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Turkey

Sugar Annual

Turkey Sugar Annual Report 2018

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Report Highlights:

Turkey's sugar beet planted area is expected to increase by three percent to 340,000 hectares (ha) in MY 2018/19, due to the slightly increased quota for sugar production. Sugar beet production is forecast at 20.5 million metric tons (MMT) in marketing year (MY) 2018/19. The Sugar Agency and Sugar Board were abolished and all authorities were transferred to the Ministry of Food, Agriculture, and Livestock (MinFAL). Starch-based sugar quotas were decreased to five percent from ten percent. The privatization of state-owned sugar factories is continuing.

Turkey Sugar Annual Report Executive Summary:

Planting area is forecast to increase by three percent to 340,000 ha in MY 2018/19 due to an amendment to the law which increased the sugar production quota. The resulting sugar beet production is forecast at 20.5 MMT in MY 2018/19, assuming favorable weather conditions.

The Sugar Agency and Sugar Board were abolished with Statutory Decree No. 696, which was published in the Official Gazette on December 24, 2017 and all the authorities of this Agency were transferred to the Ministry of Food, Agriculture and Livestock (MinFAL). MinFAL determined the sugar quotas and announced them for the 2017/18 marketing year on January 18, 2018. They kept the same level as the previous year in determining the current year's production level. In line with the decision, the overall national sugar quota was determined as 2.67 million tons of which 2.403 million tons is for beet sugar production and the remaining 267,000 tons is for starch-based sweetener production.

The government-announced privatization of state-owned sugar factories is continuing. They announced a privatization process road-map for 14 state-owned sugar factories, which were under the portfolio of the Privatization Agency. The related announcement was published in the Official Gazette on Feb. 21, 2018.

With an omnibus bill in the Turkish Parliament, Starch Based sugar quotas were decreased from 10 percent to five percent of the overall quota, while keeping the authority of the Cabinet to either increase or decrease the level by 50 percent. The bill was published in the Official Gazette on March 27, 2018.

PRODUCTION

Sugar Beets

The slight increase in quotas resulted in production of 20 MMT of sugar beets from a harvested area of 325,000 hectares in marketing year (MY) 2017/18. The planting area is forecast to increase by three percent to 340,000 ha in MY 2018/19 in parallel with the new increased quotas for sugar beets next year, since the quota for starch based sugars was reduced. The resulting sugar beet production is forecast at 20.5 MMT in MY 2018/19. 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.

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 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*. Farmers plant their beets around April and harvest them in September/October. However, these periods vary slightly according to the climate conditions of the region. Sugar beet yields have been increasing steadily in the past ten years due to the adoption of modern agriculture techniques and higher quality seeds. Currently average yield is about 60 metric tons per hectare. While the planting area is forecast to increase to meet the demand required by the increased quotas for sugar production, the increase in planted area for beets nationally is partly offset by some reductions in

Central Anatolia. Farmers who historically have sold their beets to sugar factories which are now being privatized are uncertain about the future and are choosing to diversify some of their land with some other crops next year.

Production of sugar beets, and consequently sugar, is limited by quotas. These are now set by the Ministry of Food, Agriculture, and Livestock (MinFAL) since December 2017. Previously, the Sugar Agency and Sugar Board did this 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 transferred to the Ministry of Food, Agriculture and Livestock.

The sugar beet production system is as follows:

1. MinFAL 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. 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 (the amount of sugar obtained from a beet) of their beets, relative to the base price. Higher temperature differences between day and night increase the polarity rate. For MY 2016/17, the announced beet prices were 190 TL per metric ton and it has increased to 210 TL/MT for MY 2017/18 (1 US\$ = 4 TL as of April 2018). Beets with higher polarity rates get about an extra 4 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

These quotas determine the quantity for beet sugar and starch-based sweeteners, 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. “B’ quota 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 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 2017/18 were announced on January 18, 2018 by MinFAL.

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

	2015/2016 MY	2016/2017 MY	2017/2018 MY
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	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL	A Quota	B Quota	TOTAL
Beet Sugar	2,250	67.5	2,317.5	2,385	119.25	2,504.25	2,403	120	2,523
Starch Based Sugar	250	-	250	265	-	265	267	-	267
Total Quota	2,500	67.5	2,567.5	2,650	119.25	2,769.25	2,670	120	2,790

Türkiye Şeker Fabrikaları A.Ş. (TURKSEKER) is the government entity and is the biggest sugar producer in Turkey with 25 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, 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. This year however, the privatization process has started for 14 of the 25 Turkseker factories. The Government of Turkey announced the 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. Four factories have already been sold by tenders in April 2018, and the entire process is expected to be completed by the end of April 2018.

