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#### Abstract

This report evaluates the U.S. and world sugar markets for 2007-2017 using the Global Sugar Policy Simulation Model. This analysis is based on assumptions about general economic conditions, agricultural policies, population growth, weather conditions, and technological changes.

Both the U.S. and world sugar economies are predicted to remain profitable over the next ten years mainly because of the recent surge in world oil prices have increased the conversion of sugar into ethanol in Brazil, while other exporting countries have increased their production in response to those higher prices. Brazil is the largest exporter of sugar, and it is expected that the rate of increase in Brazilian sugar exports may be reduced due to high oil prices. World demand for sugar is expected to grow at a similar rate to world supply, resulting in Carribean sugar prices remaining near the $13.0-15.5$ cents/lb range throughout the forecast period. The U.S. wholesale price of sugar is projected to increase slightly from 26.25 cents/lb in 2007 to 29.9 cents/lb in 2017, if Brazil continues to convert sugar into ethanol. It is projected that Mexico will be able to export 621 thousand metric tons of sugar to the United States by 2017. World trade volumes of sugar are expected to increase throughout the forecast period.


Keywords: sugar, production, exports, consumption, ending stocks

## Highlights

Total world sugar trade is projected to increase by $15.3 \%$ between 2007 and 2017 from 26.2 million metric tons to 30.2 million metric tons. Brazil's exports are projected to increase from 14.6 million metric tons in 2007 to 18.7 million metric tons in 2017 even though Brazil uses a substantial amount of sugar cane for ethanol production. World sugar prices also are projected to increase from 11.6 cents/lb in 2007 to 15.35 cents/lb in 2017. U.S. wholesale sugar price is projected to increase from 26.25 cents/lb in 2007 to 29.87 cents/lb in 2017.
U.S. sugar imports are predicted to decrease $16.0 \%$ over the 2007-2017 period. The main reason for the lower projected imports is that recent imports for the 2005-2007 period is larger than long term levels. Imports are expected to return to levels that were experienced between 2000 and 2004. U.S. sugar production is projected to increase 23\% between 2007 and 2017, however continued high commodity prices may limit sugar production growth from sugar beets. U.S. sugar consumption is projected to increase $11.6 \%$ and ending stocks are predicted to increase $5.1 \%$. However, the U.S. sugar industry could face some uncertainty, mainly because of potential increases in sugar imports from Mexico.

Canada's production is predicted to increase slightly between 2007 to 2017. Canada's imports are expected to increase by $18.5 \%$. Consumption is predicted to increase $20.3 \%$, and ending stocks are predicted to increase by $25.0 \%$.

Mexico's production is expected to increase by $13.3 \%$, and exports are expected to increase to 0.4 million metric tons by 2017 due to increases in exports to the United States under the North American Free Trade Agreement (NAFTA).

The European Union (EU) is expected to become an importer by 2017 due to the EU-25 sugar policy reform. Their production is predicted to decrease by $4.1 \%$ while consumption will increase by $9.0 \%$.

Production in India is predicted to increase $3.6 \%$, while consumption is predicted to increase $25.0 \%$ for the 2007-2017 period. India could import about 2.0 million metric tons by 2017.

Exporting countries, such as Australia, Thailand, South Africa, and Brazil are predicted to increase their production and exports during the forecasting period.

Most importing countries, including Algeria, China, Egypt, and Indonesia are predicted to increase their imports for the 2007-2017 period.

# 2008 Outlook of the U.S. and World Sugar Markets, 2007-2017 

Won W. Koo and Richard D. Taylor*

## INTRODUCTION

Sugar is produced in over 100 countries worldwide. In most years, over $70 \%$ of world sugar production is consumed domestically which allowed the development of a large export market. However, a significant share of this trade takes place under bilateral long-term agreements or on preferential terms such as the European Union's (EU) Lome Agreement. Since only a small proportion of world production is traded freely, small changes in production and government policies tend to have large effects on world sugar markets. As a result, sugar prices have been very unstable in the world market.

During late 2005 and the first quarter of 2006, world sugar price increased from about $\$ 0.12 / \mathrm{lb}$ to over $\$ 0.18 / \mathrm{lb}$ because of increased use of sugarcane for ethanol production in Brazil. World sugar price fell to $\$ 0.12 / \mathrm{lb}$ in late 2006 and $\$ 0.11 / \mathrm{lb}$ by early 2007 due to increased production in other exporting nations. The yearly average price for 2007 was $\$ 0.116 / \mathrm{lb}$.

This report evaluates the U.S. and world sugar industry for 2007-2017 using the Global Sugar Policy Simulation Model developed by Benirschka et al. (1996). This model was run utilizing 2007 data. The outlook projection is based on an assumption that farm and trade policies adopted by sugar exporting and importing countries remain unchanged.

Sugarcane is a perennial grass that is produced in tropical and subtropical climate zones. It matures in 12 to 16 months. Once the cane is harvested, the sucrose starts breaking down. Thus, sugarcane mills are located close to the cane fields to minimize transport costs and sucrose losses. Mills convert sugarcane into raw sugar which is shipped to refineries for further processing. In contrast to raw sugar producing mills, refineries are unconstrained by seasonal production patterns and operate throughout the year. Unlike sugarcane, sugarbeets are an annual crop of temperate climate zones. Because of disease problems, sugarbeets are always grown in crop rotations. Since sugarbeets are bulky and costly to transport, beet processing facilities are located close to production. In contrast to sugarcane, sugarbeets are directly processed into refined sugar. Raw sugar is produced only from sugarcane.

Raw sugar and refined sugar are two different products. They are both traded internationally. Beet sugar producing countries export refined sugar, while cane sugar producing countries export either raw or refined sugar. In recent years, the share of raw sugar in total sugar exports has been about $50 \%$.

[^0]
## OVERVIEW OF THE WORLD SUGAR INDUSTRY AND SUGAR POLICIES

For the 2003-2007 period, annual global sugar production was approximately 152 million metric tons with about $32 \%$ of production exported from its country of origin. The largest sugar producing region is Brazil, followed by the India and the EU (Table 1).

Table 1. World Sugar Supply and Utilization, 2003 to 2007 Average

| Country/ <br> Region | Beet/ <br> Cane | Consumption | Production | Net Exports | Ending <br> Stocks | Per Capita <br> Consumption |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Algeria | B | $--\cdots-----1,000$ metric tons, raw value--------- | Kg |  |  |  |
| Australia | C | 1,187 | 10 | $(1,188)$ | 230 | 34 |
| Brazil | C | 1,140 | 5,077 | 3,909 | 290 | 58 |
| Canada | B | 10,766 | 28,995 | 13,636 | 92 | 57 |
| China | $\mathrm{B} / \mathrm{C}$ | 1,438 | 107 | $(1,338)$ | 99 | 44 |
| Cuba | C | 700 | 11,553 | $(976)$ | 1,686 | 9 |
| European Union | B | 16,742 | 1,460 | 953 | 214 | 61 |
| Egypt | $\mathrm{B} / \mathrm{C}$ | 2,482 | 1,549 | 1,821 | 4,551 | 47 |
| Former Soviet | $\mathrm{B} / \mathrm{C}$ | 5,948 | 2,566 | $(482)$ | 346 | 35 |
| Union |  |  |  |  |  | 466 |
| India | C | 20,690 | 22,576 | 773 | 9,090 | 18 |
| Indonesia | C | 3,840 | 1,946 | $(1,888)$ | 1,252 | 17 |
| Japan | $\mathrm{B} / \mathrm{C}$ | 2,290 | 900 | $(767)$ | 395 | 18 |
| Korea | - | 1,193 | 0 | $(1,339)$ | 151 | 24 |
| Mexico | C | 5,269 | 5,709 | 17 | 1,576 | 48 |
| South Africa | C | 1,542 | 2,454 | 953 | 667 | 35 |
| Thailand | C | 2,080 | 6,190 | 4,123 | 1,290 | 31 |
| United States | $\mathrm{B} / \mathrm{C}$ | 9,222 | 6,872 | $(2,036)$ | 1,584 | 33 |
| Rest of World | $\mathrm{B} / \mathrm{C}$ | 45,490 | 34,879 | $(12,920)$ | 13,883 | 19 |
| World | $\mathrm{B} / \mathrm{C}$ | 144,379 | 151,858 | 48,793 | 37,962 | 21 |

