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Turkey

Sugar Annual

Turkey Annual Sugar Report

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Report Highlights:
Lower polarity rates in the last two harvest seasons led to a deficiency in the 'C' quota sugar demanded by exporter confectionary producers. This resulted in a substantial increase in sugar imports in 2015 to 170,000 MT compared to 4,600 MT in 2014. As a result, after remaining the same for the past two marketing years, total sugar quota increased eight percent to 2,769,250 MT in MY 2016/17 where total beet sugar quota is announced as 2,5040,250 MT and the starch based sugar quota is 265,000 MT. In line with the increased quotas, Turkey's sugar beet plantation is expected to increase to 300,000 hectares in MY 2016/17 and the sugar production is expected to be 2.5 MMT.

Executive Summary

There are 33 factories belonging to 7 companies operating in the Turkish beet sugar sector with a total annual production capacity of 3.1 MMT, yet the actual production is usually ten to twenty percent lower than the capacity, in order to balance supply and demand.

Sugar production is regulated by a public institute called the Turkish Sugar Board, which announces and allocates annual production quotas to the existing producers, as per the Sugar Law of 2001. The Turkish Sugar Board has drafted a revision to this Law to expand regulations to cover stevia and high density sugar varieties among other structural changes, but it has not yet been approved by the Parliament.

In the past two market years (MY 2014/15 and MY 2015/16), climate conditions were unfavorable for sugar beets which led to lower polarity rates (amount of sugar obtained from sugar beets). As a result the Sugar Board increased the sugar production quotas for MY 2016/17 to 2,769,250 MT where total beet sugar quota is announced as 2,504,250 MT and the starch based sugar quota is 265,000 MT. Even though plantation is just starting, post expects an increase in plantation areas and the eventual sugar production in MY2015/16.

As farmers become more familiar with modern agricultural techniques and are using better quality seeds, the yields are increasing and so are farmers' incomes, especially in the Central Anatolia region.

Starch based sugar (SBS) production has also increased six percent in MY 2016/17 in light of the general increase in sugar production quotas.

Commodities:

Sugar Beets

Sugar, Centrifugal

Production

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. Sugar beet fields are rotated with cereals, pulses, fodder crops and sunflowers. Sugar beets are planted in the spring (April), and the harvest begins in October. However, these periods vary slightly according to the climate conditions of the region.

Production of sugar beets, and consequently sugar, is limited to the quotas specified by the Turkish Sugar Board. These quotas determine the quantity for beet sugar and starch based sugar, and are announced as 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, and its volume is calculated as a percentage (generally 4 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 is sold by factories at world prices and can only be used for export purposes.

The table below provides the production quotas for the last three marketing years. Figures are in 1,000 metric tons.

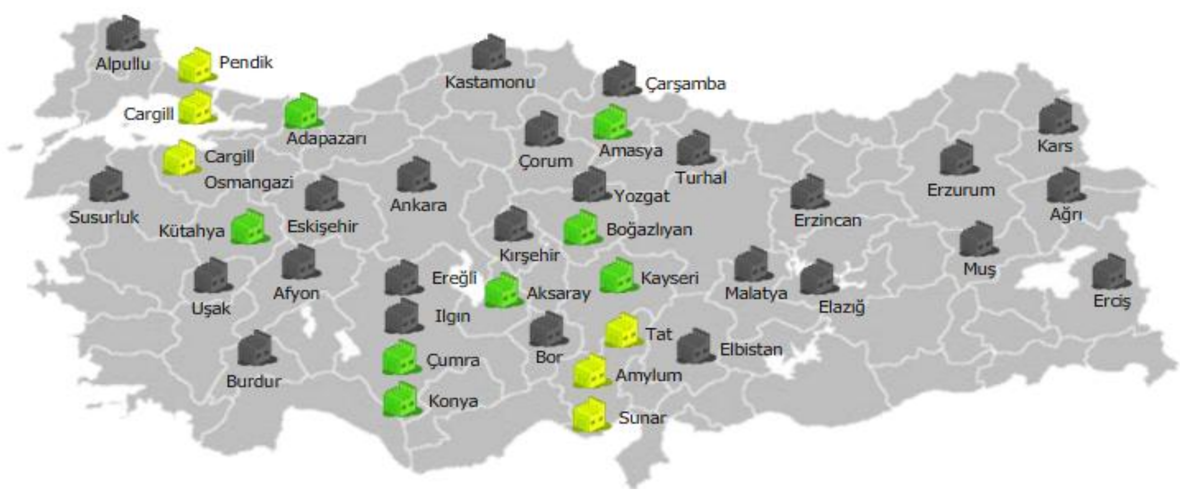
	2014/2015 MY			2015/2016 MY			2016/2017 MY		
	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL
Beet Sugar	2,250	67.5	2,317.5	2,250	67.5	2,317.5	2,385	119.25	2,504.25
Starch Based Sugar	250	-	250	250	-	250	265	-	265
Total Quota	**2,500**	**67.5**	**2,567.5**	**2,500**	**67.5**	**2,567.5**	**2,650**	**119.25**	**2,769.25**

