13.4
Recovery rate (percent)	10.5	9.9	11.3	10.7	11.0	2.7
Sugar production (1,000 STRV)	116	138	169	148	131	-11.0

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

In contrast, cane sugar production in Florida is reduced from the previous month's projection, based on reductions provided by processors' forecasts, but the totals still represent an increase from the past several years. NASS reduced Florida's sugarcane yield from 44.0 tons per acre to 42.5 in its December report. Either projection, if realized, would result in a record yield for the State. The reduction in yields is partially offset by a higher recovery rate forecast, in line with processors' forecast for sugar production in the latest SMD. The current projection of 2.069 million STRV represents a 26,000-STRV reduction from the earlier projections.

Imports from Mexico Projected To Be Highest Since 2013/14

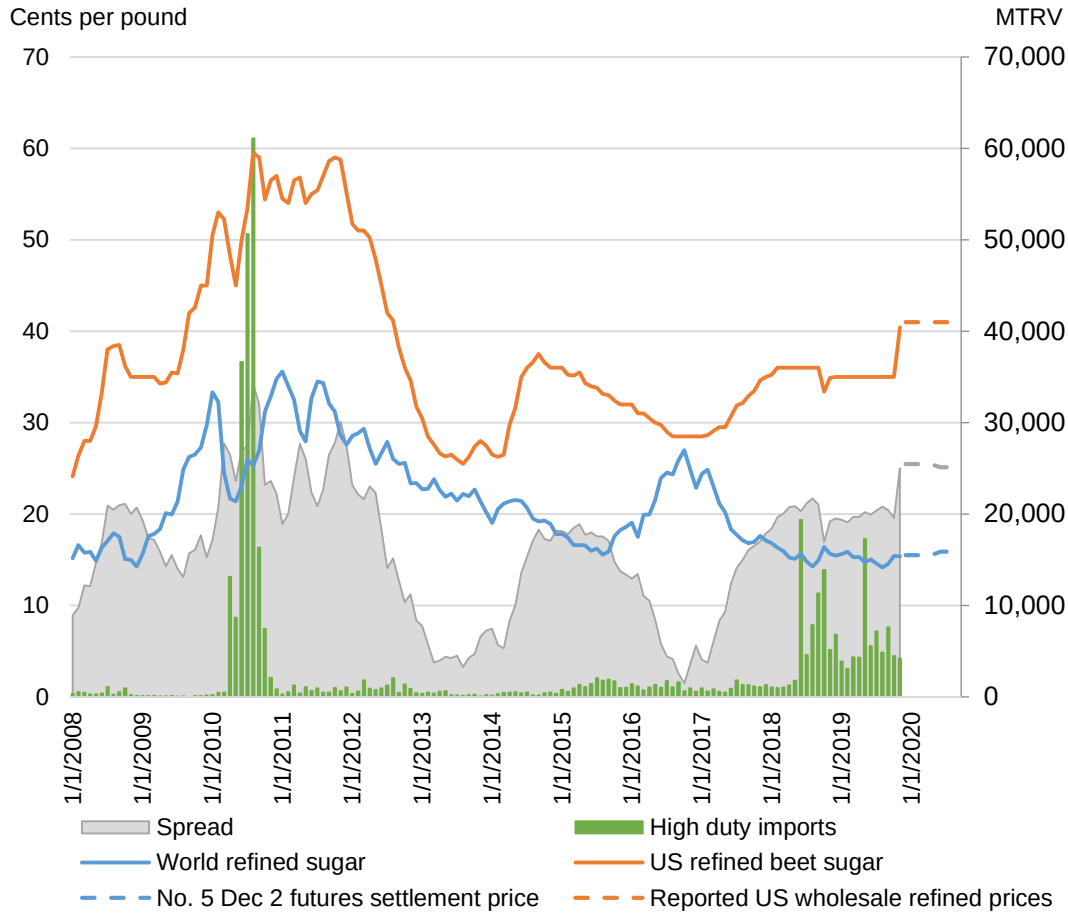
Sugar imports for 2019/20 are expected to total 3.860 million STRV, a 20.5-percent increase from 2018/19 and a 701,000-STRV increase from the previous month. The lowered outlook for domestic production means that a much larger share of domestic demand will need to be met by imported sugar.

Imports from Mexico represent the largest change in total import projections. Shipments from Mexico in 2019/20 are projected to total 1.826 million STRV, a 709,000-STRV increase from the November WASDE. The total is based on the calculated U.S. Needs, as defined by the Suspension Agreements on sugar between the U.S. and Mexico Governments. Following the terms of the agreement, the U.S. Department of Commerce will update Mexico's Export Limit based on projections produced by the December WASDE. The new Export Limit will represent 80 percent of the U.S. Needs calculation. Given that the Export Limit will eventually represent the full U.S. Needs calculation, the WASDE projects the full U.S. Needs amount for the 2019/20 market. If realized, imports from Mexico are projected to be 82.6 percent higher than 2018/19 and the largest total since 2013/14.

Imports under quota programs in 2019/20 are reduced a relatively minor 8,000 STRV to 1.613 million STRV. The net change is due to expectations of 11,000-STRV less sugar under the WTO raw sugar TRQ, offset by a 4,000-STRV increase in imports under FTAs—specifically, in increased shipments from the Dominican Republic under CAFTA/DR for the 2020 calendar year.

Projections for high-tier imports for 2019/20 remain unchanged at 70,000 STRV. The current projection is in line with monthly entries reported by the Foreign Agricultural Service (FAS) in October and November. U.S. sugar prices—both raw and refined—have fluctuated over the past several weeks. World refined sugar prices have also increased in recent weeks as well, but the spread between U.S. and world futures' prices has grown. This may encourage more shipments at the out-of-quota tariff rate, as the economic feasibility improves for such imports. Over the past few years, there has been a lag between when the price spread increases and when increased shipments are observed in the data. As a result, changes to the high-duty import forecast will likely be the result of increased data for such imports.