Per capita sugar consumption was highest in the Cuba followed by Australia and Brazil. Per capita sugar consumption in the United States was 33 kg , which was above world average per capita consumption ( 21 kg ). Per capita sugar consumption was lowest in China at 9 kg per capita, but that may increase substantially as per capita income increases. Annual global sugar consumption for the 2003-2007 period was 144 million metric tons.

The major sugar exporting countries were Brazil, Thailand, Australia, the EU, and Cuba. These countries accounted for $50 \%$ of global exports from 2003 to 2007. A relatively few number of countries dominate world sugar exports, but imports are less concentrated. Major importing countries were the Former Soviet Union (FSU), the United States, Indonesia, Korea, Canada, Algeria, China, and Japan. Imports by these countries accounted for about $24 \%$ of all
sugar imports from 2003 to 2007. Under the Lome Convention, the EU was required to import sugar under preferential terms from certain African, Caribbean, and Pacific countries.


Figure 1. U.S. and World Sugar Prices
The Caribbean raw sugar price is usually considered to be the world market price for sugar. Except for years with high world market prices, there was a substantial wedge between the U.S. wholesale price of raw sugar and the world market price. Over the last decade, U.S. wholesale prices fluctuated between $\$ 0.22$ and $\$ 0.29$ per pound. World market prices ranged between $\$ 0.06$ per pound and $\$ 0.18$ per pound (Figure 1). Both real Caribbean raw sugar prices and U.S. raw sugar import prices had long-term downward trends but are increasing for the past 4-5 years. Figure 1 shows the dramatic price increase in Caribbean sugar price in late 2005 and 2006. In 2003, the price averaged $\$ 0.07 / \mathrm{lb}$, but it had risen to $\$ 0.12 / \mathrm{lb}$ in 2005 and it was $\$ 0.18 / \mathrm{lb}$ in June 2006 before falling to $\$ 0.11 / \mathrm{lb}$ in 2007. The high Caribbean sugar price also increased the U.S. wholesale price to over $\$ 0.30 / \mathrm{lb}$ in 2006, before falling to $\$ 0.26 / \mathrm{lb}$ in 2007.

The volatility of world sugar prices could be due to the nature of supply response to price changes stemming from high fixed costs of sugar production. An increase in sugar production in response to rising sugar prices requires significant investments in processing facilities, and it takes some time until new production capacity becomes available. Once the facilities are in place, they tend to be used at full capacity to spread the fixed costs. Thus, when prices fall, production remains at full capacity. Sugar production is relatively unresponsive to price in the short run, however sugar price does respond to changes in consumption. The increase in the Caribbean price of sugar in 2005 and 2006 is mainly because Brazil increased the production the
ethanol from sugarcane. However, the price dropped in 2007 because of increased production of sugar from sugarcane in response to the higher sugar prices in 2005 and 2006.

The United States produces both beet and cane sugar. Cane sugar is produced mainly in Florida, Louisiana, and Texas. Beet sugar is produced largely in the Great Lakes region, Upper Midwest, Great Plains, and far western states. Beet sugar production increased $26.5 \%$ from the 1990 to 2007, while cane sugar production increased 19.5\% (Figure 2). U.S. total sugar production increased about $24.2 \%$ from 6.2 million metric tons in 1990 to 7.7 million metric tons in 2007 (Figure 3).
U.S. consumption of sugar increased by $16.6 \%$ from 8.0 million metric tons in 1990 to 9.3 million metric tons in 2007 (Figure 4). The balance was imported from more than 40 countries. U.S. sugar imports decreased $71 \%$ from 4.5 million metric tons in 1974 to 1.3 million metric tons in 1987 and then increased to an average of 1.7 million metric tons during the 1990 to 2007 period. Under the North American Free Trade Agreement (NAFTA), Mexico currently is allowed to export excess sugar to the United States. Currently, Mexico has exported less than 100,000 metric tons of sugar into the United States for the last few years, due to production shortages. The U.S.-Central American Free Trade Agreement (CAFTA), which is a free trade agreement (FTA) currently with six Central American countries, provides additional sugar imports of 107,000 metric tons, with additional increases of 3,000 metric tons per year.


Figure 2. U.S. Beet and Cane Sugar Production


Figure 3. U.S. Sugar Production and Imports


Figure 4. U.S. Sugar Consumption and Ending Stocks

## U.S. Sugar Programs and Policies

The U.S. sugar program was established by the Food and Agricultural Act of 1981. Several modifications were made by the Food Security Act of 1985; the Food, Agriculture, Conservation, and Trade Act of 1990; the Federal Agriculture Improvement and Reform Act of 1996; and the Farm Security and Rural Investment (FSRI) Act of 2002.

The core policy tools in the program are the loan program, import restrictions, and production allotments. The main purpose of the loan program is to maintain a minimum market price for U.S. producers. Processors use sugar as collateral for loans from the U.S. Department of Agriculture (USDA). The program permits processors to store the sugar rather than sell it for lower than desired prices. Loans can be taken for up to nine months. Processors pay growers for delivered beets and cane, typically about $60 \%$ of the loan. Final payments are made and the loan is repaid after the sugar has been sold.

Under the FSRI Act, the sugar loan rate is set at 18 cents per pound for raw cane sugar and 22.9 cents per pound for refined beet sugar. Loans under the FSRI Act become recourse loans if the tariff rate quota (TRQ) is at 1.5 million metric tons or below, regardless of the price. When the TRQ is set above 1.5 million metric tons, the loans are nonrecourse. Under the nonrecourse loan, a processor can forfeit collateral (sugar) to the Commodity Credit Corporation (CCC) instead of loan repayment if market prices fall below the loan rates. Processors who obtain a nonrecourse loan must pay farmers an amount for their sugarbeets and sugarcane that is proportional to the loan value of sugar. This is the same as under previous legislation.

The Uruguay Round Agreement (URA) on agriculture made minor adjustments for sugar trade. U.S. import quotas on sugar were converted into TRQs, implying that a specified amount of sugar can be imported at the lower of two alternative duty rates. The amount of raw cane sugar subject to the lower duty rate must be no less than $1,117,195$ metric tons in a fiscal year which was increased to $1,231,497$ metric tons for 2005 due to production losses due to Hurricane Katrina. The minimum low-duty import of refined sugar is 22,000 metric tons. The minimum low-duty imports for raw and refined sugar add up to 1.256 million metric short tons raw value of sugar per year. The high duty (about 15.82 cents per pound) is imposed on the amount of sugar imported over the import quota. The first-tier duty ranges from zero to 0.625 cents per pound.

The second tier-duty for raw cane sugar was reduced from 17.62 cents per pound in 1995 to 15.82 cents per pound in 2000 under the URA. The duty for refined sugar was reduced from 18.6 cents per pound in 1995 to 16.21 cents per pound in 2000 . The duties have remained constant since 2000.

