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Turkey

Sugar

Annual Report 2019

Approved By:

Christine Strossman, Agricultural Counselor

Prepared By:

Kubilay Karabina, Agricultural Specialist

Report Highlights:

Sugar beet production and planting area is forecast at 20.5 MMT and 340,000 ha in MY 2019/20, assuming favorable growing conditions similar to last year. Starch-based sugar quotas were decreased to 2.5 percent from five percent. The privatization process of state-owned sugar factories is partly finished. Turkish confectionary products exports are increasing steadily.

Commodities:

Sugar Beets; Sugar, Centrifugal

PRODUCTION**Sugar Beets**

A slight increase in quotas resulted in production of 20.5 MMT of sugar beets from a harvested area of 335,000 hectares in marketing year (MY) 2018/19. Sugar beet production and planting area is forecast at 20.5 MMT and 340,000 ha in MY 2019/20, assuming favorable growing conditions in line with last year.

Farmers plant their beets around April and harvest them in September/October. Planting for MY 2019/20 has started throughout Turkey. Production of sugar beets, and consequently sugar, is limited by quotas. These are now set by the Ministry of Agriculture and Forestry (MinAF) as of December 2017. Producers have already started to contract farmers for next year's beet production in the vicinity of their factories per their allocated sugar production quotas. Farmers who historically have sold their beets to sugar factories which are now being privatized are reportedly uncertain about the future and some are choosing to diversify some of their land with other crops next year.

Turkey produces sugar from sugar beets in most regions, but the majority of production comes from the Central Anatolia region, near the cities of Ankara, Konya, Eskisehir, Afyon, Tokat and Yozgat. There are about 110,000 farmers who produce sugar beets in Turkey. Sugar beets are planted in 4-year rotations with corn, wheat, barley, potatoes and sunflowers. Factories begin processing sugar beets in the beginning of October and finish in January, in a period called the campaign period. Currently, the average yield is about 60 metric tons per hectare.

Ethanol and Molasses

Molasses is a side product of sugar production from sugar beets, and production was around 820,000 MT in 2018, according to Turkseker's data, of which about 800,000 MT is used for the feed sector. The remainder is used for ethyl alcohol production and other purposes.

Sugar beets are the main source of bioethanol production in Turkey, followed by corn and wheat. No additional sugar beets are planted to produce this bioethanol as it is produced from molasses, which is a side product of sugar production from sugar beets. Once the sugar is extracted from beets, the alcohol remaining in the molasses is converted into ethanol. Afterwards, the molasses is used as feed and as raw material for the pharmaceutical industry, cosmetics, construction, alcoholic beverages and yeast. Sugar beet pulp is used directly or as a mixture with molasses in the feed sector. Production of these side products is increasing in parallel with the amount of beets utilized by the factories.

There are three plants in Turkey producing fuel-purpose bioethanol with an established total production of 160 million liters annually. Some 84 million liters of this comes from the Pankobirlik's Cumra Plant in Konya, where ethanol is produced from sugar beet molasses. The rest comes from two plants in the cities of Bursa and Adana where it is produced from locally grown corn.

Currently there is a three percent mixture rate of bioethanol into fuel as specified by the Energy Market Regulatory Authority (EPDK). The regulation requires this bioethanol to be obtained from only domestically-grown agricultural products. This law has been in place since 2014.

CONSUMPTION

With a population of approximately 80 million, Turkey is a significant sugar consumer. Turkey's annual per capita consumption of total sugar is estimated to be 30 kg. Sugar consumption breaks down to about 80 percent used by the industry and 20 percent by households. The increase in home-use and industrial sugar consumption appears to be correlated with the increase in population and increasing foreign visitors. The current recession in the Turkish economy may affect domestic consumption and preferences in the next months, though it is hard to estimate the total impact on overall sugar consumption.

Currently, Turkey's total annual sugar and sweetener consumption varies between 2.3 and 2.9 MMT, where beet sugar accounts for between 2.2 and 2.7 MMT, and starch-based sugar (SBS) accounts for approximately 250,000 MT. Increasing urbanization and the subsequent changes to lifestyles and eating habits play an important role in increasing sugar consumption. Starch-based sweeteners that are derived from corn are not consumed directly, but are used by the industry as an ingredient in the production of candies, baked products, traditional desserts, ice cream, helva, jams, and alcoholic and non-alcoholic beverages.