Figure 1
U.S. and World refined sugar prices, monthly, January 2008 to September 2020



Source: USDA, Economic Research Service.

U.S. Sugar Use Projections Unchanged, Slight Increase Forecast for Domestic Food and Beverage Deliveries

Projected U.S. sugar use is unchanged from the November WASDE, with total use expected to total 12.265 million STRV for 2019/20. This includes a projected 12.125 million STRV for domestic deliveries for food and beverage use, also unchanged. The current forecast indicates that food and beverage deliveries increase a slight 0.2 percent from the previous year.

Mexico Outlook

Majority of Mexico Exports Projected To Head to United States

Mexico's sugar supplies for 2019/20 are projected to be 7.025 million metric tons, actual value (MT), unchanged from the previous month's forecast. The most significant change to the Mexico balance sheet for December is within the Export category, with shipments shifting from other countries to the United States due to the need for supplies to buttress the poor domestic prospects for 2019/20.

Table 4: Mexico sugar supply and use, 2017/18 - 2018/19 and projected 2019/20, December 2019

Items	2017/18	2018/19 (estimate)	2019/20 (forecast)
		1,000 metric tons, actual weight	
Beginning stocks	1,002	1,395	1,169
Production	6,010	6,426	5,772
Imports	220	85	85
Imports for consumption	132	22	20
Imports for sugar-containing product exports, IMMEX 1/, other	88	63	65
Total supply	7,232	7,905	7,025
Disappearance			
Human consumption	4,228	4,092	4,057
For sugar-containing product exports (IMMEX)	482	460	435
Other deliveries and end-of-year statistical adjustment	29	-20	0
Total	4,739	4,532	4,492
Exports	1,099	2,204	1,603
Exports to the United States & Puerto Rico	1,047	856	1,563
Exports to other countries	52	1,348	40
Total use	5,838	6,737	6,095
Ending stocks	1,395	1,169	930
		1,000 metric tons, raw value	
Beginning stocks	1,062	1,478	1,239
Production	6,370	6,811	6,118
Imports	234	90	90
Imports for consumption	140	23	21
Imports for sugar-containing product exports (IMMEX)	93	67	69
Total supply	7,666	8,380	7,447
Disappearance			
Human consumption	4,482	4,337	4,300
For sugar-containing product exports (IMMEX)	510	488	461
Other deliveries and end-of-year statistical adjustment	31	-21	0
Total	5,023	4,804	4,761
Exports	1,165	2,337	1,700
Exports to the United States & Puerto Rico	1,110	908	1,657
Exports to other countries	55	1,429	42
Total use	6,188	7,141	6,461
Ending stocks	1,478	1,239	986
Stocks-to-human consumption (percent)	33.0	28.6	22.9
Stocks-to-use (percent)	23.9	17.3	15.3
High-fructose corn syrup (HFCS) consumption (dry weight)	1,593	1,528	1,520

1/ IMMEX = Industria Manufacturera, Maquiladora y de Servicios de Exportación.
Source: USDA, *World Agricultural Supply and Demand Estimates* and
Economic Research Service, Sugar and Sweeteners Outlook; Conadesuca.

Mexico is projected to export 1.603 million MT, a 5,000-MT increase from the November WASDE. Shipments to the United States are increased 607,000 MT from the previous month, however, totaling 1.563 million MT. This total corresponds to the calculation of U.S. Needs based on the December WASDE parameters, in accordance with the Suspension Agreements. Exports to other countries are lowered substantially from 641,000 MT in the November report to 40,000 MT in the December forecast. According to Conadesuca, through the end of November, Mexico has exported 30,000 MT of sugar to non-U.S. destinations. The current projection assumes that Mexico will only ship an additional 10,000 MT for the remainder of the year, in order to accommodate the increases for the United States.

Drought Conditions Expected To Impact Mexico Sugar Production in 2019/20

Severe drought conditions in many of Mexico's sugarcane-growing regions—the Gulf region in particular—are expected to reduce sugar production in 2019/20. Production is unchanged from the previous month, totaling 5.772 million MT, but the current projection represents a 10.2-percent decline from production in 2018/19. The Mexico sugarcane campaign is still in its early stages, with only 15 of the 54 sugar mills beginning operation for the year as of November 30, 2019. 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.