The sugar quota has been allocated among more than 40 quota-holding countries, allowing imports of specific quantities of sugar at first-tier duty rates. The quota allocation is based on historical exports to the United States for the 1975 to 1985 period.

NAFTA allowed a rapid reduction in the second-tier duty for Mexican sugar over the past several years. The second-tier duty for Mexican sugar was reduced from 16.11 cents per pound in 1995 to zero in 2008. Duties beyond the import quota for most countries will remain at 15.82 cents per pound for raw cane sugar and 16.21 cents per pound for refined sugar. This implies that Mexico is in a unique position to increase its exports of sugar to the United States above the allocated quota. Mexico produced 6.0 million metric tons of sugar in 2005 and consumed 5.4 million metric tons in the same year. Its net exports were 243 thousand metric tons for the year. If Mexico starts to use High Fructose Corn Sweetener (HFCS) for beverages, more of its sugar could be exported to the United States. Furthermore, the price of HFCS has increased substantially as a result of increased corn price. If the price of HFCS remains near the current levels, Mexico may not use HFCS for beverages. Currently there are transportation and use taxes on HFCS in Mexico. Mexico has been declared an excess sugar producer which will allow additional exports into the United States.

The United States signed a trade agreement with the Central American countries of El Salvador, Guatemala, Honduras, Nicaragua, Costa Rica and the Dominican Republic. CAFTA allows 107,000 metric tons of additional sugar to be imported into the United States in the first year of implementation of the agreement, with additional increases of about 3,000 metric tons per year. This increase, however, does not have a significant impact on the price of U.S. sugar or world trade flows. Recent trade agreement and negotiations with Australia do not include increased sugar imports.

## Domestic and Export Subsidies in the EU, South Africa, and Mexico

The basic tools of the EU's sugar policies are (1) import restrictions with limited free access for certain suppliers; (2) internal support prices that ensure returns to producers for fixed quantities of production and permit the maintenance of refining capacity; and (3) export subsidies for a quantity of domestically produced sugar.

EU member states allocate an "A" quota and a "B" quota to each sugar producing operation, each isoglucose producing operation, and each inulin syrup producing operation established in their territory. Current quota levels have been in place since the accession of Austria, Sweden, and Finland to the EU. The total EU sugar production quotas for A and B sugar are 11.98 million metric tons and 2.61 million metric tons, respectively. Any sugar that is produced by any member of the EU in excess of its yearly quota is considered "C-sugar." A and B sugar production is used for domestic consumption and for subsidized exports. C-sugar must be exported into the world market without subsidy or carried over into the next marketing year. In 2005, the EU converted the sugar support program to direct payments which allows producers to plan for the market.

Since marketing year 1995, EU-subsidized exports of sugar to third-world countries have been limited, in volume and value, under the URA commitments of the EU. However, the EU did not make an export subsidy commitment on its subsidized exports of a quantity of sugar equal to
its preferential imports under the Lome Convention. The EU has proposed to limit sugar production to about 14.9 million metric tons per year. In 2007, the EU produced 17.5 million metric tons of sugar. If the EU limits sugar production to the stated level, the EU will become an importer of sugar.

South Africa has both internal price supports and export subsidies. South Africa reduced its subsidized exports by 200,000 tons to 702,208 tons although net exports for 2007 were 1.2 million metric tons. Mexico also has subsidized exports and is subsidizing raw sugar storage.

## Brazil

Brazil is the largest sugar producing country in the world. The production of sugar has increased $306 \%$ since 1990. About $50 \%$ of Brazilian sugar consumed domestically is converted into ethanol for fuel. Exports have risen from 1.2 million metic tons in 1990 to 15.5 million metric tons in 2007. Sugar that is converted into ethanol is subsidized at prices higher than the world price. Recent increases in the world oil price has increased the price of ethanol which in turn increased Brazil's conversion of sugar into ethanol, reducing potential sugar exports from Brazil. That reduction in the growth of exports has increased world sugar prices.

## State Trading Enterprises in Australia, China, and India

Australia's sugar exports are handled by the Queensland Sugar Corporation (QSC), a statutory authority established under the Sugar Industry Act 1991. The QSC is responsible for the domestic marketing and export of $100 \%$ of the raw sugar produced in the state of Queensland, which produces $95 \%$ of the sugar produced in Australia. The QSC supports domestic producers through buyer-seller arrangements, marketing quotas, dual pricing arrangements, and other quasigovernment mechanisms that isolate domestic producers from foreign competition. State trading enterprises (STEs) were not addressed in the URA. Other countries, including China and India, handle their sugar trade through STEs similar to the QSC.

## OUTLOOK FOR THE WORLD SUGAR INDUSTRY

Total world sugar trade is projected to increase $15.3 \%$, from 26.2 to 30.2 million metric tons over the 2007-2017 period. Exports of sugar in most countries will increase for 2007-2017. Exports will increase 28.0\% for Brazil, and 12.0\% for Australia.

World sugar price, referred to as the Caribbean price of sugar, is projected to increase about $32 \%$ from 11.60 cents/lb in 2007 to 15.35 cents/lb in 2017 (Figure 5) because substantial diversion of sugar cane to ethanol production.

## United States

Table 2 shows production, consumption, imports, and ending stocks of sugar for the United States. U.S. sugar production is predicted to increase to 8.9 million metric tons in 2017. The increase in sugar production is due mainly to a combination of higher world and U.S. sugar prices and increases in consumption for the time period. However, growth in sugar production from sugar beets may be limited if high prices for competing crops remain at 2007 levels. U.S. sugar consumption is predicted to increase 12.0\% from 9.3 million metric tons (the 2005-2007 average) to 10.4 million metric tons in 2017. Ending stocks are also predicted to increase $5.1 \%$ (Table 2). Imports are predicted to decrease 32\% from the 2005-07 average. However, the imports depend upon Mexico's sugar production and consumption. The decreased levels of imports for 2017 are due to short term higher levels in 2005 through 2007. Average imports levels for 2000 through 2004 was 1.7 million metric tons per year. Therefore, imports are expected to return to long term levels.

Table 2. U.S. Sugar Production, Consumption, Imports, and Carry-over Stock, 2007-2017 Average

|  | Average <br> $(2005-2007)$ | 2007 | 2017 | \% Change <br> $(2005-07)$ to 2017 |
| :--- | :---: | :---: | :---: | :---: |
|  | $------1,000$ metric tons--------- |  |  |  |
| Production | 6,920 | 7,671 | 8,929 | 29.04 |
| Beet | 4,049 | 4,363 | 5,371 | 32.66 |
| Cane | 2,871 | 3,309 | 3,559 | 23.96 |
| Net Imports | 2,229 | 1,805 | 1,516 | -31.98 |
| Per capita Consumption | 64 | 63 | 65 | 1.57 |
| Consumption | 9,306 | 9,344 | 10,389 | 11.64 |
| Carry-over Stocks | 1,664 | 1,819 | 1,748 | 5.07 |

## Exporters

The EU has changed the internal sugar policy by restricting support. This has reduced production. Because of that change, the EU has become a net importer of sugar. EU imports are predicted to decrease from 1.6 million metric tons in 2007 to 1.3 million metric tons in 2017 (Figure 6). Sugar production in the EU is predicted to decrease $4.1 \%$ and consumption is predicted to increase from 17.7 million metric tons for the 2005-2007 average to 19.3 million tons in 2017 (Table 3). Most of the increase in consumption is due to the additional countries now included in the EU.


