

USDA Foreign Agricultural Service

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Global Agricultural Information Network

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Guatemala

Sugar Annual

Next Step: Upgrading Technology

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Report Highlights:

Guatemalan sugar production for Marketing Year (MY) 2018 is forecast at 2.90 million metric tons (MMT). Production for MY2017 has been revised down 8 percent to 2.80 MMT from the previous estimate due to the closure of the Chabil Utzaj sugar mill. Production for MY2016 was revised down 5 percent to 2.82 MMT, due to the Chabil Utzaj closure. Total exports for MY2018 are forecast at 2.11 MMT, with raw sugar making up 52 percent and refined sugar 48 percent of Guatemalan exports.

Harvested area has almost reached its maximum capacity at 270,000 Ha, and although sugarcane yields are high, the industry will depend on increasing sugar recovery rates to maintain growth.

Executive Summary:

There is little land left for Guatemalan sugarcane to expand. Sugar production increases are now more dependent on increases in sugar recovery rates. During MY2016, Chabil Utzaj sugar mill, which ran operations from MY2013 to MY2016, was permanently closed. In MY2018, harvested area is forecast at 270,000 Ha. Sugar recovery rates in MY2018 are expected to be 105 Kg/MT with up to 115 Kg/MT potential rate in the future if milling infrastructure in the older mills is upgraded. Present milling capacity is 171,504 MT per day.

Domestic Consumption for MY2016 was revised slightly up to 776,000 MT and revised down to 780,000 MT for MY2017. Local consumption represents roughly one third of total production. Exports for MY2018 are forecast at 2.11 MMT, with a 52-48 share of raw and refined sugar. Guatemala produces 54 percent of the total Central America sugarcane. During MY2016, both the United States and Canada were the first major export markets for Guatemalan sugar, with a combined share of 29 percent. Guatemala continues filling the United States WTO sugar quota in a timely manner and utilizing as much as possible of the CAFTA-DR quota for refined sugar.

Commodities:

Sugar, Centrifugal

Production:

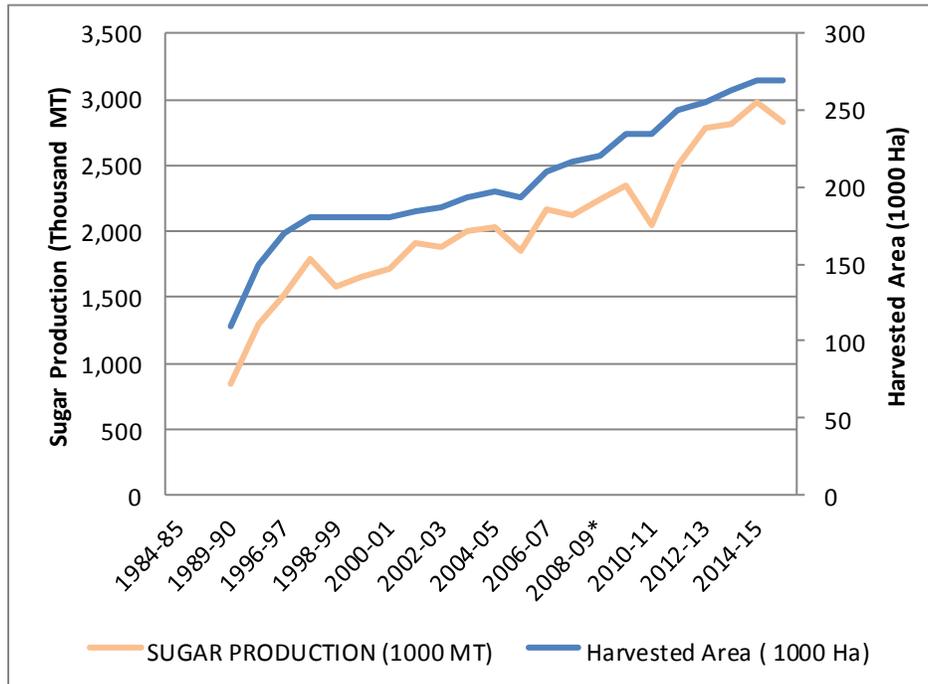
Production for MY2018 is forecast at 2.90 MMT with sugar yields expected to average 10.5 MT/Ha. Production for MY2017 has been revised down 8 percent to 2.80 MMT from the previous estimate due to the closure of the Chabil Utzaj sugar mill. Sugarcane yield for MY2017 is estimated at 104 MT/Ha and a sugar recovery rate of 100 Kg/MT in total harvested area of 270,000 Ha. Daily milling capacity has significantly increased to 171,504 MT. Production for MY2016 was revised downward 5 percent to 2.82 MMT and total exports of 2.03 MMT, down 11 percent from previous estimates due to a slight increase in consumption combined with a decrease in total output. Total output reduction is due to the closure of Chabil Utzaj sugar mill and a drier than expected harvest season.