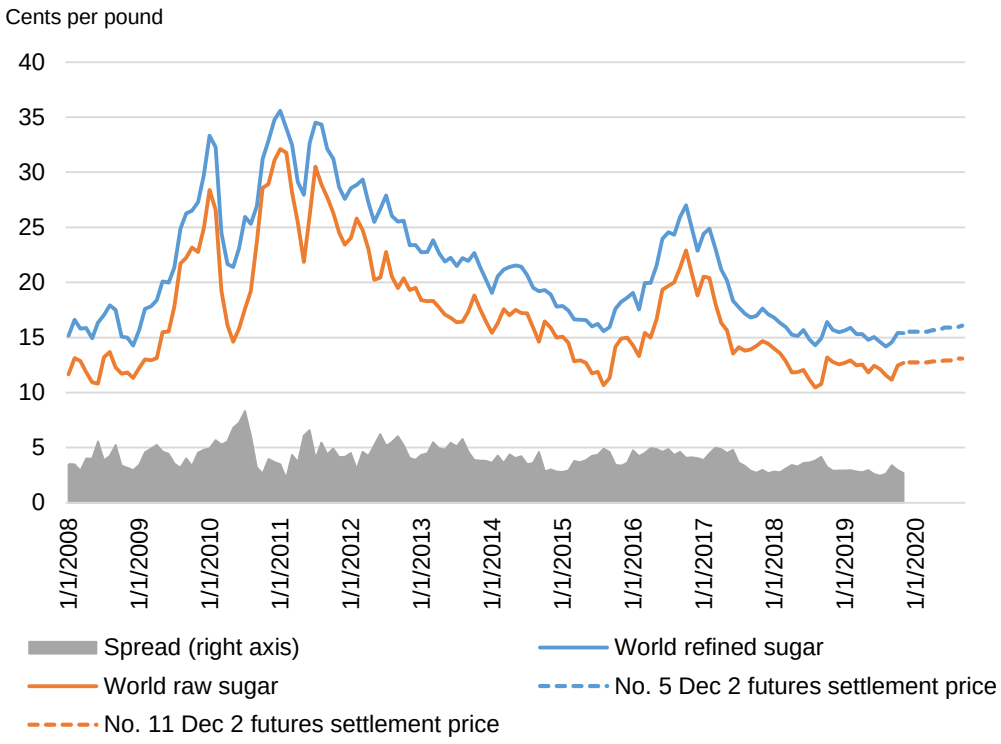
The current outlook has Mexico ending stocks for 2019/20 at 930,000 MT, a slight reduction from the 936,000 MT projected the previous month. The decline is due to the increase in total exports. The stocks-to-consumption ratio is projected at 22.9 percent, still well within historical levels and in line with domestically stated goals of maintaining 10 weeks-worth of consumption in inventories to bridge the beginning of the October 1 fiscal year and the start of the harvest later in the fall. The continuing progress and results from the Mexico sugarcane harvest will be important in evaluating the overall size, structure, and location, of sugar supplies in the country and how they affect the U.S. sugar market.

Global Sugar Outlook

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

World sugar prices, as represented by the price of futures contracts for both raw sugar and refined sugar, have remained relatively low since the summer of 2017. Prices have also remained in a relatively narrow range for a prolonged period. This is particularly notable, since world sugar markets have historically been characterized by volatility and large price swings caused by dramatic fluctuations 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 (commonly referred to as the No. 11 contract), have remained within a range of 10.46 cents and 14.66 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 and 16.42 cents per pound.

Figure 2
World raw and refined sugar prices, monthly, January 2008 to September 2020



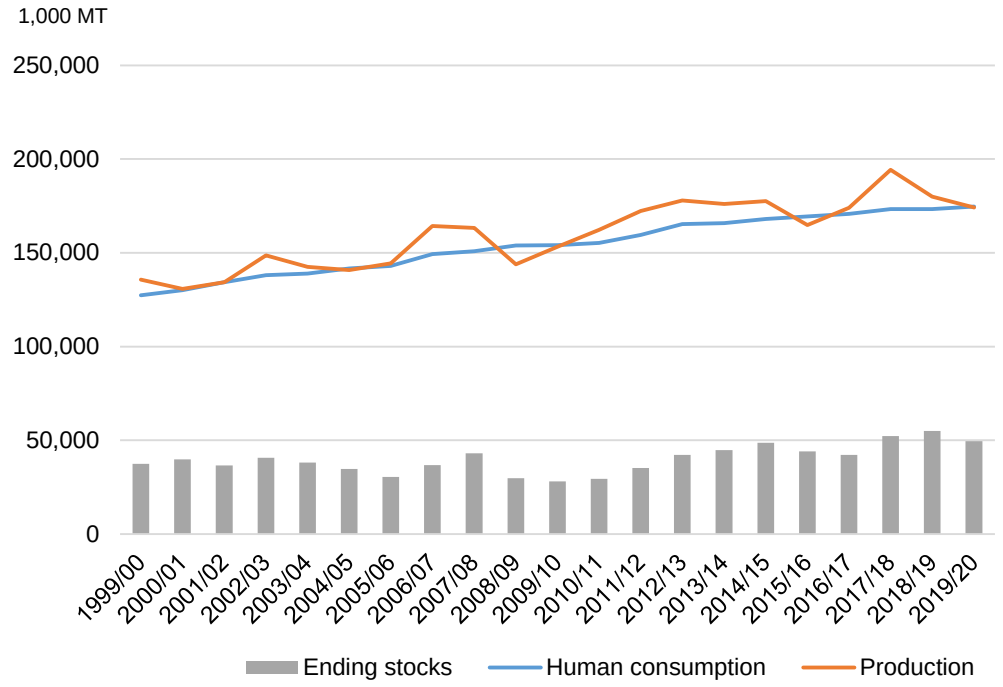
Source: USDA, Economic Research Service.

The reason for this prolonged period of low stable pricing can be explained by global market fundamentals, as well as key market and policy circumstances in certain countries.

Global sugar production hit a peak in 2017/18, reaching 194 million metric tons, raw value (MT), which created a supply glut for the global market. Global consumption, though, has remained relatively stable—as it has historically. With more production than the global market was able to

absorb, stocks rose to record levels by 2018/19. Further, while production levels decreased after 2017/18, they have remained above consumption levels in 2018/19 and are projected to be essentially balanced with consumption for 2019/20. As a result, global supplies have remained relatively large since 2017/18.