The production quotas for MY2017/18 are allocated to the centrifugal sugar producers:

Table 2: Beet Sugar Quotas for Producers for MY 2017/2018 (Metric Tons)

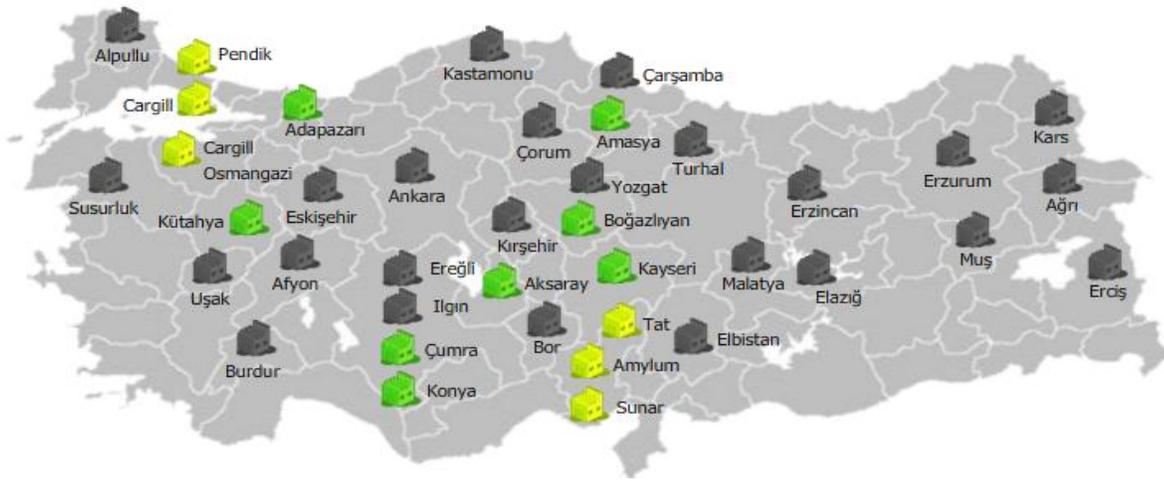
Beet Sugar Producers	A Quota	B Quota
Türkiye Şeker Fabrikaları A.Ş. (TURKSEKER)	1,370,700	68,840
Adapazarı Şeker Fabrikası A.Ş.	50,000	2,500
Amasya Şeker Fabrikası A.Ş.	66,100	3,150
Kayseri Şeker Fabrikası A.Ş.	328,800	16,440
Keskinkılıç Gıda San. ve Tic. A.Ş.	110,000	5,350
Konya Şeker San. ve Tic. A.Ş.	438,500	21,780
Kütahya Şeker Fabrikası A.Ş.	38,900	1,940
Total	2,403,000	120,000

Source: Market Sources

There are also five starch-based sugar (SBS) producers, all of which are privately owned and have a total processing capacity of 1.2 MMT of HFCS output. There are also additional SBS producing companies which produce only for export and are outside of the quota system.

The map below shows the locations of all production facilities throughout Turkey. There are 33 sugar plants and six SBS plants in total. The plants marked in gray (25) are the public beet sugar production factories that belong to Turkseker of which [14 plants](#) are under privatization process. The dark green plants (8) are private and cooperative-owned beet sugar production factories and the yellow plants (6) are starch based sugar production plants, all of which are private.

Figure 1: Map of Sugar and SBS Production Facilities in Turkey



From the green plants above, the Adapazarı factory belongs to the Turkish conglomerate Yildiz Holding, the Aksaray factory belongs to Keskinilic Company, and the Kutahya Factory belongs to Kiler and Torun groups. The remaining five factories belong to PANKOBIRLIK – the Turkish Sugar Beet Producers Cooperative, which market under the brand Torku.

Some of the Turkseker factories are not operating every 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 Turkish Republic to promote social welfare and employment in certain regions of the country. Because sugar production is labor intensive, facilities were established in the East and in regions where the government hoped to support rural populations and reduce migration to urban centers.

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 2018, the factory sales price of sugar is 166 TL for a 50 kg bag (3.32 TL/kg) which is ten percent higher than the previous year, in terms of Turkish Lira which is

slightly under the inflation rate. The retail price of sugar currently varies between 3.75 and 4.85 TL/kg in supermarkets (1 US\$ = 4 TL as of April 2018). See all prices by years [here](#).