There are seven beet sugar producers in Turkey; six of which are private and one is public (Turkseker), which have been in the process of being privatized for eight years now. These seven producers have 33 factories with a total production capacity of 3.1 MMT per year. There are also five starch based sugar (SBS) producers, all of which are privately owned and have a total processing capacity of 1 MMT of corn. The production quotas for MY2016/17 are allocated to the sugar beet producers as follows:

BEET SUGAR QUOTAS FOR MY 2016/2017 (Metric Tons)			
Beet Sugar Producers	**A Quota**	**B Quota**	
Türkiye Şeker Fabrikaları A.Ş.	1,361,700	68,090	
Adapazarı Şeker Fabrikası A.Ş.	50,000	2,500	
Amasya Şeker Fabrikası A.Ş.	63,100	3,150	
Kayseri Şeker Fabrikası A.Ş.	328,800	16,440	
Keskinkılıç Gıda San. ve Tic. A.Ş.	107,000	5,350	
Konya Şeker San. ve Tic. A.Ş.	435,500	21,780	
Kütahya Şeker Fabrikası A.Ş.	38,900	1,940	
Total	**2,385,000**	**119,250**	

The announced quota is allocated to each of these producer companies at the beginning of a calendar year. These producers then contract farmers in the vicinity of their factories to plant sugar beets based on their allocated quotas. Any excess sugar produced at the end of a marketing year beyond their 'A' quota is sold by factories at significantly lower world prices, which is called the 'C' quota sugar, and its use is restricted to either direct exports or sales to producers of confectionary products for export. There is no quota announced for 'C' sugar since it can only be used in products that will be exported, and cannot be marketed domestically. While private companies prefer to export their 'C' sugar directly, Turkseker has the largest share in providing 'C' sugar to exporting confectionary producers. The government has obliged Turkseker to do so in order to support exports. In the event that 'C' sugar does not meet the demands of exporters and exporting producers in a market year, Turkseker shifts some of its 'A' quota sugar to 'C' sugar and sells it at world prices, and bears the economic loss in order to meet that demand.

The map below shows the locations of all production facilities throughout Turkey. There are 33 sugar plants and six SBS plants in total (one company has two plants). The plants marked in gray (25) are the public beet sugar production factories that belong to Turkseker. The green plants (8) are private and cooperative owned beet sugar production factories and the yellow plants (6) are starch based sugar production plants that are all private.



From the green plants above, the Adapazari factory belongs to the Turkish conglomerate Yildiz Holding, the Aksaray factory belongs to Keskinkilic Company, and the Kutahya Factory belongs to Kiler and Torun groups. The rest (5) of the factories belong to PANKOBIRLIK – the Turkish Sugar Beet Producers Cooperative.

Some of the Turkseker factories are not operated every market year. These are the Kars, Agri, Carsamba, Alpullu and Susurluk factories. Beets produced in these regions are delivered to other more efficient factories in years when there is low production. Some of the factories of Turkseker were opened in the earlier years of the republic to promote social welfare in certain regions of the country and because sugar production is labor intensive, facilities have been established in the East and in regions where the government hopes to reduce migration to urban centers.