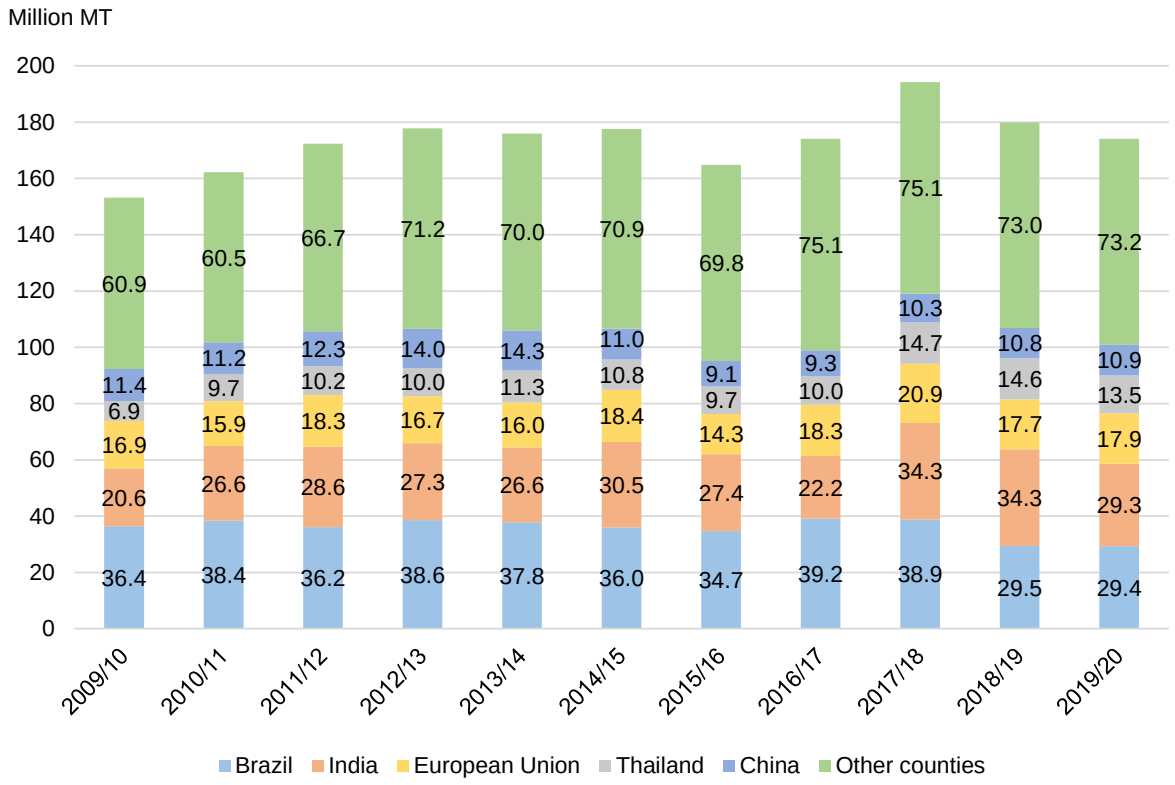
Figure 3
World sugar production, human consumption, and production surpus, 1999/00 to 2019/20



Source: USDA, Foreign Agricultural Service.

Record production in 2017/18 was the result of several factors. Favorable weather conditions boosted production in South and Southeast Asia. India produced a record amount of sugar, as weather conditions were extremely favorable for its sugarcane crop. Thailand also saw a boost in production, recovering to levels produced in prior years. Sugar production in Brazil—the world's largest exporter—increased, responding to rising sugar prices and shifting sugarcane production away from domestic ethanol demand. Finally, the European Union increased its domestic production, as policy reform removing production quotas of sugar and grain-based sweeteners went into effect at the beginning of 2017/18.

Figure 4
World sugar production 2009/10 to 2019/20



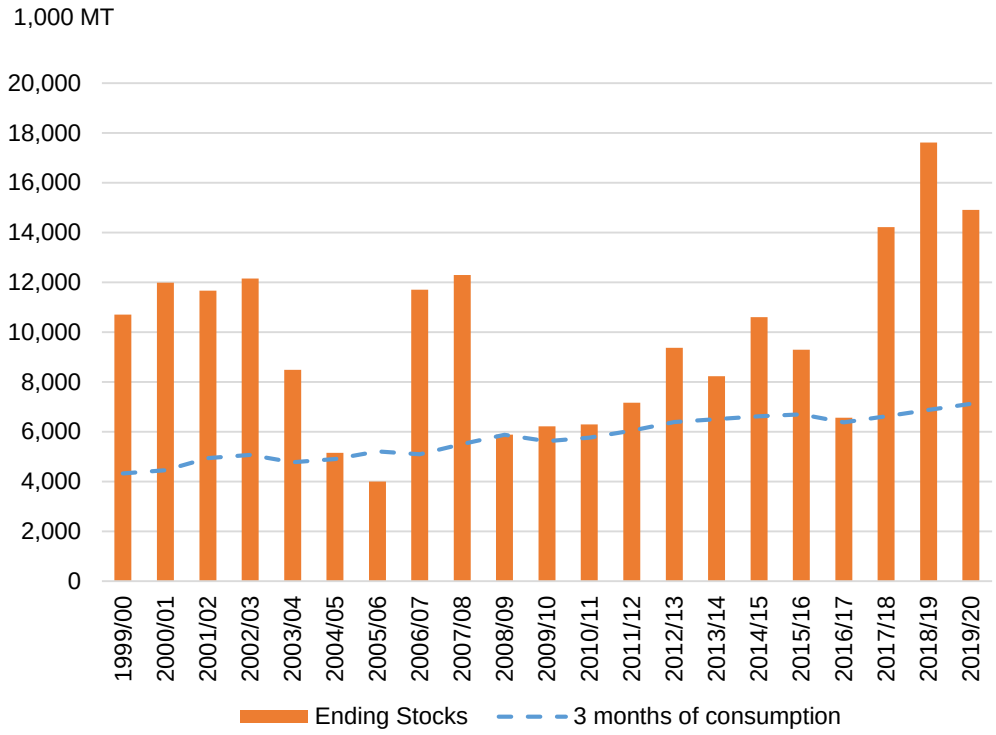
Source: USDA, Foreign Agricultural Service.