Starch Based Sugar (SBS)

The Raw Material and Sugar Prices Decree of 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 for production for the Turkish market and their total production capacity is approximately 1.2 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.

The privatization of sugar factories has raised the issue of sugar and HFCS in Turkey and provoked a national discussion on the issue. At the same time, groups campaigned against sweeteners from corn and there was speculation and misinformation on the health effects of HFCS in several media outlets. Then the Ministry of Health published a HFCS report on March 12, 2018. In the report they advised that the HFCS production quota in Turkey should not be increased and food industry should be encouraged to use sucrose instead of HFCS.

As part of an omnibus bill in the Turkish Parliament, starch-based sugar quotas were decreased to five percent from ten percent of the overall sugar quota and were published in the Official Gazette on March 27, 2018. The new quota decision maintains the authority of the Cabinet to either increase or decrease the level by 50 percent. New quota allocation is understood to be effective for MY 2018/19.

For MY 2017/18, as announced by MinFAL on January 18, 2018, overall national sugar quota is 2.67 million tons, of which 2.403 million tons is for beet sugar production and remaining 267,000 tons for HFCS production. On a raw sugar equivalent basis, the HFCS amount is about 210,000 tons.

The table below shows the allocation of the SBS quota for MY 2017/18 to the five producers.

Table 3: Starch Based Sugar Companies and Quotas (MT)

Starch Based Sugar Producing Companies	A Quota
CARGILL TARIM VE GIDA SANAYİ VE TİCARET A.Ş.	117,058
AMYLUM NİŞASTA SANAYİ VE TİCARET A.Ş.	83,007
PNS PENDİK NİŞASTA SANAYİ A.Ş.	37,933
TAT NİŞASTA İNŞAAT SANAYİ VE TİCARET A.Ş.	17,206
SUNAR MISIR ENT. TES. SANAYİ VE TİCARET A.Ş.	11,796
Total	267,000

Source: Market Sources

Ethanol and Molasses

Molasses is a side product of sugar production from sugar beets, and production was around 850,000 MT in 2017, of which 830,000 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. Beet sugar consumption breaks down as 80 percent 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 GDP.

Currently, Turkey's total annual sugar and sweetener consumption varies between 2.3 and 2.7 MMT, where beet sugar accounts for between 2.3 and 2.5 MMT, 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 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 desserts, ice cream, helva, jams, and alcoholic and non-alcoholic beverages.

The centrifugal sugar consumption is forecast to increase to 2.6 MMT due to increased beet sugar quotas in MY2018/19.

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 2017/18 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.

Turkey's import and export figures for sugar in MY 2016/17 and for the first five months of MY 2017/18 are given in the below table. During the first five months of MY 2017/18, Turkey imported about 119,000 MT of sugar, compared with 105,000 MT in the same period of the previous year. Turkey has also imported about 25,000 MT of HFCS each year, raw value basis, in recent years. For MY 2018/19, sugar imports into Turkey are forecast at 260,000 tons, raw sugar equivalent basis, with stable demand (similar to MY 2017/18) from sugar product exporters for both beet sugar and HFCS.

Table 4: 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>		
	MY2016/17 (Oct- Sep)	MY2017/18* (Oct-Feb)
Syria	325	150
Turkish Rep. of North Cyprus	122	75
United States	27	39
Ethiopia	13	38
Somalia	3,136	0
Azerbaijan	1,017	14
Other	87	29
Grand Total	4,727	345*
<u>Import Trade Matrix</u>		
	MY 2016/17 (Oct-Sep)	MY 2017/18* (Oct-Feb)
Brazil	74,113	25,746
Ukraine	38,096	15,595
Germany	2,107	14,848
Egypt	8,454	4,369
France	34,857	14,571
Algeria	17,532	9,054
Morocco	11,658	7,965
United States	34	3
Other	41,596	26,813
Grand Total	228,447	118,964*

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

*Note: MY 2017/18 is not a full year

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 keep a certain amount of sugar on

hand as “security reserves”, which is called ‘B’ quota. So, any remaining stocks would belong to Turkseker, 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.

Ending stocks are forecast to be at a normal level, 10,000 MT in MY 2018/19, which is similar with 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 sugar 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 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 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 found for sale in the domestic market.

Turkey levies a 135 percent import tax on sugar. Sugar imported for use in the domestic market is limited to specialty sugar that is not domestically produced (aimed for medical, laboratory use, etc.). The increased imports as seen in the PSD tables are 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

The last marketing year was 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 parties have traditionally been against privatization 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.