Sugar Beet Production

The production system is as follows:

1. The Sugar Board announces the quotas for the Market Year and allocates them to the existing producers.

2. Producers contract farmers in the vicinity of their factories per their allocated production quotas.

3. Farmers plant their beets around April and harvest them in September/October. At the beginning of the harvest period the Sugar Board announces a base procurement price (for a polarity rate of 16) and the factories pay the farmers according to the polarity rate of their beets relative to the base price. Higher temperature differences between day and night favor the polarity rate (the

amount of sugar obtained from a beet). The announced beet base price was 157.5 TL and the average beet price throughout Turkey was 160 TL per metric ton. For MY 2016/17 the announced beet prices are 190 TL per metric ton. (1 US$ = 2.8 TL as of April 2016)

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 stock market prices to exporting companies to be used in their confectionary products, which is called the 'C' quota.

In MY 2015/16, sugar beets were planted on 288,367 hectares and 16,632,256 MT beets were harvested. High temperatures in August in the past two marketing years and a wide spread Cercospora disease observed in beet leaves led to lower than expected sugar production, which is why producers could not fulfill their production quotas. Despite a total of 2,362,500 MT of quota, only 2,000,000 MT of sugar was produced. Eventually companies could not allocate any (excess A quota sugar to) C sugar for export purposes. This led to a jump in imports from 4,600 MT in 2014 to 170,000 MT in 2015.

Centrifugal Sugar Prices

The Sugar Board announces a base price for sugar beets and a factory sales price (referred to as *ex-factory price* in this report) 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 other (private and cooperative) producers as their costs are much lower and their profit margins become higher. In MY 2015/16 the ex-factory sales price of sugar is announced as 2.8 TL/kg which makes 3 TL after the 8 percent sales tax is applied. The retail price of sugar currently varies between 3.5 and 4.5 TL/kg in supermarkets. (1 US$ = 2.8 TL as of April 2016)

Starch Based Sugar (SBS)

The Raw Material and Sugar Prices Decree (2009) requires the use of domestically grown corn for the production of SBS that is marketed domestically. There are currently five private SBS companies that are allocated a quota and their total production capacity is approximately 1 MMT/year. Apart from these, there are four other SBS companies that are not allocated quotas and are allowed to produce SBS only for export purposes. These have a total SBS production capacity of 269,000 MT/year.

The table below shows the allocation of the SBS quota for MY 2016/17 to the five producers.

Starch Based Sugar Producing Companies	A Quota
CARGILL TARIM VE GIDA SANAYİ VE TİCARET A.Ş.	116,181
AMYLUM NİŞASTA SANAYİ VE TİCARET A.Ş.	82,385
PNS PENDİK NİŞASTA SANAYİ A.Ş.	37,649
TAT NİŞASTA İNŞAAT SANAYİ VE TİCARET A.Ş.	17,077
SUNAR MISIR ENT. TES. SANAYİ VE TİCARET A.Ş.	11,708
Total	**265,000**

As per the Sugar Law, only 'A' quota is allocated for starch based sugar companies. This SBS quota is announced as approximately 10 percent of the total sugar quota. However, the initial quotas announced for SBS can be increased up to 50 percent by a Cabinet decree, and the Cabinet exercises this right almost every year.

The draft Sugar Law proposes to change this yearly optional increase to cap the maximum quota for SBS at a fixed 15 percent (of the total sugar quota).

Ethanol and Molasses

Sugar beets are the main source of bio-ethanol production in Turkey, followed by corn and wheat. No additional sugar beets are planted to produce this bio-ethanol 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 are increasing parallel to the amount of beets produced by the factories.

Annual molasses production does not vary vastly from year to year and is around 670,000 MT. Currently there is a three percent mixture rate of bio-ethanol into fuel as specified by the Energy Market Regulatory Authority (EPDK). This ratio is expected to increase to five percent in 2017, which will necessitate extra bioethanol production. The law requires this bio-ethanol to be obtained from only domestically grown agricultural products.

In Turkey 22 MMT of fuel is consumed annually, 1.9 MMT of which is gasoline. Currently there are three plants producing fuel-purpose bioethanol with an established total production capacity of 150 million liters. Some 84 million liters of this come from the Cumra plant of Pankobirlik 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. Pankobirlik is currently considering building a new factory to produce ethanol from corn to meet the increased bioethanol need in 2017.

Consumption

Turkey is the world's fifth largest beet sugar producer, ranking behind France, Germany, the United States, and Russia. With a population of approximately 80 million, Turkey is also a significant consumer. Annual consumption is around 2.3 MMT.