The closing of the Chabil Utzaj, one of thirteen mills, marked a clear end to the ability of the sugar industry to continue increasing overall productivity and production area. Chabil Utzaj sugar mill was one of the newest sugar mills that started with 22,000 MT of sugar production in MY2013, reaching 44,000 MT of sugar in MY2015 and forecast to produce 51,000 MT in MY2016.

The expansion of the sugar industry in Guatemala can be seen in Graph 1. Guatemala's sugar production increased from roughly 500,000 MT in MY1985 to almost 3.0 million MT by MY2016, a 6-fold increase in the past 30 years, equivalent to a 5% annual increase. Area harvested did not expand at the same pace (going from 80 to 270 hectares in that same period), growing half as much as the production increase.

Graph 1

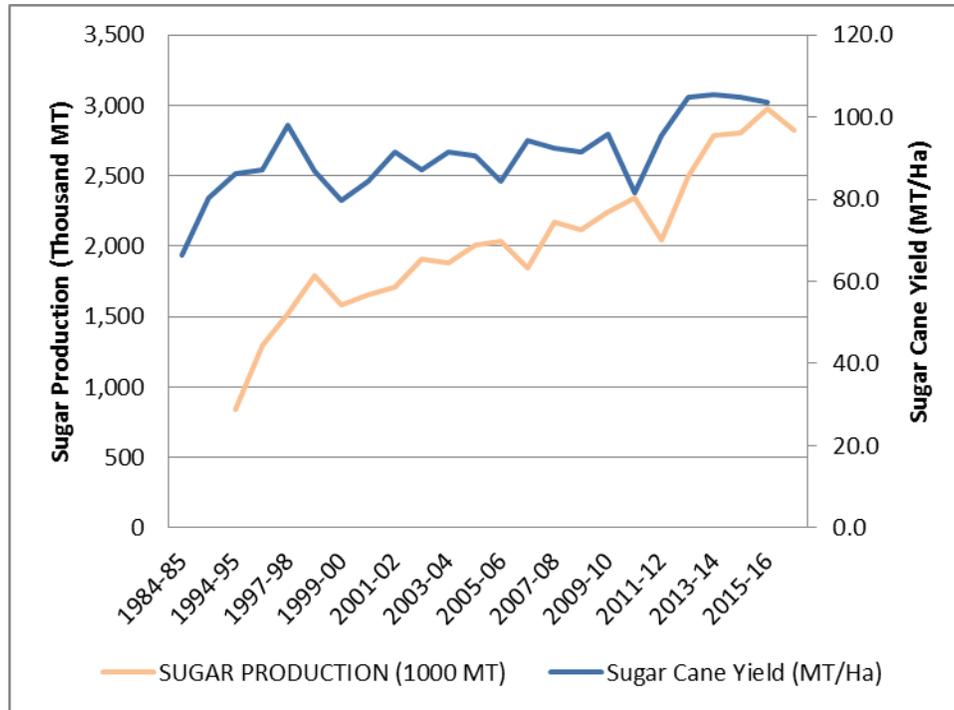
Guatemala's Annual Sugar Production and Harvested Area