The response to large global supplies in 2018/19 was abrupt for some markets—notably Brazil, which shifted its sugarcane production heavily toward ethanol production, and the European Union, which saw an immediate decrease in production, partially due to successive drought-impacted sugarbeet crops. Both India and Thailand did not substantially reduce production in 2018/19, however. This is due to both the agronomic nature of sugarcane production and to domestic policies designed to buffer growers from economic hardship. This gradual decline in world production, rather than an abrupt market correction, has largely contributed to the continued overhang of supplies in the global market place, limiting any upward movement in prices.

The large spike in production in India resulted in a substantial overhang of supplies in the country. Domestic policy sets a target of 3-months' worth of sugar supplies as ending stocks. The Indian market has ending stocks that far exceed that target, however, as continued high levels of production boost supply. In addition to production figures, several public policies that affect India's sugar market spill over into the world market. India's Government influences domestic sugar prices through its Fair and Remunerative Price (FRP) policy, where the national Government sets the price that cane processors must pay sugar growers (with local and state Governments also having policies overlaying the FRP). The result is that cane processors often owe payments to growers well after the delivery of the crop, known as cane arrears, which has also required Government intervention. One way that India's Government has attempted to reduce supplies within the country is to institute programs to facilitate exports, subsidizing the costs associated with handling, processing, and freight, so that domestically produced sugar is

competitive on the global market. As a result, any upward movement in world sugar prices is often countered by the potential of additional Indian sugar entering the market.

Figure 5
India ending stocks 1999/00 to 2019/20

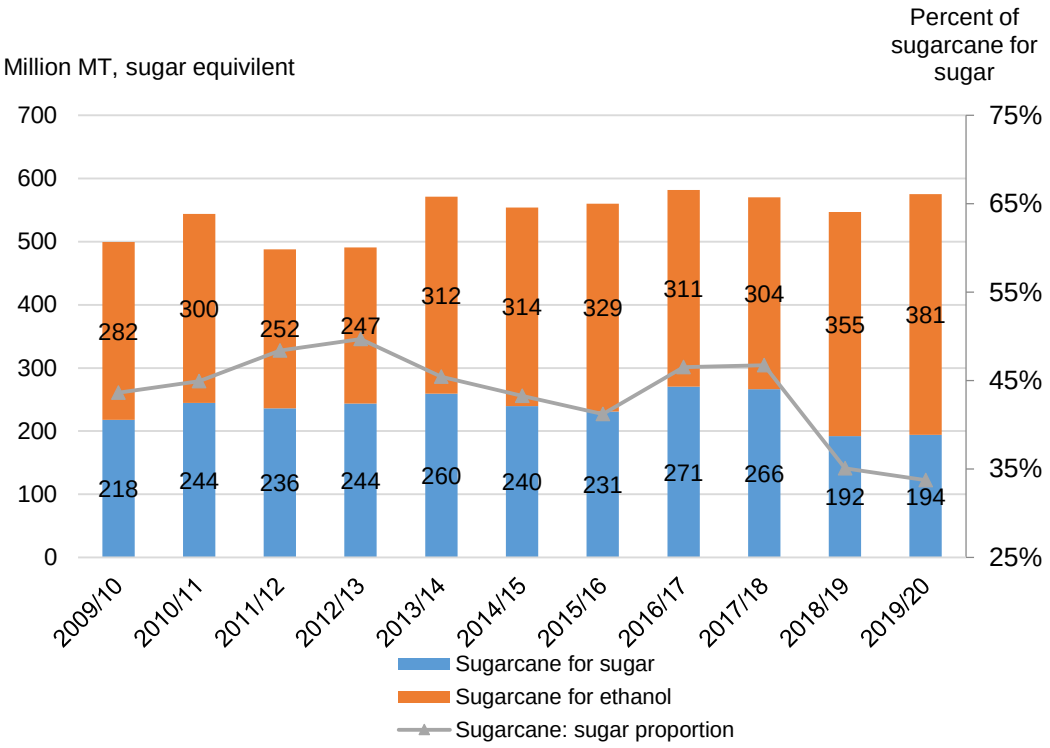


Source: USDA, Foreign Agricultural Service.

In contrast to India, Brazilian sugar producers responded promptly to the increase in global supplies. Brazil sugar production decreased 24.1 percent in 2018/19. Brazilian sugarcane production has changed very little over the past decade, but the industry has the capacity to utilize sugarcane for both sugar (primarily destined for the export market) and ethanol (primarily used in the domestic fuel market). In 2018/19 and 2019/20, Brazil has been diverting a record proportion of its crop to ethanol production. While this response has mitigated the supply glut over the past couple of years, it also serves as a governor for price increases in the world market. There is ample capacity for Brazil to return to the world market with exports, if their competitive standing were to be improved through higher sugar prices or a weaker *real*.