Post revised the centrifugal sugar consumption forecast to 2.8 MMT in MY 2018/19 which is slightly lower than previously forecast, mainly due higher exports than expected. The centrifugal sugar consumption is expected to remain high at 2.88 MMT due to increased beet sugar quotas in MY2019/20.

TRADE

A number of Turkish agricultural exports benefit from Turkey's Inward Processing Regime (IPR) policy. Sugar can be imported tariff free if used in products that will be exported and not marketed domestically. Almost all sugar imports in MY 2018/19 have been done under the scope of the IPR with zero tariffs by sugar product exporters. If imported for the domestic market, the tariff on sugar is 135 percent. The HFCS tariff is also 135 percent. Therefore, sugar imported for use in the domestic market is limited to specialty sugar that is not domestically produced (aimed for medical, laboratory use, etc.).

Turkey's import and export figures for sugar in MY 2017/18 and for the first five months of MY 2018/19 are given in the below table. Following the depreciation of the Turkish Lira in summer 2018, the price of Turkey's sugar became competitive on the world market and exports increased. During the first five months of MY 2018/19, Turkey exported 64,226 MT of sugar, compared to just 323 MT in the same period of the previous year.

However, import decisions were also affected. Turkey imported about 252,000 MT of sugar in MY 2017/18. During the first five months of MY 2018/19, Turkey imported about 67,000 MT of sugar, compared to about 119,000 MT in the same period of the previous year. Post revised the import forecast

from 260,000 MT to 200,000 MT raw sugar equivalent basis, for both beet sugar and HFCS in MY 2018/19 due to decrease in demand as a result of the depreciation of the Turkish Lira in summer 2018. For MY 2019/20, sugar imports into Turkey are projected at 230,000 tons, raw sugar equivalent basis, with stable demand from sugar product exporters for both beet sugar and HFCS.

Table 1: Turkey’s Trade for Beet Sugar and Chemically Pure Sucrose, Refined, In Solid Form, Not Containing Added Flavoring or Coloring Matter (HS 170199)

<u>Export Trade Matrix</u>		
	MY 2017/18 (Oct-Sep)	MY 2018/19* (Oct-Feb)
Syria	14,771	35,204
Iraq	3,400	24,795
Europe Free Zone	211	691
Azerbaijan	9	7
Turk. Rep. of N. Cyprus	158	91
Other	233	3,438
Grand Total	18,782	64,226
<u>Import Trade Matrix</u>		
	MY 2017/18 (Oct-Sep)	MY 2018/19* (Oct-Feb)
Ukraine	74,113	7,018
Brazil	38,096	22,532
Algeria	2,107	10,470
Germany	8,454	4,615
Poland	34,857	8,520
France	17,532	8,429
India	11,658	725
Belgium	34	1,218
Other	24,029	3,458
Grand Total	231,515	66,985*

Source: Global Trade Atlas, Metric Tons in Marketing Years,

*Note: MY 2018/19 is not a full year

As seen in Table 2, Turkey’s HFCS imports have declined dramatically, after the government quota decision for MY 2017/2018. The reduction in quota for use of HFCS in products consumed domestically resulted in utilization of some of the domestic HFCS production capacity for exported confectionary products, through the IPR system.

Table 2: Turkey's Imports of Sugars Nesoi, Including Chemically Pure Lactose, Maltose, Glucose & Fructose In Solid Form; Sugar Syrups (Plain); Artificial Honey; Caramel (MT)