Increasing urbanization and the subsequent changes to lifestyles and eating habits play an important role in increasing sugar consumption. This is reflected in the increase of SBS imports. Starch based sugar that is derived from corn is not consumed directly, but is rather used by the industry as an ingredient in the production of candies, baked products, traditional deserts, ice cream, halva, jams, and alcoholic and non-alcoholic beverages.

The decreased production in the past marketing years led to a huge spike in imports and a 37% decrease in exports in 2015.

Trade:

Export Trade Matrix	**2014**	**2015**
Exports to (MT)		
United States	18	28
Iraq	34	49
Azerbaijan	8,081	8,267
Syria	826	95
FTZ – Istanbul Leather Industry	111	67
Kuwait	58	65
Turkish Rep.of North Cyprus	485	828
Lebanon	87	13
Somalia	5,000	0
Others not listed	962	471
Grand Total	**15,662**	**9,883**
Import Trade Matrix	**2014**	**2015**
Imports from (MT)		
United States	10	17
United Kingdom	1,779	1,913
France	2,512	2,281
Germany	283	251
Algeria	0	66,742
Brazil	0	54,335
Morocco	0	28,822
India	1	10,478
Thailand	0	2,000
Others	8	2,853
Grand Total	**4,593**	**169,692**

Source: Global Trade Atlas, in Calendar Years
Commodity: HS 170199- Beet Sugar and Chemically Pure Sucrose, Refined, In Solid Form, Not Containing Added Flavoring or Coloring Matter – Annual Quantity

Stocks

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 preserve their security reserves ('B' quota).

Any remaining stocks at the end of a marketing year mostly belong to Turkseker and are kept in factory silos. Lower production rates in the past two marketing years, caused a depletion of Turkseker's stocks. It is mostly Turkseker who provides 'C' sugar to exporting confectionary companies and the reduced production also resulted in the absence of ‘C’ sugar for exporters. The government therefore opened the door for sugar imports in March 2015 under the inward processing regime (i.e. the imported sugar can only be used in products that will be exported and not marketed domestically) which is exempt from the 135 percent import tax levied on sugar imports to be marketed domestically.

Starch Based sugar companies usually produce and sell their entire allocated quota and are left with no more than 10-15 thousand tons of stocks at the end of the marketing year.

Policy

The sugar sector is regulated by a Sugar Board that was formed in 2001. It is composed of members from government offices and sugar producers. The government is now in the process of making a substantial change in its sugar policy. The government sent to Parliament a new Sugar Law on April 8, 2013 that will replace the current law (Nr. 4634). The proposed law, which is still waiting at the Parliament, will dissolve the Turkish Sugar Board and establish a Sugar Sector Regulation and Auditing Board. The new Board will be entitled to determine quotas, allocate these quotas, and regulate issues such as new factory establishments, and increases in capacity.

The new law will change the definition of sugar to: “all sorts of sugar varieties including raw sugar, brown sugar, side white sugar, white sugar, refined sugar, sugar solution, invert sugar solution, invert sugar syrup, glucose syrup, glucose-fructose syrup, dried glucose syrup, dextrose, dextrose monohydrate, water-free dextrose, fructose syrup, fructose-glucose syrup, and crystal fructose, which include sucrose, glucose, fructose or their polymers such as starch or inulin as raw materials.”

Another important change of the proposed legislation is the increase in SBS Quota from the current 10 percent to 15 percent of the ‘A’ quota domestic beet sugar. Currently, the Cabinet of Ministers has the right to increase or decrease this amount by 50 percent, but the new law sets the quota at a fixed 15 percent, the scope of which is expanded to include sucrose based sugars as well.

The draft law excludes sugar that will be used for non-food purposes from the announced quota regime. Therefore, sugar that will be used as a raw material in industries such as chemistry, medicine, fermentation, construction, paper, and bio-fuels will not be subject to a quota limit; however, production and sale of these sugars will require a license from the new Board. This is a specialized kind of sugar and its production and consumption is not in large amounts.

Privatization

Turkiye Seker Fabrikalari A.S. (TURKSEKER) is a government entity and is the biggest sugar producer with 25 sugar factories, 4 alcohol and 5 machine plants, 1 electromagnetic devices plant, 1 seed treatment plant and 1 Sugar Institute. TURKSEKER was subjected to privatization by the Privatization Board in 2001.