Figure 5. Estimated U.S. and World Sugar Prices


Figure 6. World Sugar Export by Country

Brazil's production is predicted to increase by $4.9 \%$ from 30.1 million metric tons in 2005-2007 to 31.6 million metric tons in 2017 (Table 3). Brazil's exports are predicted to increase from 14.6 million metric tons in 2005-2007 to 18.7 million metric tons in 2017.

Its domestic consumption is predicted to increase by $18.1 \%$ from 10.9 million metric tons in 2005-2007 to 12.9 million metric tons in 2017. Much of the increase in consumption is due to ethanol production.

Thailand's exports are predicted to increase by 30.0\% from the 2005-2007 average of 4.2 million metric tons for the 2005-2007 average to 5.5 million metric tons in 2017 (Table 3). Most of the increase is due to small exports in 2005. Consumption increases from 2.1 million metric tons for the 2005-2007 average to 2.5 million metric tons in 2017. Sugar production in the country also is predicted to increase by $27.7 \%$ from 6.3 million metric tons to 8.0 million metric tons in 2017. However, the increase in production would be only $10.9 \%$ compared to the 2007 production.

Australia's exports are predicted to increase by $4.6 \%$ from 3.7 million metric tons for the 2005-2007 average to 3.9 million metric tons in 2017 (Table 3), due mainly to increased sugar production, which is predicted to increase by $5.0 \%$ from 4.9 million metric tons to 5.2 million metric tons in 2017. Sugar consumption is expected to increase by $11.4 \%$ from 1.1 million metric tons to 1.3 million metric tons in 2017.

Cuba's exports are predicted to decrease by 40.6\% from the 2005-2007 level to 2017 (Table 3). It is predicted that Cuba will increase its sugar production $3.4 \%$, while consumption is predicted to increase by $13.3 \%$. These projections are based on the assumption that the political situation remains the same between the United States and Cuba.

Mexico's production is predicted to increase by $13.3 \%$ from 5.7 million metric tons in 2005-2007 to 6.4 million metric tons in 2017. Mexico is expected to export 621 thousand metric tons by 2017, mainly to the United States under NAFTA. Sugar consumption is predicted to increase by 11.1\% from 5.2 million metric tons in 2005-2007 to 5.8 million metric tons in 2017 under the assumption that Mexico does not convert to HFCS in their soft drink industry. Ending stocks are predicted to increase by $17.6 \%$. If Mexico replaces the sugar that is used in soft drinks with HFCS, the excess sugar will likely be exported to the United States under NAFTA.

South Africa's production is predicted to increase by $22.0 \%$ from 2.5 million metric tons in 2005-2007 to 3.0 million metric tons in 2017. South Africa's exports are predicted to increase slightly by 2017. Sugar consumption is predicted to increase by $19.3 \%$ and ending stocks are predicted to decrease by $31.0 \%$.

Table 3. Sugar Production, Consumption, Exports, and Carry-over Stocks in Exporting Countries

| Average |  |  | \% change |
| :---: | :---: | :---: | :---: |
| $(2005-2007)$ | 2007 | 2017 | $(2005-07)$ to 2017 |


| European Union |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Production | 18,771 | 17,490 | 18,003 | -4.1 |
| Net Exports | 828 | $(1,551)$ | $(1,333)$ | NA |
| Consumption | 17,733 | 18,400 | 19,327 | 9.0 |
| Carry-over | 4,239 | 3,840 | 3,895 | -8.1 |
| Brazil |  |  |  |  |
| Production | 30,133 | 31,100 | 31,601 | 4.9 |
| Net Exports | 14,597 | 15,450 | 18,675 | 27.9 |
| Consumption | 10,943 | 11,400 | 12,927 | 18.1 |
| Carry-over | (385) | (385) | 152 | NA |
| Thailand |  |  |  |  |
| Production | 6,252 | 7,200 | 7,984 | 27.7 |
| Net Exports | 4,214 | 5,300 | 5,478 | 30.0 |
| Consumption | 2,117 | 2,200 | 2,494 | 17.8 |
| Carry-over | 1,340 | 1,980 | 1,053 | -21.4 |
| Australia |  |  |  |  |
| Production | 4,940 | 4,700 | 5,185 | 5.0 |
| Net Exports | 3,742 | 3,496 | 3,916 | 4.6 |
| Consumption | 1,132 | 1,100 | 1,263 | 11.4 |
| Carry-over | 188 | 111 | 253 | 34.6 |
| Cuba |  |  |  |  |
| Production | 1,150 | 1,000 | 1,189 | 3.4 |
| Net Exports | 685 | 635 | 407 | -40.6 |
| Consumption | 700 | 700 | 793 | 13.3 |
| Carry-over | 205 | 175 | 141 | -31.2 |
| Mexico |  |  |  |  |
| Production | 5,689 | 5,830 | 6,445 | 13.3 |
| Net Exports | (179) | 240 | 621 | NA |
| Consumption | 5,229 | 5,150 | 5,810 | 11.1 |
| Carry-over | 1,559 | 1,726 | 1,833 | 17.6 |
| South Africa |  |  |  |  |
| Production | 2,465 | 2,500 | 3,008 | 22.0 |
| Net Exports | 1,085 | 1,035 | 1,104 | 1.6 |
| Consumption | 1,568 | 1,585 | 1,871 | 19.3 |
| Carry-over | 508 | 275 | 351 | -31.0 |

## Importers

Figures 7 through 9 show sugar imports by the major sugar importing countries. Sugar imports of selected Asian and African countries are expected to increase by $22.6 \%$ and $32.0 \%$, respectively, for the 2007-2017 period.

Canada's production is predicted to increase above the 2005-2007 average of 105 thousand metric tons to 120 thousand tons by the year 2017, and consumption is predicted to increase from 1.5 million metric tons to 1.8 million metric tons in 2017 (Table 4). As a result, Canada's imports are predicted to increase $18.5 \%$ from 1.4 million metric tons to 1.6 million metric tons in 2017.

The FSU's production is predicted to increase by $17.4 \%$ from the 2005-2007 average of 2.9 million metric tons to 3.4 million metric tons in 2017, and consumption is predicted to increase $8.6 \%$ from 5.8 million metric tons to 6.3 million metric tons for the same period. Imports are predicted to increase 1.6\% from the 2005-2007 average (Table 4).


Figure 7. World Sugar Imports by Country, Major Importers


Figure 8. World Sugar Imports by Country, Asian Countries


Figure 9. World Sugar Imports by Country, African Countries

China is expected to increase its imports by about $179.5 \%$ from 0.9 million metric tons in 2005-2007 to 2.6 million metric tons in 2017 (Table 4). China’s production is predicted to increase by $20.9 \%$ from 12.4 million metric tons for the 2005-2007 average to 15.0 million metric tons in 2017, and consumption is predicted to increase by $36.0 \%$ from 12.9 million metric tons to 17.6 million metric tons for the period.

India's production is predicted to increase by $3.6 \%$ from 27.9 million metric tons in 2005-2007 to 28.8 million metric tons in 2017. However, India’s imports are expected to remain level throughout the projection period.

Japan's imports are predicted to decrease by 1.6\% from the 2005-2007 average to 1.4 million metric tons in 2017, due to a slight decrease in domestic consumption and a slight increase in production (Table 4).

In South Korea, consumption is predicted to increase by $12.7 \%$ for the time period. As a result, South Korea's imports are predicted to increase $1.2 \%$ for the period. There is no domestic production of either sugar cane or sugar beets in South Korea.