Turkey Import Statistics From World					
Commodity: 1702, Sugars Nesoi, Including Chemically Pure Lactose, Maltose, Glucose And Fructose In Solid Form; Sugar Syrups (Plain); Artificial Honey; Caramel (MT)					
Calendar Year: 2016 - 2018					
Commodity	Description	Quantity			% Change
		2016	2017	2018	2018/2017
1702	Sugars Nesoi, Incl Chem Pure Lactose Etc; Caramel	72,324	38,449	32,188	-16.28
170230	Glucose (Dextrose), Under 20% Fructose In Dry Form	17,631	17,280	18,339	6.13
170290	Sugar, Nesoi, Including Invert Sugar & Syrup	14,000	7,811	6,529	-16.42
170211	Lactose & Lactose Syrup Cont 99% More Lactse By Wt	2,117	2,381	2,800	17.6
170250	Chemically Pure Fructose In Solid Form	1,127	1,439	2,421	68.28
170240	Glucose & Glucose Syrup Containing 20-49% Fructose	19,417	9,150	1,921	-79.01
170260	Fructose, Nesoi & Syrup, Ov 50% Fructose In Dry Fm	18,010	374	163	-56.39
170220	Maple Sugar And Maple Syrup	11	7	9	27.57
170219	Lactose In Solid Form And Lactose Syrup, Nesoi	11	7	6	-10.76

Source: GTA

Table 3: Turkey's Exports of Sugars Nesoi, Including Chemically Pure Lactose, Maltose, Glucose And Fructose In Solid Form; Sugar Syrups (Plain); Artificial Honey; Caramel (MT)

Turkey Export Statistics To World					
Commodity: 1702, Sugars Nesoi, Including Chemically Pure Lactose, Maltose, Glucose And Fructose In Solid Form; Sugar Syrups (Plain); Artificial Honey; Caramel					
Calendar Year: 2016 - 2018					
Commodity	Description	Quantity			% Change 2018/2017
		2016	2017	2018	
1702	Sugars Nesoi, Incl Chem Pure Lactose Etc; Caramel	200,017	242,306	245,740	1.42
170230	Glucose (Dextrose), Under 20% Fructose In Dry Form	111,374	124,369	117,375	-5.62
170250	Chemically Pure Fructose In Solid Form	64,363	79,262	81,428	2.73
170260	Fructose, Nesoi & Syrup, Ov 50% Fructose In Dry Fm	13,401	16,994	20,852	22.71
170240	Glucose & Glucose Syrup Containing 20-49% Fructose	4,294	11,523	12,370	7.35
170290	Sugar, Nesoi, Including Invert Sugar & Syrup	2,160	5,604	10,272	83.28
170219	Lactose In Solid Form And Lactose Syrup, Nesoi	3,769	2,957	2,133	-27.86
170211	Lactose & Lactose Syrup Cont 99% More Lactse By Wt	654	1,569	1,289	-17.83
170220	Maple Sugar And Maple Syrup	3	29	22	-24.62

Source: GTA

As seen in Table 4, Turkey's **sugar confectionary products** exports are steadily increasing in recent years. This helps Turkish sugar producers to expand consumption of their products as ingredients in international markets.

Table 4: Turkey's Exports of Sugar Confectionary Products

Turkey Export Statistics To World					
Commodity: 1704, Sugar Confectionary (Including White Chocolate), Not Containing Cocoa					
Calendar Year: 2016 - 2018					
Commodity	Description	Quantity			% Change
		2016	2017	2018	2018/2017
1704	Sugar Confection (Incl White Chocolate), No Cocoa	165,701	188,541	194,168	2.98
170490	Sugar Confection (Incl Wh Choc), No Cocoa, Nesoi	150,228	172,813	182,516	5.61
170410	Chewing Gum, Whether Or Not Sugar Coated	15,473	15,728	11,653	-25.91

Source: GTA

STOCKS

Sugar producers who are allocated quotas at the beginning of the marketing year sell their ‘A’ quota production in the domestic market. If a company cannot market its entire ‘A’ quota sugar, the remaining amount is transferred to the ‘A’ quota of the following marketing year, which cuts into the company’s quota allocation for the following year. Therefore, companies prefer to market this excess amount as ‘C’ sugar and either export it directly or sell it to confectionary companies at world prices to be used in their products for export. The companies are required to keep a certain amount of sugar on hand as “security reserves”, which is called ‘B’ quota. So, any remaining stocks would belong to sugar factories, and they try to sell this stock at discounted prices (ranging from 5 percent to 8 percent, depending on the amount purchased) before the beginning of the new campaign period due to financial reasons.