Figure 6

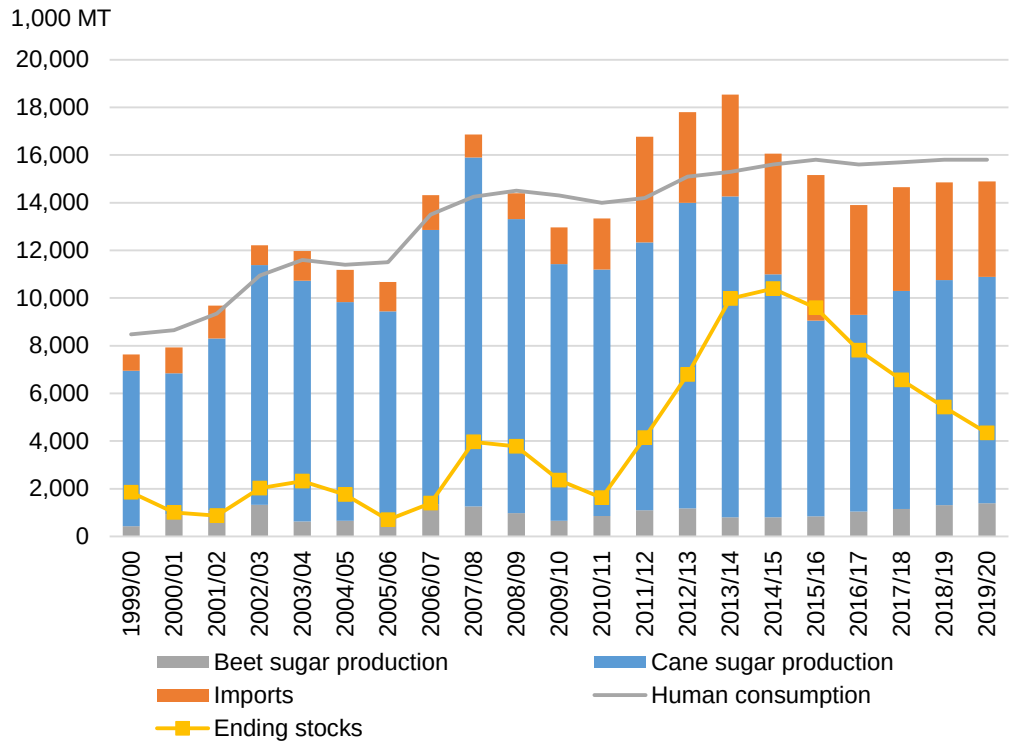
Brazil Center-South sugarcane production and use, through December 1, April-to-March marketing year



Source: Brazilian Sugarcane Industry Association (UNICA).

In addition to Brazil and India, the Asia-Pacific region represents an increasingly important region for global sugar production and trade. Indonesia and China represent the top two importers in the world, while Thailand and Australia are the second- and fourth-largest exporting countries, respectively. Market swings and policies in China, in particular, have had important effects on trade flows and global demand. As it did with other commodities, China increased its domestic sugar stocks dramatically between 2011/12 and 2013/14. This was done primarily through increased imports during a period of steadily declining world prices. Domestic production, which is composed of a sugarbeet and sugarcane sector in China, fell substantially between 2014/15 and 2016/17, in part due to relatively low domestic sugar prices and falling profits for domestic growers and mills.

Figure 7
China sugar production, exports, and domestic consumption 1999/00 to 2019/20



Source: USDA, Foreign Agricultural Service.

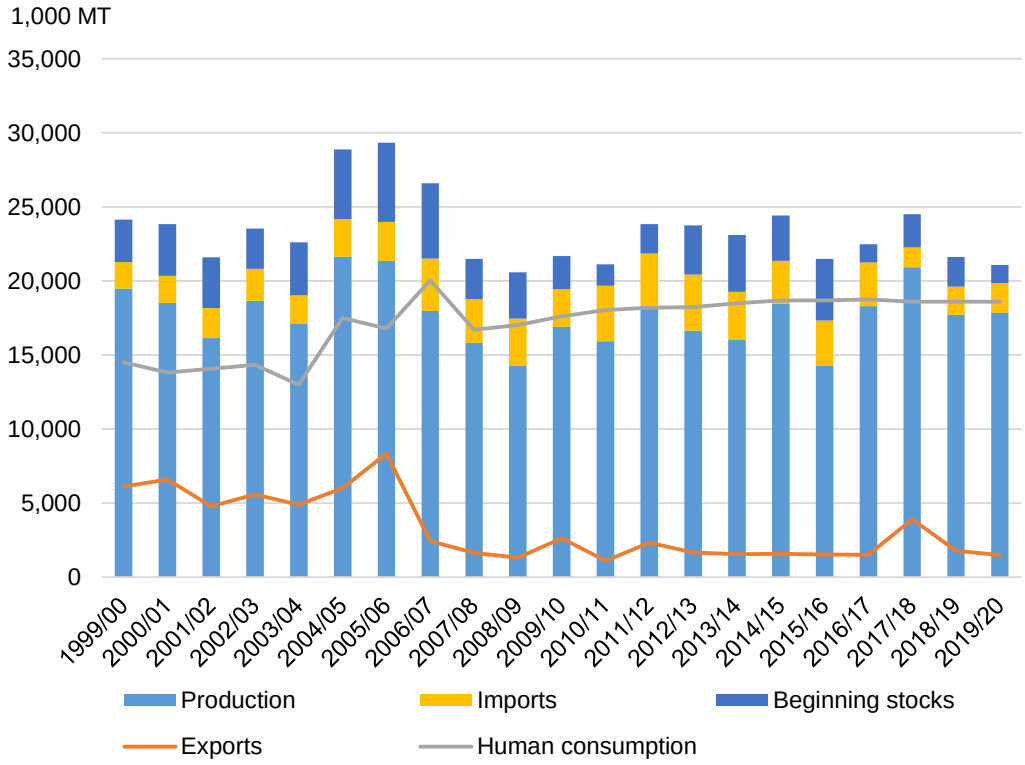
China is a large enough market that it can affect world prices when entering the import market for additional sugar supplies. While China continues to import a large share of its supply, the country has also sought to draw down on its extensive stocks to help meet its domestic demand. It has also relied upon TRQs and safeguard measures to limit availability and increase the price of imports to insulate its domestic industry from foreign competition (although some WTO-permitted duties are set to expire in May 2020). China's projected stocks-to-use ratio for 2019/20 shows that the market has been tightening steadily, meaning China may need additional supplies in the coming years, either from continued production growth or from increased imports. If China does become a bigger participant in the global sugar market, it could have a strong enough impact on demand to increase world sugar prices.