Source: Based on CENGICAÑA's Data, 2017

Production increased at twice the pace of area expansion due to either increased cane yields in the field and/or increased recovery rates at the mill. Graph 2 shows Guatemala's historical sugar production and sugar cane yields. Sugarcane yields increased 35 percent from 66 MT/Ha to 104 MT/Ha in the past three decades, corresponding to an average one extra MT per year. The gap between sugar production and sugar cane yield has closed significantly; this suggests that sugarcane yield is reaching its peak given presently used technologies.

Graph 2
Guatemala's Annual Sugarcane Production and Sugar Cane Yield



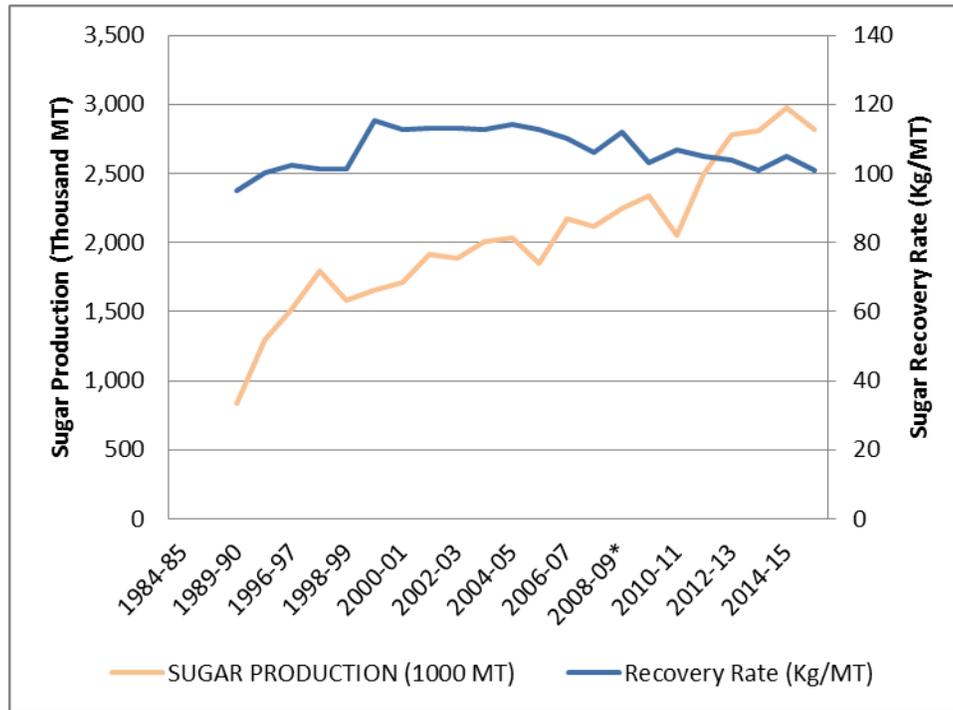
Source: Based on CENGICÑA's Data, 2017

The Center for Sugarcane Research (CENGICÑA) has been critical of the industry in increasing both production and sugarcane yields. CENGICÑA has programs to maintain productivity via: 1) improved genetics, 2) integrated pest management (IPM), 3) irrigation efficiency, and 4) environmental sustainability. At least 30 percent of the genetics have been adapted to local conditions and most of the pest management follows a biological control program that has significantly reduced chemical dependency. Irrigation efficiency has scaled up to more than 1.80 Ha/ML (mega liter, or one million liters), which has significantly reduced water usage to 820 Lts/Kg for non-refined sugar. This means that the sugarcane industry has cut water usage in half for field irrigation.