In Algeria, consumption is predicted to increase by $30.7 \%$ from 1.2 million metric tons in 2005-2007 to 1.6 million metric tons in 2017. This increase in consumption results in imports increasing from 1.3 million metric tons for the 2005-2007 average to 1.6 million metric tons in 2017.

Egypt's imports are predicted to increase by $46.3 \%$ from 0.9 million metric tons in 20052007 to 1.3 million metric tons in 2017, due mainly to increased consumption. Consumption is predicted to increase $25.8 \%$ from 2.5 million metric tons to 3.1 million metric tons in 2017.

Indonesia's imports are predicted to increase by $8.5 \%$ from 2.2 million metric tons in 2005-2007 to 2.4 million metric tons in 2017. Consumption is predicted to increase from 4.1 million metric tons for the 2005-2007 average to 4.8 million metric tons in 2017.

Table 4. Sugar Production, Consumption, Imports, and Carry-over Stocks in Importing Countries

|  | $\begin{gathered} \text { Average } \\ (2005-07) \\ \hline \end{gathered}$ | 2007 | 2017 | $\begin{array}{r} \text { \% Change } \\ (2005-07) \text { to } \end{array}$ |
| :---: | :---: | :---: | :---: | :---: |
| -----------1,000 metric tons----------- |  |  |  |  |
| Algeria |  |  |  |  |
| Production | 10 | 10 | 11 | 6.5 |
| Net Imports | 1,268 | 1,350 | 1,591 | 25.4 |
| Consumption | 1,225 | 1,200 | 1,601 | 30.7 |
| Carry-over | 277 | 284 | 264 | -4.8 |
| Canada |  |  |  |  |
| Production | 105 | 105 | 120 | 14.3 |
| Net Imports | 1,385 | 1,375 | 1,641 | 18.5 |
| Consumption | 1,458 | 1,425 | 1,755 | 20.3 |
| Carry-over | 212 | 94 | 265 | 25.0 |
| China |  |  |  |  |
| Production | 12,402 | 10,500 | 14,997 | 20.9 |
| Net Imports | 937 | 1,000 | 2,618 | 179.5 |
| Consumption | 12,933 | 11,500 | 17,594 | 36.0 |
| Carry-over | 1,450 | 1,703 | 2,133 | 47.1 |
| Egypt |  |  |  |  |
| Production | 1,626 | 1,601 | 1,883 | 15.8 |
| Net Imports | 898 | 903 | 1,286 | 43.2 |
| Consumption | 2,501 | 2,441 | 3,147 | 25.8 |
| Carry-over | 359 | 356 | 385 | 7.3 |
| Former Soviet Union |  |  |  |  |
| Production | 2,883 | 2,500 | 3,384 | 17.4 |
| Net Imports | 2,837 | 2,790 | 2,881 | 1.6 |
| Consumption | 5,780 | 5,400 | 6,275 | 8.6 |
| Carry-over | 437 | 470 | 365 | -16.4 |
| India |  |  |  |  |
| Production | 27,853 | 21,140 | 28,846 | 3.6 |
| Net Imports | 2,087 | 1,460 | 2,025 | -3.0 |
| Consumption | 21,428 | 19,785 | 26,779 | 25.0 |
| Carry-over | 10,885 | 4,175 | 17,544 | 59.6 |
| Indonesia |  |  |  |  |
| Production | 1,983 | 2,100 | 2,400 | 21.0 |
| Net Imports | 2,197 | 1,800 | 2,383 | 8.5 |
| Consumption | 4,083 | 3,850 | 4,784 | 17.2 |
| Carry-over | 1,323 | 1,170 | 1,419 | 7.2 |
| Japan |  |  |  |  |
| Production | 900 | 880 | 918 | 2.0 |
| Net Imports | 1,395 | 1,390 | 1,373 | -1.6 |
| Consumption | 2,333 | 2,300 | 2,290 | -1.9 |
| Carry-over | 406 | 372 | 430 | 6.0 |
| Korea |  |  |  |  |
| Production | 0 | 0 | 0 | NA |
| Net Imports | 1,337 | 1,331 | 1,353 | 1.2 |
| Consumption | 1,200 | 1,196 | 1,353 | 12.7 |
| Carry-over | 152 | 150 | 155 | 2.2 |

## CONCLUDING REMARKS

This report provides an overview of the U.S. and world sugar markets for 2007-2017 using the Global Sugar Policy Simulation Model. The baseline projections are based on a series of assumptions about general economic conditions, agricultural policies, weather conditions, and technological change.

Total world sugar trade is projected to increase by $15.3 \%$ from 26.2 million metric tons in 2007 to 30.2 million metric tons in 2017. The price of Caribbean sugar is expected to increase by about $32 \%$ from 11.6 cents/lb in 2007 to 15.35 cents/lb in 2017, because the substantial increases in ethanol production from sugar cane in Brazil.

Exports are predicted to increase for Brazil, Australia, South Africa, and Thailand, due to the increased sugar price.

Imports by most importing countries are predicted to increase from the 2005-07 average to 2017. China's imports are predicted to increase by $179 \%$, while Japan's imports are predicted to decrease by 1.6\%. Imports by Egypt and Algeria are predicted to increase 43.2\% and 25.4\%, respectively.
U.S. sugar consumption is predicted to increase by $11.6 \%$ for the forecasting period, while production is expected to increase by $33.0 \%$ for beet sugar and by $24 \%$ for cane sugar. Increases in beet sugar production may be limited due to high prices for other commodities such as corn, soybeans, and wheat. However, if the price of corn, soybeans, and wheat remains higher than the prices projected by FAPRI and USDA, the U.S. domestic production of sugar could be much smaller and imports could be higher. Imports are predicted to decrease by $32.0 \%$ for the period but most of the decreases are due to abnormally high levels of imports between 2005 and 2007. Imports are expected to return to long term levels. Mexico could have an impact on the U.S. sugar industry if the country uses HFCS in its soft drink industry. However, the recent high prices of HFCS could limit conversion from sugar to HFCS of the soft drink industry. Otherwise Mexico's exports to the United States could be relatively small, even though NAFTA allows unlimited exports beginning in 2008.

The large price increase in world sugar that occurred in late 2005 and 2006 will not be maintained. In the first half of 2007, Caribbean sugar price fell to 11 cents per pound from a high of 15.5 cents per pound in late 2006. The increased ethanol production in Brazil in 2005 and 2006 caused increases in the world price of sugar, which resulted in a production increase in other sugar exporting countries. Those production increases will continue to offset Brazil's ethanol production requirements.