European Union Sugar Market Still Transitioning 3 Years Into Domestic Market Reform

Consumption in the European Union is expected to remain relatively unchanged for 2019/20, as consumption continues to flatten after increases that occurred subsequent to the expansion of the EU in 2003/04. While production had been trending upward leading up to its 2017/18 market reforms, production for 2019/20 is projected to increase a slight 0.7 percent in 2019/20, as growers were impacted by the second consecutive year of dry growing conditions. As a result, imports in 2019/20 are expected to remain relatively low compared to pre-2017/18 levels. Exports are projected to remain well below the recent peak in 2017/18, primarily due to the poor

growing conditions that have hindered available supplies; but also due to low global prices that limit profitability.

Figure 9
European Union sugar production, exports, and domestic consumption 1999/00 to 2019/20



Note: Data reflect the totals for 15-Member State European Union through 2003/04 and 25-Member State European Union through 2005/06.
Source: USDA, Foreign Agricultural Service.

The European Union sugar market is still transitioning after the change to its new policy regime. In 2017/18, the EU abolished its sugar production quotas, as well as the production quotas for isoglucose (such as HFCS). Previously, Member States were constrained by production quotas, limiting the amount of sugar and isoglucose produced for food use.

The reform addressed only domestic production policies. Imports of sugar into the European Union are still largely governed by TRQs that provide market access to specific exporters—particularly preferential access to Least Developed Countries (LDCs) and the Everything-but-Arms (EBA) Agreement- as well as market access specified within FTAs, and high-duty rates for imports outside of quota programs.

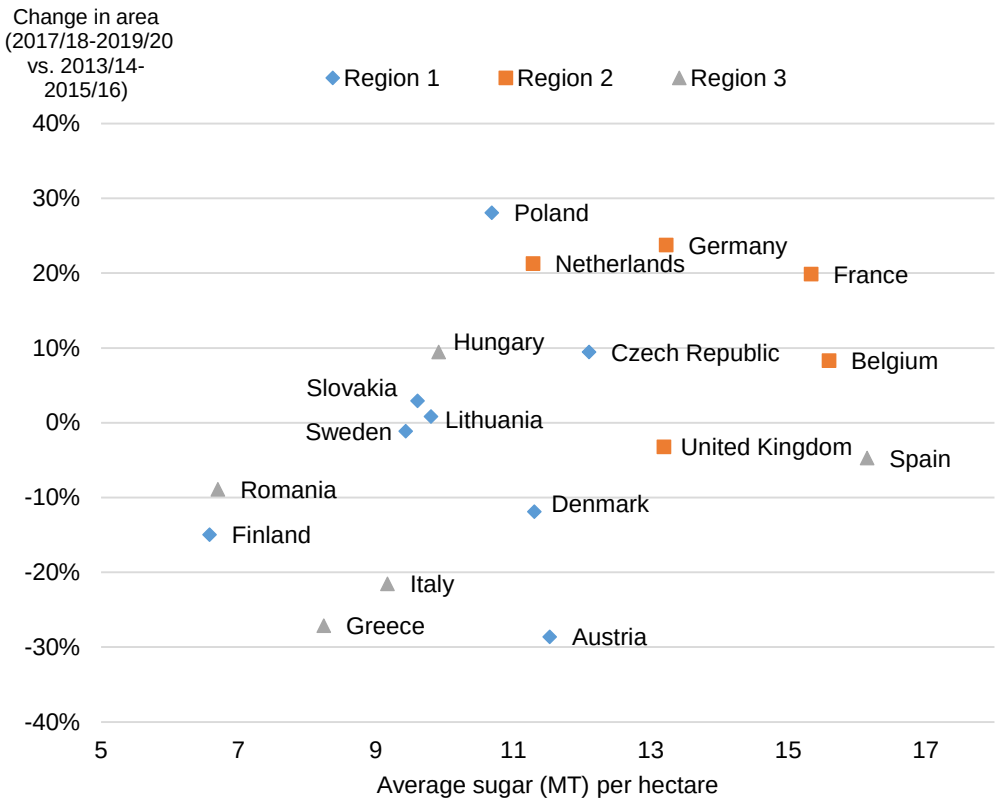
Given the focus of the 2017/18 reform, there are two key market elements to evaluate the reform's impact: the allocation of sugarbeet and sugar production among EU Member States and sugar prices within the European Union.

The removal of production quotas for each Member State resulted in a restructuring of the sugarbeet sector within the European Union. The top sugarbeet growing Member States, by harvested area, remain relatively unchanged by the reform. The top-five producing countries in 2013/14—France, Germany, Poland, the United Kingdom, and Netherlands—remained the

same in 2019/20. In fact, the reform resulted in most of the top countries expanding their area base for sugarbeet production, with the exception of the United Kingdom.

Comparing the 3-year average harvested area after the reform (2017/18 to 2019/20) to the 3 years leading up to the transition year (2013/14 to 2015/16), two important factors seemed to determine how production shifted within the European Union: productivity and geography. Member States that had higher measures of productivity, measured as metric tons of sugar produced per harvested hectare, were more likely to see acreage expansion after the reform. This includes the countries with the highest productivity rates, such as France, Belgium, and Germany, which also saw harvested area increase substantially. There was a clear trend throughout the EU, with more productive Member States increasing harvested area or staying relatively unchanged, while less productive Member States had harvested area declines.