The ending stocks forecast is expected to be at a normal level, 10,000 MT in MY 2019/20, which is similar to the previous year, assuming stable demand. The government’s quota system discourages stocking of sugar by the companies, except the security reserves (‘B’ quota).

Starch-based sweetener companies usually produce and sell their entire allocated quota amount and are left with no more than 10,000-15,000 tons of HFCS stocks at the end of the marketing year.

MARKETING

The state-owned Turkseker, private producers, wholesalers and retailers handle the marketing of sugar. The marketing year begins after the harvest and lasts until the next autumn (i.e. from September 1 to August 31 of the following year). Despite the 4-5 month production period that starts generally around September and ends in January, sugar is marketed for 12 months.

The sweets and confectionary sectors in Turkey are developing steadily. Production of chocolate and cacao products increased substantially compared to the traditional Turkish products such as *Turkish delight* and *helva*. Exporters of these products can use ‘C’ sugar at world prices, but are charged a fine if their products are found for sale in the domestic market.

Turkey levies a 135 percent import tax on sugar. Imports seen in the PSD tables are mainly brought in tariff-free under the scope of the IPR. This means the imported sugar is exempt from tariffs as long as it is used in exported goods, and not imported to be sold domestically.

POLICY

Previously, the Sugar Agency and Sugar Board managed the quota process, but these entities were abolished with [Statutory Decree No. 696](#), which was published in the Official Gazette on December 24, 2017, under Turkey’s “State of Emergency”. All the authorities of this Agency were then transferred to the Ministry of Agriculture and Forestry. The Sugar Department under the Ministry was founded on April 28, 2018. According to the Sugar Department’s webpage, it deals with sugar issues such as determining the sugar quotas and regulating the sugar market.

The sugar beet production system is as follows:

1. The Government announces the sugar production quotas for the market year and allocates them to the existing sugar producers.
2. Sugar producers contract farmers in the vicinity of their factories per their allocated sugar production quotas.
3. At the beginning of the harvest period, the GOT announces a base procurement price (for a polarity rate of 16) and the factories pay the farmers according to the polarity rate (the amount of sugar obtained from a beet) of their beets, relative to the base price. For MY 2017/18, the announced beet prices were 210 TL per metric ton and it has increased to 235 TL/MT for MY 2018/19 (1 US\$ = 5.5 TL as of April 2019). The GOT also gives support for fertilizer (40 TL/ha), and gasoline (135TL/ha). Beets with higher polarity rates get about an extra 3 USD/MT per each degree of polarity increase.
4. At the end of the production period, the factories market their allocated ‘A’ quota sugar within Turkey at the price announced by the Sugar Board, and any excess amount is either exported or sold at international market prices to exporting companies to be used in their confectionary products, which is called the ‘C’ quota.

Centrifugal Sugar

Turkey's quotas determine the quantity for beet sugar and starch-based sweetener production, and are announced in three categories. The 'A' quota specifies how much sugar companies can sell in Turkey within a marketing year. The 'B' quota is an extra amount that is produced and kept in reserve as a buffer. 'B' quota volume is calculated as a percentage (generally 5 percent) of the 'A' quota. The 'B' quota is allocated only for beet sugar, and not to starch-based sugar, as per the sugar law. The 'C' quota applies to excess sugar produced above the allocated 'A' quota amount, which can only be exported and is sold by factories at world prices.

The table below provides the production quotas for the last three marketing years. Typically, the overall quota is increased slightly each year. The quotas for MY 2019/20 were announced on February 5, 2019 by a [presidential decree](#). In the announcement, it said that the new quotas would cover MY 2019/20.