As seen with previous data and graphs, the production growth in the Guatemalan sugar industry has clearly relied on area expansion combined with improvements in the sugarcane yield. Sugarcane yields increased as a result of the 30-year agricultural research program which optimized production efficiency and water utilization. Graph 3 shows that historical gains in sugar production do not correspond to a consistent pattern on the sugar recovery rate (Kg/MT), in contrast with the consistent patterns shown previously with harvested area and sugarcane yields. While production increased 6-fold from 1985-2015, sugar recovery rate has shown inconsistent changes for no more than a 10% maximum variation.

Graph 3

Guatemala's Annual Sugar Production and Sugar Recovery Rate



Source: Based on CENGICAÑA's Data, 2017

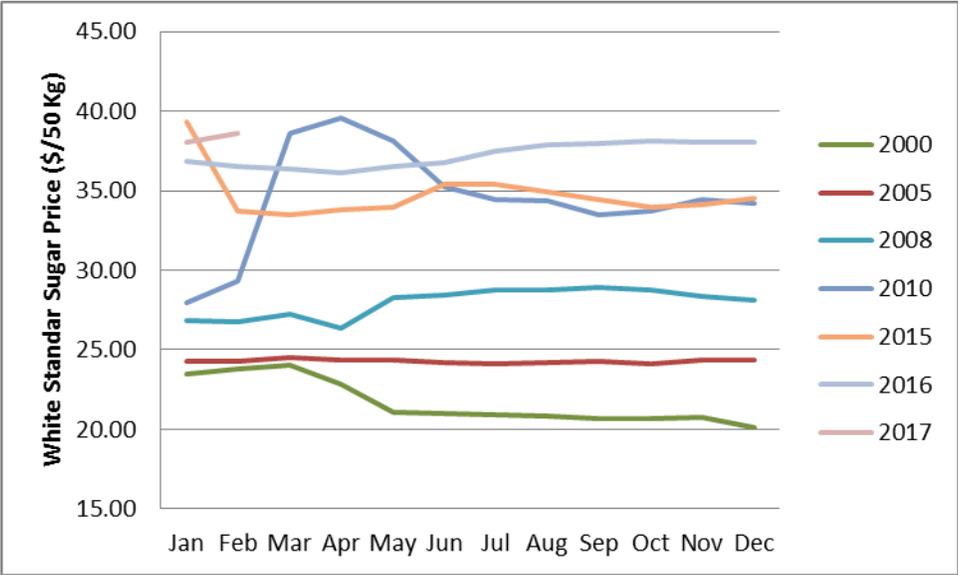
Increasing the sugar recovery rate is essential for the industry's growth. There are two medium term options for increasing the recovery rate: a) increasing sucrose content in the cane and/or b) increasing extraction of sugar at the mill. Increased concentration of sucrose in the cane is dependent upon production technologies, used throughout the production cycle, and weather. According to sugarcane growers, the agronomic component of technologies and farming practices used today have been finely tuned and used consistently for the past 30 years. However, sugar content in cane could be increased with the adoption of newer technologies such as improving genetic material through genetically engineered cane seed.

There is also room for improving the industrial efficiency, but this requires significant investment. CENGICAÑA's Industrial Research Program is currently focusing on sugar recovery and energy efficiencies. Improved sugar extraction rates will increase sugar recovery from molasses and bagasse, but will require costly machinery upgrades and innovation. In addition, energy efficiency will depend on: diagnostics and optimization of vapor generators, fuel characterization and improvement, and reduction of energy consumption.

As part of the environmental sustainability actions; water conservation, forests for fuels and ethanol production have been incorporated into the sugar industry's production operations. In MY2016, cogeneration of energy reached 575 MW (32 percent of the national grid during harvest time) and produced 269 million liters of alcohol.