Recent Sugar Market Developments Timeline:

2017 - *No appointments were made to the Sugar Board:* According to the Sugar Law No. 4636 which was enacted in 2001, the Sugar Agency and its decision-making body, the Sugar Board, attached to the Ministry of Science, Industry and Technology was established to be a watchdog and supervise sugar market regulations and its operations. Yet no appointments were made to the Sugar Board by the government since 2016, which made the existing system inoperable. Without the existence of an

authorized decision-making body, no decisions were made and therefore, no sugar quotas were determined for the 2017/18 marketing year by the Board, which caused uncertainty for the sugar producers.

2017 – *No Sugar Board Decisions*: Without quotas, sugar producers (both HFCS and beet-sugar producers) used the previous year’s quota in determining the production level.

December 24, 2017 – *Sugar Agency and Sugar Board were abolished*. The Sugar Agency and Sugar Board were abolished with Statutory Decree No. 696, which was published in the Official Gazette on December 24, 2017, under the rule of “State of Emergency”, and all the authorities of this Agency were transferred to the Ministry of Food, Agriculture and Livestock.

January 18, 2018 – *Sugar Quotas were determined by the Ministry of Food, Agriculture and Livestock* and announced for the 2017/18 marketing year. The Ministry kept the same quota amounts as the previous year, so the overall national sugar quota was determined as 2.67 million tons [2.403 million tons for beet sugar production and the remaining 267,000 tons for HFCS production].

February 21, 2018 – *Government announced privatization of the state-owned sugar factories*. The government announced the 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.

March 12, 2018 – Upon wide-spread speculations on the health effects of HFCS in several media outlets, the Ministry of Health published its recommendations on HFCS. [In the report](#) they mention:

- HFCS and sugar consumption should both be reduced by consumers to improve health
- Quota of HFCS production in Turkey should not be increased above 10 percent and Inspections should be increased
- Food industry should be encouraged to use sucrose instead of HFCS
- Foods to be placed on the market should be labeled in detail about the sugar used in the products.

March 27, 2018 – *HFCS quotas were decreased*. With a last-minute motion during the negotiations on an omnibus bill in the Turkish Parliament, HFCS quotas were decreased to five percent from ten percent of the total overall sugar production quota, while keeping the authority of the Cabinet to either increase or decrease the level by 50 percent. The related Omnibus Bill was published in the Official Gazette on March 27, 2018. New quota allocation will be effective for MY 2018/19.

April 3, 2018 – *Privatization process for state-owned sugar factories started*. The privatization process [tendering] for state-owned sugar factories started amid protest by the opposition political parties including with political rallies at sugar factories. As of April 13, four factories have been sold, and the buyers have all been Turkish companies. The tender process for selling all fourteen factories is expected to be completed by April 18th.

Production, Supply and Demand Data:

Sugar Beets Market Begin Year	2016/2017		2017/2018		2018/2019	
	Sep 2016		Sep 2018		Sep 2019	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Turkey						
Area Planted	320	320	330	330	0	340
Area Harvested	315	315	325	325	0	340
Production	19,500	19,500	20,000	20,000	0	20,500
Total Supply	19,500	19,500	20,000	20,000	0	20,500
Utilization for Sugar	19,500	19,500	20,000	20,000	0	20,500
Utilizatn for Alcohol	0	0	0	0	0	0
Total Distribution	19,500	19,500	20,000	20,000	0	20,500

(1000 HA) ,(1000 MT)

Sugar, Centrifugal Market Begin Year	2016/2017		2017/2018		2018/2019	
	Oct 2016		Oct 2017		Oct 2018	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Turkey						
Beginning Stocks	10	10	10	10	0	10
Beet Sugar Production	2,500	2,500	2,500	2,500	0	2,600
Cane Sugar Production	0	0	0	0	0	0
Total Sugar Production	2,500	2,500	2,500	2,500	0	2,600
Raw Imports	0	0	0	0	0	0
Refined Imp.(Raw Val)	240	240	240	260	0	260
Total Imports	240	240	240	260	0	260
Total Supply	2,750	2,750	2,750	2,770	0	2,870
Raw Exports	0	0	0	0	0	0
Refined Exp.(Raw Val)	240	240	240	260	0	260
Total Exports	240	240	240	260	0	260
Human Dom. Consumption	2,500	2,500	2,500	2,500	0	2,600

Other Disappearance	0	0	0	0	0	0
Total Use	2,500	2,500	2,500	2,500	0	2,600
Ending Stocks	10	10	10	10	0	10
Total Distribution	2,750	2,750	2,750	2,770	0	2,870
(1000 MT)						