Table 5: Sugar Production Quotas in Turkey (1,000 MT)

	2016/2017 MY			2017/2018 MY			2018/2019 MY			2019/2020 MY		
	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL
Beet Sugar	2,385	119.25	2,504.25	2,537	120	2,532	2,565	128.2	2,692.20	2,632.50	131.6	2,764.10
Starch-based Sugar	265	-	265	133*	-	133*	135	-	135	67.5	-	67.5
Total Quota	2,650	119	2,769	2,670	120	2,790	2,700	128.2	2,828.20	2,700	131.6	2,831.60

Source: Official Gazette;

*Note: MY 2017/18 quota was reduced by the Turkish Government in the third quarter of the marketing year from 265,000 MT to 133,000 MT

Turkiye Seker Fabrikalari A.S. (TURKSEKER) is a government entity and is the biggest sugar producer in Turkey with 15 sugar factories, though not all of them are operating every year. Under Turkseker, there are also four alcohol/bioethanol plants, farm machinery plants, a seed treatment plant, and a Sugar Institute for research purposes. In addition to the government-owned Turkseker factories, there are six other privately-owned beet sugar producers in Turkey. In total, including government and privately owned, there are 33 factories with a total production capacity of 3.1 MMT per year.

Historically, like many sectors in Turkey, all Turkey's sugar factories were government-owned and operated. Some were then privatized, and there have been plans for years to let the private sector buy and operate more of the factories, but the attempts at privatization were not successful and unpopular politically. As another privatization attempt, the government announced a privatization process road-map for 14 state-owned sugar factories, under the portfolio of the Privatization Agency. The announcement was published in the Official Gazette on Feb. 21, 2018. The privatization process

started for 14 of the 25 Turkseker factories in 2018, and 10 of the factories are now owned by the private sector, as of 2019.

The production quotas for MY2019/20, allocated to the centrifugal sugar producers:

Table 6: Beet Sugar Quotas for Producers for MY 2019/2020 (Metric Tons)

Beet Sugar Producers	A Quota	B Quota
Türkiye Şeker Fabrikaları A.Ş. (TURKSEKER)	934,000	46,700
Konya Şeker San. ve Tic. A.Ş.	435,500	21,775
Kayseri Şeker Fabrikası A.Ş.	328,800	16,440
Kayseri Şeker Fabrikası A.Ş.(Turhal)	100,750	5,037
Dogus Yiyecek Icecek Uretim San. (Afyon)	115,000	5,750
Keskinkılıç Gıda San. ve Tic. A.Ş.	107,000	5,350
Corum Şeker Fabrikası A.Ş.	95,750	4,788
Amasya Şeker Fabrikası A.Ş.	79,400	3,970
Tutku Gıda Turizm (Kirsehir)	70,250	3,512
Adapazarı Şeker Fabrikası A.Ş.	67,800	3,390
Bor Şeker Fabrikası A.Ş.	62,000	3,100
Albayrak Turizm Seyehat A.S. (Erzurum)	50,500	2,525
Mutulucan Seker Uretim AS	50,000	2,500
Kütahya Şeker Fabrikası A.Ş.	43,750	2,188
Mus Şeker Fabrikası A.Ş.	40,500	2,025
Albayrak Turizm Seyehat A.S.(Erzincan)	26,500	1,325
Binbir Gıda Tarım ürünleri A.Ş.(Alpullu)	25,000	1,250
Total	2,632,500	131,625

Source: Official Gazette

Centrifugal Sugar Prices

The GOT announces a base price for sugar beets and a factory sales price for sugar in consultation with Turkseker. The factory sales price of sugar is announced depending on the average refining costs of Turkseker. This eventually benefits the private and cooperative producers as their costs are much lower, so their profit margins become higher. In 2019, the factory sales price of sugar is 166 TL for a 50 kg bag (3.32 TL/kg) which is similar to the previous year. The retail price of sugar currently varies between 3.9 and 4.9 TL/kg in supermarkets (1 US\$ = 5.5 TL as of April 2019). Turkseker's historical prices by year can be found [here](#).

Starch-Based Sugar (SBS)

There are five starch-based sugar (SBS) producers under the quota system, all of which are privately owned and have a total processing capacity of about 1 MMT of high fructose corn syrup (HFCS) output annually. There are also five additional SBS producing companies with about 300,000 MT of capacity, which are supposed to only produce for export and are outside of the quota system.

Starch-based sweeteners made in Turkey for the domestic market are made from domestically produced corn. Over the last few years, the starch-based sweeteners market in Turkey has been squeezed by legislation and regulations. SBS quotas, which were on average, around 345,000 MT per year between 2003 and 2016, were reduced to 265,000 MT in 2017 and 2018 marketing years, with no discretionary increases by the government in the existing 10 percent quota.