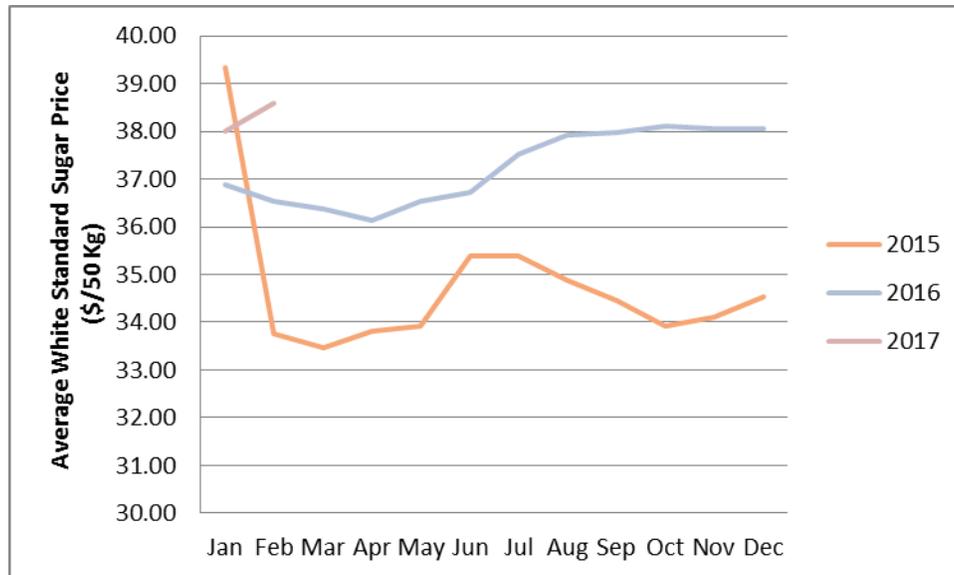
Overall, the sugar sector has maintained a reliable supply of sugar and sugar products in the local market. Historical prices for standard white sugar at wholesale and retail levels in Guatemala are shown in Graphs 4 and 5. A comparison of the latest available historical data for retail prices vs. wholesale are shown in Graph 6.

Graph 4
 Historical Monthly Standard White Sugar Prices at the Wholesale Market in Guatemala



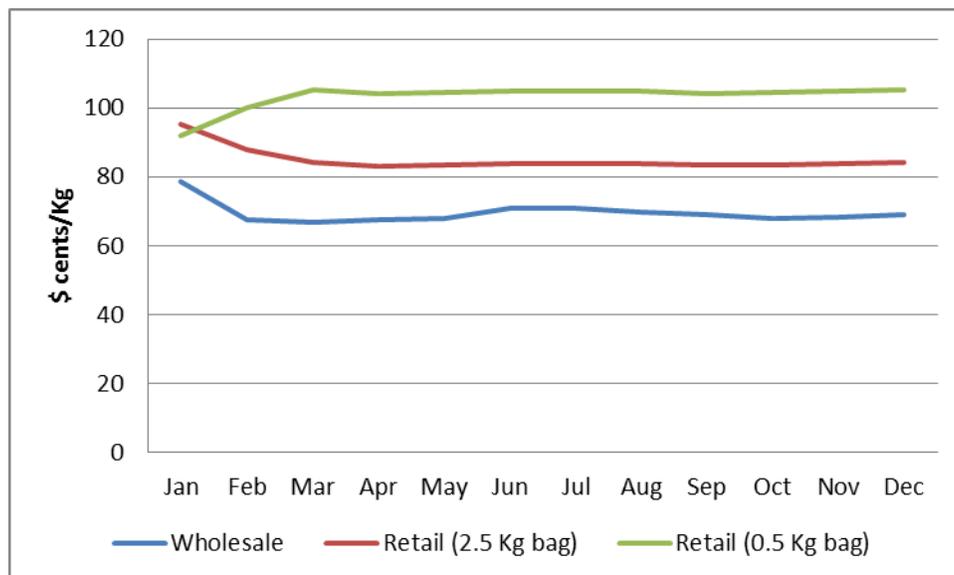
Source: Historical Prices, DIPLAN, Ministry of Agriculture, 2017