In 2004 and 2005, three government-owned sugar refineries - Kutahya, Adapazari and Aksaray plants were privatized by the Turkish government. Afterwards, privatization efforts for the rest of Turkseker staggered on and off until August 2008. In 2008 the Privatization Administration decided to group the factories into portfolios as below:

Portfolio A: Kars, Erciş, Ağrı, Muş and Erzurum factories
Portfolio B: Elazığ, Malatya, Erzincan and Elbistan factories
Portfolio C: Kastamonu, Kırşehir, Turhal, Yozgat, Çorum and Çarşamba factories
Portfolio D: Bor, Ereğli and Ilgın factories
Portfolio E: Uşak, Alpullu, Burdur, Afyon and Susurluk factories
Portfolio F: Eskişehir and Ankara factories

The portfolios were offered for sale in several tenders throughout 2008 and 2009 but there were several complications with the process. For instance, Portfolio A factories (i.e. in the Eastern part of Turkey) which were offered for sale in 2008 did not receive any bids in the allotted period since they are low-capacity factories which had originally been established to generate employment in the lesser-developed region, and are too inefficient to generate private sector interest. Afterwards, Portfolio C factories were offered for sale and received 9 bids yet the Sugar workers union objected to the process and the Council of State had to cancel the tender. Then Portfolio B factories were offered for sale in 2010 but it was again cancelled with a court order that grants a motion for stay of execution.

Turkish sugar beet producers used to be against privatization due to social and economic reasons. One of the main arguments of the anti-privatization group is 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. This fear was validated by the massive layoffs after transfer of the plants to the Privatization Administration. In December 2007, 650 people (20 percent of the white-collar work force of these companies) were laid off. Instead of privatization, the sector hoped for a change in the beet contracting methods and modernization of public plants. Now that this option seems to be off the table, the sugar beet producers cooperative Pankobirlik has proposed several alternatives to the government to prevent infractions to the sugar industry.

Privatization was supposed to be completed by December 31, 2014, but the Privatization Board extended the deadline to December 31, 2016.

Marketing

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

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 seen to be sold in the domestic market. The sector is also increasingly using SBS instead of beet-sugar due to cheaper prices.

Turkey levies a 135 percent import tax on sugar and sugar imports are limited to specialty sugar that is not domestically produced (aimed for medical, laboratory use, etc.). The increased figures of 2015 are exempt from this statement since they were under the inward processing regime for export goods, and not actually imported to be used domestically. In 2015, Turkey imported 46,800 MT of sweeteners compared to 30,000 MT in 2014. Turkey has reduced sugar smuggling in recent years with the help of increased controls and preventive measures taken by the Sugar Board. Registered beet sugar and SBS imports for the past five years are compared below.

Production, Supply and Demand Data Statistics

Sugar Beets	2014/2015		2015/2016		2016/2017	
Market Begin Year	Sep 2014		Sep 2015		Sep 2016	
Turkey	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Area Planted	295	288	300	290	0	300
Area Harvested	285	285	295	288	0	295
Production	16750	16500	18000	16632	0	17500
Total Supply	16750	16500	18000	16632	0	17500
Utilization for Sugar	16750	16500	18000	16632	0	17500
Utilization for Alcohol	0	0	0	0	0	0
Total Distribution	16750	16500	18000	16632	0	17500
(1000 HA) ,(1000 MT)						

Sugar, Centrifugal	2014/2015		2015/2016		2016/2017	
Market Begin Year	Oct 2014		Oct 2015		Oct 2016	
Turkey	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	103	103	3	0	0	0
Beet Sugar Production	2055	2055	2300	2000	0	2500
Cane Sugar Production	0	0	0	0	0	0
Total Sugar Production	2055	2055	2300	2000	0	2500
Raw Imports	0	0	0	0	0	0
Refined Imp.(Raw Val)	160	43	20	170	0	25
Total Imports	160	43	20	170	0	25
Total Supply	2318	2201	2323	2170	0	2525
Raw Exports	0	0	0	0	0	0
Refined Exp.(Raw Val)	15	14	10	10	0	50
Total Exports	15	14	10	10	0	50
Human Dom. Consumption	2300	2187	2300	2160	0	2200
Other Disappearance	0	0	0	0	0	0
Total Use	2300	2187	2300	2160	0	2200
Ending Stocks	3	0	13	0	0	275
Total Distribution	2318	2201	2323	2170	0	2525