In 2018, SBS quotas were reduced again to 5 percent of the total national sugar quota (A-quota) with an amendment made in the Sugar Law No. 4634 which was published in the Official Gazette on March 27, 2018. This was confirmed by a Presidential Decree ([Decree No. 4](#)), published in the Official Gazette on 07/31/2018 confirming the quota level at 135,0000 MT and requiring SBS producers to supply at least half of their allocated SBS quota as “glucose”. The stated justification for this requirement was to prevent any supply-side bottlenecks in the sugar-using industries since glucose could not be substituted by beet-based alternatives as was considered to be the case for fructose.

For MY 2019/20, as announced by a new Presidential Decree ([Decision No. 702](#)) on February 5, 2019, total A quota for beet sugar production is 2.7 million tons and SBS quotas were determined as 2.5 percent of the total national sugar quota at 67.5 thousand tons for the marketing year 2019/2020. On a raw sugar equivalent basis, the high fructose corn syrup quota amount is about 53,000 tons.

The table below shows the allocation of the SBS quota for MY 2019/20 to the five producers.

Table 7: Starch-Based Sugar Companies and Quotas (MT)

Starch-Based Sugar Producing Companies	A Quota
CARGILL TARIM VE GIDA SANAYİ VE TİCARET A.Ş.	29,589
AMYLUM NİŞASTA SANAYİ VE TİCARET A.Ş.	21,011
PNS PENDİK NİŞASTA SANAYİ A.Ş.	9,583
TAT NİŞASTA İNŞAAT SANAYİ VE TİCARET A.Ş.	4,346
SUNAR MISIR ENT. TES. SANAYİ VE TİCARET A.Ş.	2,971
Total	67,500

Source: Official gazette

For additional information on Turkey’s corn production, please see [Turkey Grain and Feed Annual Report 2019](#).

The last two years were very dramatic in terms of sugar policy and debates on sugar. The uncertainty of the Sugar Board and sugar quotas caused stress for producers and farmers. Then the privatization announcement of state-owned sugar beet factories sparked another set of debates. Turkish sugar beet

producers and opposition political parties have traditionally been against privatization of the sugar sector due to social and economic reasons. One of the main arguments of the anti-privatization groups are that once these plants are privatized, only a few profitable refineries will survive and the rest will be shut down, causing a spike in unemployment. For detailed information for 2018, please [see](#) Turkey Sugar Annual Report 2018.

Production, Supply and Distribution Data Statistics

Sugar Beets	2017/2018	2018/2019	2019/2020
Market Begin	Sep 2018	Sep 2019	Sep 2020

Year						
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Turkey						
Area Planted	330	330	340	340	0	340
Area Harvested	325	325	340	335	0	340
Production	20000	20000	20500	20500	0	20500
Total Supply	20000	20000	20500	20500	0	20500
Utilization for Sugar	20000	20000	20500	20500	0	20500
Utilization for Alcohol	0	0	0	0	0	0
Total Distribution	20000	20000	20500	20500	0	20500

(1000 HA) ,(1000 MT)

Sugar, Centrifugal Market Begin Year	2017/2018		2018/2019		2019/2020	
	Oct 2017		Oct 2018		Oct 2019	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Turkey						
Beginning Stocks	10	10	10	10	0	10
Beet Sugar Production	2500	2500	2600	2700	0	2750
Cane Sugar Production	0	0	0	0	0	0
Total Sugar Production	2500	2500	2600	2700	0	2750
Raw Imports	0	0	0	0	0	0
Refined Imp.(Raw Val)	260	252	260	200	0	230
Total Imports	260	252	260	200	0	230
Total Supply	2770	2762	2870	2910	0	2990
Raw Exports	0	0	0	0	0	0
Refined Exp.(Raw Val)	5	20	5	100	0	100
Total Exports	5	20	5	100	0	100
Human Dom. Consumption	2755	2732	2855	2800	0	2880
Other Disappearance	0	0	0	0	0	0
Total Use	2755	2732	2855	2800	0	2880
Ending Stocks	10	10	10	10	0	10
Total Distribution	2770	2762	2870	2910	0	2990

(1000 MT)