Graph 5
Average Monthly Standard White Sugar Prices at the Wholesale Market in Guatemala (2015-2017)



Source: Historical Prices, DIPLAN, Ministry of Agriculture, 2017

Graph 6
Average Monthly Standard White Sugar Prices in Guatemala in 2015 (Wholesale vs. Retail)



Source: DIPLAN/MAGA and Institute of National Statistics, INE

Consumption:

MY2018 consumption is expected to increase to 788,000 MT, one percent above MY2017 consumption estimate of 780,000 MT. Consumption for MY2016 increased one percent above the prior estimate of 765,000 MT. Annual consumption of sugar in Guatemala remains close to 46 Kg or 100 pounds per capita. Domestic consumption of sugar is 75 percent for direct human consumption and 25 percent for industrial use. The soft drink industry is the major industrial consumer of sugar, followed by confectioneries, bakeries, juice makers, dairy producers, and pharmaceutical companies. Overall, domestic consumption is roughly 27 percent of total production. Alternative sweeteners use is not impacting per capita consumption of sugar. Drops in consumption continue to be tightly related to price increases in the basic food basket items. Most of the sugar consumption is standard white but brown sugar consumption is increasing as the healthy trend for more natural products continues, including organic options of molasses, as shown in Fig. 1.

Fig. 1
Ready-to-eat organic molasses for consumption



Source: <http://www.panelaeltesoro.com/es/content/nuestros-productos>

Trade:

During MY2016, Guatemala exported 2.03 MMT in raw and refined sugar, one percent above the estimate. As shown in Table 1, exports dropped 15 percent from MY2015 to MY2016. The drop in exports also responded to the drop in production resulting from the definite closure of the 13th sugar mill, Chabil Utzaj. Sugar and its products represent the highest source of foreign exchange for the Guatemalan agricultural sector, followed by bananas and then coffee. Exports for MY2017 are forecast at 2.10 MMT, three percent above exports for MY2016.