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## Appendix

2008 Baseline Solution

United States - Nominal Sugar Beet and Sugarcane Farm Prices (dollars/short ton)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Sugar Beets | 40.00 | 41.37 | 37.93 | 37.99 | 38.17 | 39.43 | 39.67 | 41.05 | 40.69 | 40.63 | 40.99 | 41.53 |
| Sugarcane | 27.00 | 28.96 | 26.34 | 26.40 | 26.59 | 27.89 | 28.14 | 29.56 | 29.19 | 29.13 | 29.50 | 30.06 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Caribbean Price | 11.35 | 15.50 | 11.60 | 11.65 | 11.80 | 12.75 | 13.05 | 13.70 | 13.90 | 14.05 | 14.45 | 14.90 | 15.35 |
| TRQ Status | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota |
| Implicit Tariff | 10.07 | 6.64 | 6.00 | 6.00 | 6.00 | 6.10 | 6.00 | 6.50 | 6.00 | 5.80 | 5.70 | 5.70 | 5.70 |
| Import Price | 21.28 | 22.14 | 17.60 | 17.65 | 17.80 | 18.85 | 19.05 | 20.20 | 19.90 | 19.85 | 20.15 | 20.60 | 21.05 |
| Wholesale Price | 27.04 | 29.54 | 26.25 | 26.30 | 26.46 | 27.56 | 27.77 | 28.98 | 28.66 | 28.61 | 28.93 | 29.40 | 29.87 |
| Retail Price | 43.54 | 49.58 | 43.54 | 43.62 | 43.83 | 45.32 | 45.61 | 47.25 | 46.82 | 46.75 | 47.18 | 47.82 | 48.46 |

United States - Area Harvested (1000 acres)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Sugar Beets | 1243 | 1304 | 1241 | 1274 | 1289 | 1307 | 1319 | 1335 | 1349 | 1364 | 1381 |
| Sugarcane | 858 | 847 | 832 | 847 | 846 | 849 | 853 | 861 | 868 | 876 | 886 |
| Total Area | 2101 | 2150 | 2073 | 2121 | 2135 | 2156 | 2172 | 2196 | 2217 | 2240 | 2268 |

United States - Yields (short tons/acre)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Sugar Beets | 22.10 | 26.10 | 25.40 | 25.84 | 26.02 | 26.17 | 26.26 | 26.39 | 26.47 | 26.65 | 26.85 | 27.05 | 27.26 |
| Sugarcane | 28.80 | 33.00 | 35.00 | 34.60 | 34.45 | 34.33 | 34.34 | 34.41 | 34.53 | 34.66 | 34.80 | 34.95 | 35.10 |


| United States - Sugar Beet and Sugarcane Production (1000 short tons) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Sugar Beets | 27468 | 34024 | 31532 | 32919 | 33540 | 34188 | 34637 | 35219 | 35706 | 36337 | 37083 | 37923 | 38823 |
| Sugarcane | 24716 | 27938 | 29110 | 29301 | 29136 | 29165 | 29298 | 29629 | 29975 | 30369 | 30845 | 31398 | 31998 |


|  | United States - Sugar Extraction Rates (percent) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Variable | 16.20 | 14.70 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| Sugar Beets | 12.10 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 | 12.26 |
| Sugarcane |  |  | 12.26 |  |  |  |  |  |  |  |  |  |

United States - Sugar Production (1000 short tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Beet Sugar | 4032 | 4549 | 4809 | 5020 | 5115 | 5214 | 5282 | 5371 | 5445 | 5541 | 5655 | 5783 | 5921 |
| Cane Sugar | 2681 | 3166 | 3647 | 3592 | 3572 | 3576 | 3592 | 3633 | 3675 | 3723 | 3782 | 3849 | 3923 |
| All Sugar | 6713 | 7715 | 8456 | 8613 | 8687 | 8789 | 8874 | 9003 | 9120 | 9265 | 9437 | 9633 | 9843 |

United States - Sugar Import Quotas (1000 short tons, raw value) and Tariffs (U.S. cents/pound, raw sugar, most countries)

| Variable | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Tariff Rate Quota | 2588 | 1624 | 1256 | 1256 | 1256 | 1256 | 1256 | 1256 | 1256 | 1256 | 1256 |
| Below Quota Tariff | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Above Quota Tariff | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 | 15.36 |


| United States - Implicit Tariff (U.S. cents/pound) and Sugar Trade (1000 short tons) |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| TRQ Status | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota |
| Implicit Tariff | 7.00 | 4.00 | 6.00 | 6.00 | 6.00 | 6.10 | 6.00 | 6.50 | 6.00 | 5.80 | 5.70 | 5.70 |
| Quota |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Imports | 1949 | 2524 | 1886 | 1776 | 1781 | 1786 | 1791 | 1791 | 1791 | 1791 | 1791 | 1791 |
| Quota-sugar Imports | 1600 | 2074 | 1571 | 1576 | 1581 | 1586 | 1591 | 1591 | 1591 | 1591 | 1591 | 1591 |
| Other Sugar Imports | 500 | 349 | 450 | 315 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 |
| Total Exports | 203 | 422 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 | 120 |
| Net Imports | 1746 | 2102 | 1766 | 1656 | 1661 | 1666 | 1671 | 1671 | 1671 | 1671 | 1671 | 1671 |

United States - Sugar Supply and Utilization (1000 short tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Carry-in Stocks | 1208 | 1540 | 1799 | 2005 | 1911 | 1881 | 1923 | 1893 | 1880 | 1886 | 1896 |
| Production | 7399 | 8445 | 8516 | 8613 | 8687 | 8789 | 8874 | 9003 | 9120 | 9265 | 9437 |
| Net Imports | 3431 | 1949 | 1990 | 1656 | 1661 | 1666 | 1671 | 1671 | 1671 | 1671 | 1671 |
| Consumption | 10340 | 10135 | 10300 | 10417 | 10559 | 10610 | 10736 | 10761 | 10934 | 11085 | 11210 |
| Carry-out Stocks | 1698 | 1799 | 2005 | 1911 | 1881 | 1923 | 1893 | 1880 | 1889 | 1671 |  |

United States - Per Capita Sugar Consumption (pounds) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| Per Capita Consumption | 71.42 | 69.38 | 69.88 | 70.05 | 70.37 | 70.07 | 70.28 | 69.81 | 70.30 | 70.71 | 70.94 | 71.12 | 71.33 |
| Stocks/Consumption | 16.42 | 17.75 | 19.47 | 18.34 | 17.81 | 18.13 | 17.63 | 17.47 | 17.25 | 17.11 | 17.01 | 16.92 | 16.83 |

Canada - Sugar Beet Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 21 | 20 | 20 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Yield | 45.00 | 47.00 | 47.00 | 47.97 | 48.27 | 48.73 | 49.15 | 49.58 | 50.00 | 50.43 | 50.85 | 51.28 |
| Production | 932 | 940 | 940 | 1002 | 1014 | 1021 | 1029 | 1035 | 1041 | 1046 | 1051 | 1056 |


| Variable | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Extraction Rate (\%) | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 | 11.30 |

Canada - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 160 | 171 | 219 | 223 | 225 | 228 | 232 | 236 | 239 | 242 | 247 | 253 | 259 |
| Production | 105 | 105 | 105 | 113 | 115 | 115 | 116 | 117 | 118 | 118 | 119 | 119 | 120 |
| Net Imports | 1375 | 1375 | 1404 | 1389 | 1419 | 1440 | 1461 | 1479 | 1493 | 1531 | 1568 | 1604 | 1641 |
| Imports | 1390 | 1390 | 1420 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Exports | 15 | 15 | 16 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 1425 | 1450 | 1500 | 1500 | 1530 | 1551 | 1574 | 1592 | 1608 | 1644 | 1681 | 1718 | 1755 |
| Carry-out Stocks | 194 | 219 | 223 | 225 | 228 | 232 | 236 | 239 | 242 | 247 | 253 | 259 | 265 |

Canada - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 43.39 | 43.76 | 44.86 | 44.47 | 44.96 | 45.22 | 45.50 | 45.68 | 45.75 | 46.42 | 47.08 | 47.72 |
| Stocks/Consumption | 13.61 | 15.10 | 14.87 | 14.97 | 14.93 | 14.96 | 14.99 | 15.02 | 15.06 | 15.03 | 15.04 | 15.07 |