Figure 10
European Union Member State change in sugarbeet area vs. agronomic productivity, 2013/14 to 2019/20

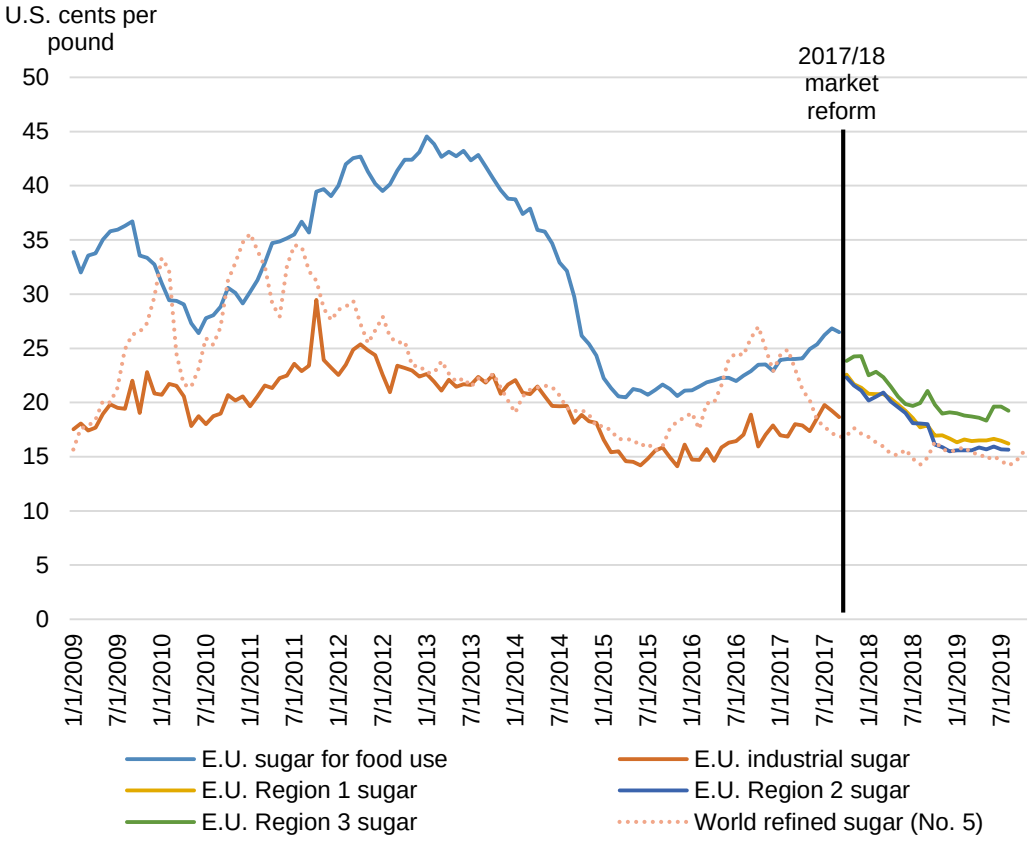


Source: USDA, Foreign Agricultural Service; European Commission.

Additionally, there is a correlation between changes in harvested area and a Member State's geographic location within the continent, as defined by the European Commission for sugar price reporting. Most of the growth was in Northern and Eastern European Member States in Regions 1 and 2, while many Southern Member States in Region 3 had their harvested area contract. Further, each region appears to have clustering, with more productive Member States within a region having higher percentages of area increases (or lower percentage declines) than less productive Member States. The trends within the regions are not as strong as the trend overall, however.

The removal of production quotas also resulted in a structural change in E.U. sugar pricing. Under the previous policy regime, E.U.-produced sugar was segregated into two different markets: in-quota production to be used for food use and out-of-quota production that was marketed for industrial use. There was a premium for sugar produced within the production quota. The removal of the quotas means there is no longer a market segregated by domestic use. After the reform went into place in 2017/18, the European Union began to report prices based on geography of the continent (Region 1, 2, and 3, as described earlier in this section).

Figure 11
World sugar production, human consumption, and production surpus, 1999/00 to 2019/20



Source: European Comission; USDA, Economic Research Service.

While the E.U. sugar market continues to transition to the new policy regime, particularly in the context of world sugar prices, there are several key observations that can be made thus far through the end of 2018/19. First, sugar prices in the E.U. have fallen since the reforms were put in place. Sugar prices in September 2019 were significantly lower than any domestic food use prices going back to 2006, when the E.U. reformed its sugar policies with regard to exports.

Second, domestic pricing in the European Union has become comparable to prices for refined sugar in the world futures market, particularly since October 2018. There is, however, no statistical evidence that E.U. and world sugar prices have become integrated. This could mean that world prices have been serving as a price floor for the European Union, but it does not support the notion that E.U. prices will follow in concert with world prices. Prices within the European Union still move independent of changes in the world futures market. This point

should be tempered, however, by the fact that the data up to this point is still limited and likely affected by the dynamic nature of any transition in policies. As the market stabilizes and more data becomes available, stronger conclusions may be made as to whether the sugar price in the European Union has become integrated with the world futures market.

Finally, pricing throughout the European Union has diverged since the 2017/18 reform, particularly during 2018/19. The price of sugar in Region 3 has been higher relative to the price in Regions 1 and 2. This is likely due to the trends in production. As production has concentrated more in the Northern and Eastern regions, this has resulted in increased costs for sugar buyers in the Southern Member States. In the first 3 months of 2017/18, the Euro price premium for sugar was 11 percent for Region 3 versus Region 2. By the last quarter in 2018/19, that price premium grew to 22 percent. Again, this is also likely impacted by the dynamics of a policy transition as the market continues to stabilize. Assets, infrastructure, and market factors affecting price differentials between regions are likely to change as the E.U. sugar market continues to evolve under the new policies under which it operates.

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