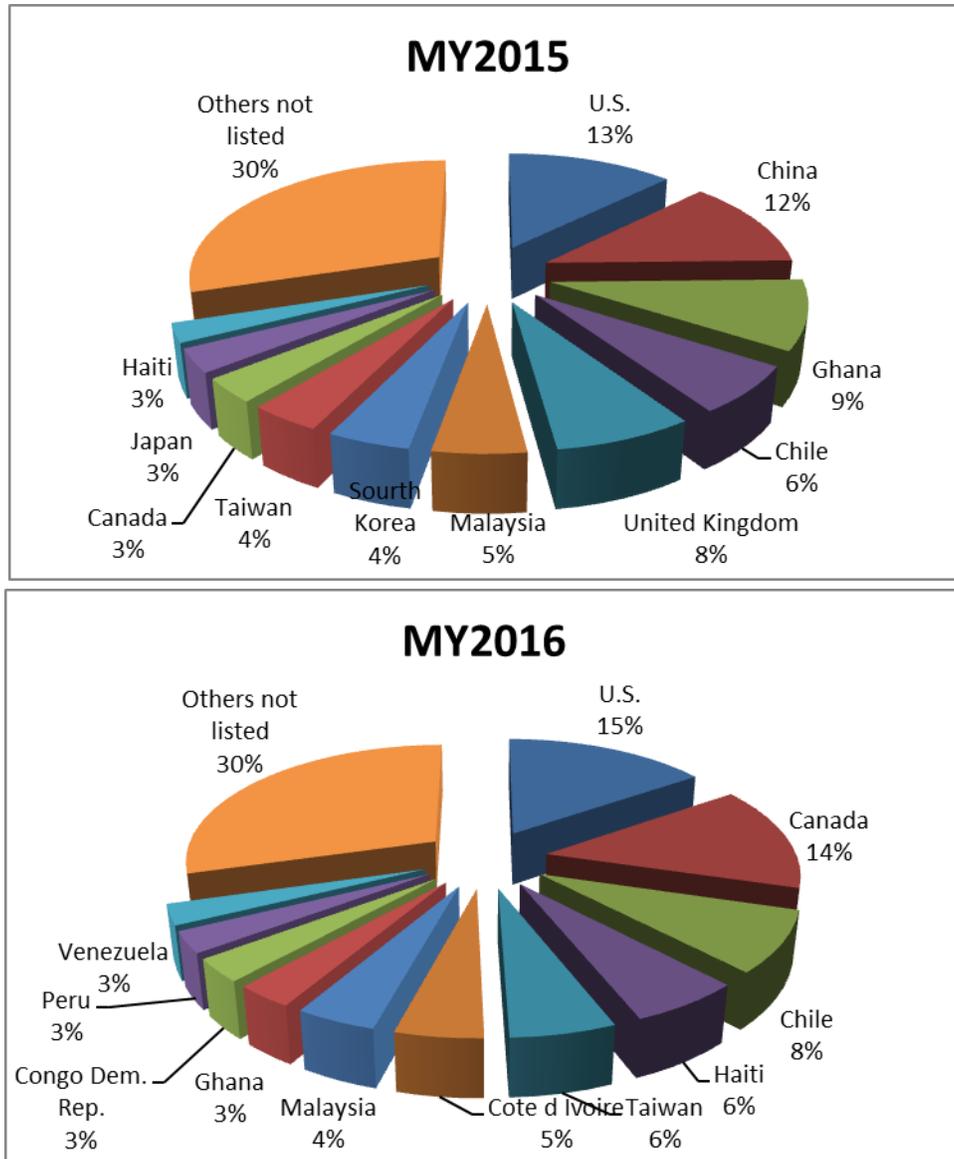
Table 1
Export Trade Matrix for Guatemala’s Sugar (MY2015 and MY2016)

Export Trade Matrix			
Country	Guatemala		
Commodity	Centrifugal Sugar		
Time period	Oct-Sep		
MY2015 (MT)		MY2016 (MT)	
U.S.	339,495	U.S.	312,685
China	321,560	Canada	287,529
Ghana	250,498	Chile	167,475
Chile	172,255	Haiti	123,044
United Kingdom	199,664	Taiwan	114,630
Malaysia	133,850	Cote d Ivoire	95,555
South Korea	118,200	Malaysia	88,000
Taiwan	103,218	Ghana	64,004
Canada	87,142	Congo Dem. Rep.	63,221
Japan	85,000	Peru	58,804
Haiti	68,788	Venezuela	56,409
Total for Others	1,879,670		1,431,356
Others not listed	800,556	Others not listed	597,993
Grand Total	2,340,731	Grand Total	2,029,349

Source: Global Trade Atlas, 2017

Guatemala continues exporting around 73 percent of its total production. The export markets have changed quite significantly in the past decade, but the United States continues to be Guatemala’s major export market, as shown in Graph 7.

Graph 7
 MY2015-2016 Comparison of Guatemala's Sugar Exports to Major Markets



Source: Global Trade Atlas, 2017

For MY 2016, raw sugar exports represented 52 percent share of total exports and refined sugar 48 percent. The trend to increase exports of refined sugar has increased the importance of South American and Caribbean countries for Guatemala's sugar exports. Top buyers for Guatemalan sugar in MY2016 were the United States, Canada and Chile. Canada basically took China's share during this past year.