Mexico - Sugarcane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 650 | 645 | 665 | 666 | 668 | 672 | 676 | 681 | 686 | 691 | 696 | 701 | 707 |
| Yield | 73.00 | 74.00 | 74.30 | 74.30 | 74.50 | 74.75 | 75.01 | 75.28 | 75.55 | 75.82 | 76.09 | 76.36 | 76.63 |
| Production | 47450 | 47730 | 49410 | 49445 | 49741 | 50193 | 50700 | 51259 | 51822 | 52387 | 52967 | 53558 | 54157 |

Mexico - Sugar Extraction Rates (percent)

| Mexico - Sugar Extraction Rates (percent) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Sugarcane | 11.80 | 11.80 | 11.80 | 11.80 | 11.80 | 11.80 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 |

Mexico - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 2045 | 1297 | 1656 | 1726 | 1737 | 1747 | 1756 | 1766 | 1776 | 1787 | 1797 | 1807 | 1820 |
| Production | 5604 | 5633 | 5830 | 5835 | 5869 | 5923 | 6033 | 6100 | 6167 | 6234 | 6303 | 6373 | 6445 |
| Net Imports | -626 | 329 | -240 | -659 | -639 | -626 | -670 | -661 | -660 | -668 | -674 | -649 | -621 |
| Exports | 866 | 135 | 440 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 240 | 464 | 200 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 5326 | 5210 | 5150 | 5165 | 5220 | 5287 | 5354 | 5428 | 5496 | 5555 | 5619 | 5712 | 5810 |
| Carry-out Stocks | 1294 | 1656 | 1726 | 1737 | 1747 | 1756 | 1766 | 1776 | 1787 | 1797 | 1807 | 1820 | 1833 |

Mexico - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 48.28 | 46.67 | 45.59 | 45.18 | 45.17 | 45.24 | 45.32 | 45.45 | 45.51 | 45.51 | 45.57 | 45.86 |
| Stocks/Consumption | 24.30 | 31.79 | 33.51 | 33.62 | 33.46 | 33.21 | 32.99 | 32.72 | 32.51 | 32.35 | 32.17 | 31.86 |

Algeria - Sugar Beet Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Yield | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 21 | 21 | 21 |
| Production | 138 | 138 | 139 | 144 | 147 | 149 | 150 | 151 | 152 | 153 | 154 | 154 |


| Algeria - Sugar Extraction Rates (percent) |
| :--- |
| 2005 |
| 2006 |
| Sugarbeet |

Algeria - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carry-in Stocks | 134 | 284 | 284 | 264 | 262 | 261 | 261 | 261 | 261 | 262 | 262 | 263 | 263 |
| Production | 10 | 11 | 10 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Net Imports | 1350 | 1225 | 1230 | 1290 | 1320 | 1348 | 1381 | 1410 | 1444 | 1474 | 1508 | 1537 | 1591 |
| Exports | 30 | 50 | 250 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 1380 | 1275 | 1480 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 1200 | 1225 | 1250 | 1302 | 1331 | 1359 | 1392 | 1421 | 1455 | 1485 | 1519 | 1548 | 1601 |
| Carry-out Stocks | 284 | 284 | 264 | 262 | 261 | 261 | 261 | 261 | 262 | 262 | 263 | 263 | 264 |

Algeria - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per Capita Consumption | 34.01 | 33.97 | 33.92 | 34.58 | 34.62 | 34.62 | 34.73 | 34.72 | 34.82 | 34.81 | 34.90 | 34.88 | 35.37 |
| Stocks/Consumption | 23.67 | 23.18 | 21.12 | 20.12 | 19.63 | 19.20 | 18.75 | 18.38 | 17.98 | 17.65 | 17.30 | 17.00 | 16.48 |

Australia - Sugarcane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 428 | 421 | 416 | 417 | 418 | 419 | 420 | 422 | 423 | 424 | 425 | 426 |
| Yield | 93 | 86 | 85 | 86 | 87 | 88 | 88 | 89 | 89 | 90 | 90 | 917 |
| Production | 39633 | 36206 | 35360 | 36051 | 36412 | 36736 | 37067 | 37385 | 37716 | 38033 | 38342 | 38659 |

Australia - Sugar Extraction Rate (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugarcane | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 343 | 291 | 162 | 111 | 135 | 228 | 231 | 234 | 236 | 239 | 240 | 242 | 247 |
| Production | 5297 | 4822 | 4700 | 4795 | 4843 | 4886 | 4930 | 4972 | 5016 | 5058 | 5099 | 5142 | 5185 |
| Net Exports | 4035 | 3696 | 3496 | 3645 | 3609 | 3727 | 3755 | 3788 | 3821 | 3855 | 3887 | 3900 | 3916 |
| Exports | 4039 | 3700 | 3500 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 4 | 4 | 4 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 1150 | 1150 | 1100 | 1125 | 1140 | 1156 | 1171 | 1182 | 1193 | 1202 | 1210 | 1237 | 1263 |
| Carry-out Stocks | 291 | 162 | 111 | 135 | 228 | 231 | 234 | 236 | 239 | 240 | 242 | 247 | 253 |

Australia - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 58.33 | 57.81 | 54.86 | 55.68 | 55.98 | 56.27 | 56.58 | 56.70 | 56.82 | 56.84 | 56.86 | 57.69 |
| Stocks/Consumption | 25.30 | 14.09 | 10.09 | 12.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 | 20.00 |

Brazil - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carry-in Stocks | 585 | -285 | -485 | -385 | 270 | 135 | 163 | 156 | 156 | 155 | 155 |
| Production | 26850 | 31450 | 32100 | 28855 | 29345 | 29616 | 29900 | 30184 | 30467 | 30751 | 31034 |
| Net Exports | 12690 | 15650 | 15450 | 16175 | 17299 | 17431 | 17637 | 17787 | 17972 | 18177 | 18315 |
| Exports | 12690 | 15650 | 15450 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| \#N/A | \#N | \#N/A |  |  |  |  |  |  |  |  |  |
| Imports | 0 | 0 | 0 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| \#N/A | \#N/A | \#N |  |  |  |  |  |  |  |  |  |
| Consumption | 10630 | 10800 | 11400 | 12025 | 12182 | 12158 | 12270 | 12397 | 12496 | 12574 | 12720 |
| Carry-out Stocks | -285 | -485 | -385 | 270 | 135 | 163 | 156 | 156 | 155 | 155 | 153 |

Brazil - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 56.77 | 57.05 | 59.63 | 62.28 | 62.46 | 61.78 | 61.80 | 61.88 | 61.82 | 61.71 | 61.93 |
| Stocks/Consumption | -2.68 | -4.49 | -3.38 | 2.25 | 1.11 | 1.34 | 1.27 | 1.26 | 1.24 | 1.23 | 1.21 |

China - Area Harvested (1000 hectares)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugar Beets | 234 | 368 | 350 | 358 | 353 | 357 | 365 | 366 | 373 | 374 | 378 | 382 |
| Sugarcane | 1500 | 1700 | 1890 | 1891 | 1896 | 1906 | 1918 | 1929 | 1940 | 1950 | 1959 | 1969 |
| Total Area | 1734 | 2068 | 2240 | 2248 | 2249 | 2263 | 2284 | 2295 | 2314 | 2324 | 2337 | 2351 |

China - Yields (metric tons/hectare)

| China - Yields (metric tons/hectare) | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugar Beets | 37.00 | 37.00 | 38.00 | 37.86 | 37.89 | 37.95 | 38.04 | 38.16 | 38.29 | 38.45 | 38.62 | 38.80 | 39.00 |  |
| Sugarcane | 65.00 | 72.00 | 72.20 | 72.44 | 72.67 | 72.89 | 73.11 | 73.33 | 73.54 | 73.75 | 73.96 | 74.17 | 74.38 |  |


| China - Production (1000 metric tons) |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Sugar Beets | 8658 | 13616 | 13300 | 13544 | 13364 | 13550 | 13899 | 13960 | 14300 | 14377 | 14595 | 14804 |
| Sugarcane | 97500 | 122400 | 136458 | 136959 | 137795 | 138904 | 140244 | 141433 | 142684 | 143826 | 144921 | 146062 |