Stocks:

MY2018 ending stocks are forecast at 134,000 MT and the estimate for MY2017 is to reach 136,000 MT, 18 percent above previous estimates but down compared to MY2016 final stocks. Domestic stocks are held in warehouses managed by the sugar industry throughout the country. All exported sugar is held in warehouses managed by EXPOGRANEL, the loading terminal located at Puerto Quetzal. Its warehousing capacity is 365,000 MT for bulk sugar and 66,000 MT for refined sugar (in 50 kg bags). EXPOGRANEL has an ISO 9001:2008 Quality System Certifications and ISO 22000:2005 standards to secure its Food Safety System. In addition, the sugar industry has a state-of-the-art laboratory for sugar analysis with 19 credited analyses that guarantee the sugar quality for both export and domestic markets. The laboratory is used as a reference lab by countries in the region, including Colombia.

Guatemala is known worldwide as a good partner in the sugar business, due to its high quality sugar (95-98 percent polarization) plus the consistency in supply. Guatemala signs contracts in advance, during the first three months of each calendar year. After March, prices start rising in the international market. Guatemala was assigned a WTO quota of 50,546 MT for MY2017; Guatemala fills the entire quota each year and MY2017 is no exception.

Policy:

The Sugar Board of Guatemala, which includes representatives from the Ministry of Economy, sugarcane producers, and sugar mills, establishes production goals, sets sugarcane prices, and allocates the U.S. sugar quota to the different sugar mills. The allocation to each mill is based on past production performance, previous quotas, and milling capacity. According to the law, all sugar sold domestically must be enriched with vitamin A. The industry claims to invest more than \$3.5 million a year in vitamin A. At times the Government of Guatemala (GOG) opens most favored nation quotas for imported sugar to try to control market prices, but the quotas rarely get filled in part due to the vitamin A fortification requirement. Fortification is approved and validated by the Institute of Nutrition of Central America and Panama, which has historically monitored and evaluated the impact of Vitamin A fortification, reporting it as a success story. Even though Guatemala has the third highest rate of chronic malnutrition in children less than 5 years old in the world, blindness is not an issue in the country. ^[i]

[i]

<http://www.incap.org.gt/index.php/en/areas-and-lines-of-working/nutrition-and-micronutrient/integral-analytical-center-cai>.

Marketing:

The main export strategy is to continue increasing refined sugar exports. For MY2016 exports were handled in containers (28 percent), bulk (42 percent), and break bulk (31 percent). ASAZGUA is also continuing its marketing strategy to maintain domestic sugar consumption. The industry is actively engaged with supporting the “sustainable development challenge goals” in Guatemala and has been collaborating for more than 20 years in maternal-child nutrition and health components; its major program is focused on increasing local capabilities of rural primary school teachers. As a result, the sugar industry is well known and liked in the country. ^[i]

^[i] <http://www.azucar.com.gt/index.html>.

Production, Supply and Demand Data Statistics:

Sugar, Centrifugal Market Begin Year Guatemala	2015/2016		2016/2017		2017/2018	
	Oct 2015		Oct 2016		Oct 2017	
	USDA Official	New Post	USDA Official	New Post	USDA Official	New Post
Beginning Stocks	201	201	156	219	0	136
Beet Sugar Production	0	0	0	0	0	0
Cane Sugar Production	2975	2823	3050	2800	0	2900
Total Sugar Production	2975	2823	3050	2800	0	2900
Raw Imports	0	0	0	0	0	0
Refined Imp.(Raw Val)	0	0	0	0	0	0
Total Imports	0	0	0	0	0	0
Total Supply	3176	3024	3206	3019	0	3036
Raw Exports	1225	1026	1255	1093	0	1099
Refined Exp.(Raw Val)	1030	1003	1055	1010	0	1015
Total Exports	2255	2029	2310	2103	0	2114
Human Dom. Consumption	765	776	784	780	0	788
Other Disappearance	0	0	0	0	0	0
Total Use	765	776	784	780	0	788
Ending Stocks	156	219	112	136	0	134
Total Distribution	3176	3024	3206	3019	0	3036

(1000 MT)