China - Sugar Extraction Rates (percent)

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Sugarbeets | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 | 10.15 |
| Sugarcane | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 1671 | 703 | 1728 | 1918 | 1934 | 1988 | 1978 | 1999 | 2003 | 2032 | 2065 | 2090 | 2113 |
| Production | 10500 | 12855 | 13850 | 13906 | 13965 | 14085 | 14243 | 14358 | 14507 | 14619 | 14742 | 14867 | 14997 |
| Beet Sugar | 877 | 1358 | 1350 | 1375 | 1356 | 1375 | 1411 | 1417 | 1451 | 1459 | 1481 | 1503 | 1526 |
| Cane Sugar | 8569 | 11497 | 12500 | 12532 | 12608 | 12710 | 12832 | 12941 | 13056 | 13160 | 13260 | 13365 | 13471 |
| Net Imports | 1000 | 1170 | 640 | 539 | 941 | 1206 | 1230 | 1399 | 1609 | 1746 | 2035 | 2369 | 2618 |
| Exports | 234 | 160 | 210 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 1234 | 1330 | 850 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 11500 | 13000 | 14300 | 14430 | 14852 | 15300 | 15452 | 15752 | 16087 | 16333 | 16751 | 17214 | 17594 |
| Carry-out Stocks | 703 | 1728 | 1918 | 1934 | 1988 | 1978 | 1999 | 2003 | 2032 | 2065 | 2090 | 2113 | 2133 |

China - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 8.74 | 9.82 | 10.73 | 10.77 | 11.02 | 11.27 | 11.30 | 11.44 | 11.60 | 11.70 | 11.93 | 12.18 |
| Stocks/Consumption | 6.11 | 13.29 | 13.41 | 13.40 | 13.38 | 12.93 | 12.93 | 12.72 | 12.63 | 12.64 | 12.48 | 12.27 |

Cuba - Sugarcane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 410 | 385 | 335 | 344 | 344 | 345 | 347 | 348 | 350 | 350 | 351 | 352 | 353 |
| Yield | 29 | 29 | 29 | 30 | 31 | 31 | 31 | 32 | 32 | 32 | 32 | 32 | 33 |
| Production | 11890 | 11165 | 9715 | 10315 | 10535 | 10684 | 10865 | 10978 | 11111 | 11203 | 11288 | 11393 | 11503 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sugarcane | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 | 10.34 |

Cuba - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carry-in Stocks | 400 | 330 | 260 | 175 | 194 | 208 | 206 | 200 | 191 | 181 | 172 | 162 |
| Production | 1300 | 1150 | 1000 | 1067 | 1089 | 1105 | 1123 | 1135 | 1149 | 1158 | 1167 | 1178 |
| Net Exports | 800 | 620 | 635 | 331 | 348 | 376 | 389 | 399 | 401 | 399 | 400 | 403 |
| Consumption | 700 | 700 | 700 | 717 | 728 | 731 | 740 | 746 | 757 | 768 | 777 | 785 |
| Carry-out Stocks | 180 | 260 | 175 | 194 | 208 | 206 | 200 | 191 | 181 | 172 | 162 | 151 |

Cuba - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 60.53 | 60.24 | 59.96 | 61.12 | 61.79 | 61.74 | 62.28 | 62.50 | 63.12 | 63.78 | 64.23 | 64.63 |
| Stocks/Consumption | 25.71 | 37.14 | 25.00 | 27.03 | 28.51 | 28.22 | 27.04 | 25.56 | 23.96 | 22.41 | 20.86 | 19.29 |

Egypt - Area Harvested (1000 hectares)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sugar Beets | 72 | 75 | 77 | 76 | 77 | 77 | 77 | 77 | 77 | 78 | 78 | 79 | 79 |
| Sugarcane | 125 | 126 | 125 | 126 | 127 | 129 | 130 | 132 | 134 | 135 | 137 | 139 | 141 |
| Total Area | 197 | 201 | 202 | 202 | 204 | 206 | 208 | 209 | 211 | 213 | 215 | 218 | 220 |

Egypt - Yields (metric tons/hectare)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugar Beets | 54.50 | 55.00 | 56.00 | 56.00 | 56.40 | 56.69 | 57.00 | 57.31 | 57.62 | 57.93 | 58.24 | 58.55 | 58.86 |
| Sugarcane | 103.90 | 103.47 | 102.90 | 102.86 | 102.95 | 103.15 | 103.43 | 103.79 | 104.22 | 104.71 | 105.24 | 105.81 | 106.42 |

Egypt - Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugar Beets | 3924 | 4125 | 4284 | 4281 | 4338 | 4381 | 4410 | 4431 | 4457 | 4509 | 4554 | 4603 |
| Sugarcane | 12988 | 12986 | 12863 | 12959 | 13105 | 13275 | 13469 | 13682 | 13915 | 14165 | 14430 | 14710 |

Egypt - Sugar Extraction Rates (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugar Beets | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 |
| Sugarcane | 8.50 | 8.50 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 | 8.60 |

Egypt - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 293 | 356 | 360 | 360 | 361 | 363 | 364 | 366 | 369 | 372 | 375 | 378 | 382 |
| Production | 1601 | 1627 | 1650 | 1660 | 1680 | 1700 | 1721 | 1742 | 1765 | 1793 | 1822 | 1852 | 1883 |
| Beet Sugar | 499 | 525 | 550 | 546 | 553 | 559 | 562 | 565 | 568 | 575 | 581 | 587 | 593 |
| Cane Sugar | 1102 | 1102 | 1100 | 1114 | 1127 | 1142 | 1158 | 1177 | 1197 | 1218 | 1241 | 1265 | 1290 |
| Net Imports | 903 | 900 | 890 | 973 | 1018 | 1040 | 1082 | 1114 | 1153 | 1190 | 1217 | 1242 | 1268 |
| Exports | 100 | 150 | 160 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 1003 | 1050 | 1050 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 2441 | 2523 | 2540 | 2633 | 2697 | 2738 | 2801 | 2853 | 2915 | 2980 | 3036 | 3091 | 3147 |
| Carry-out Stocks | 356 | 360 | 360 | 361 | 363 | 364 | 366 | 369 | 372 | 375 | 378 | 382 | 385 |

Egypt - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 33.95 | 34.47 | 34.13 | 34.78 | 35.03 | 35.01 | 35.25 | 35.34 | 35.57 | 35.83 | 35.99 | 36.14 | 36.30 | 12.3 |
| Stocks/Consumption | 14.58 | 14.27 | 14.17 | 13.71 | 13.44 | 13.30 | 13.08 | 12.93 | 12.75 | 12.58 | 12.46 | 12.34 | 12.23 |  |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| A-Quota | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| B-Quota | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| A plus B Quota | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 | 13669 |
| Raw Sugar Equivalent | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 | 14626 |

European Union - Sugar Beet Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 2400 | 2065 | 2040 | 2037 | 2014 | 2010 | 2013 | 2014 | 2017 | 2018 | 2019 | 2020 |
| Yield | 57.02 | 56.00 | 56.10 | 56.65 | 56.95 | 57.15 | 57.32 | 57.48 | 57.64 | 57.79 | 57.94 | 58.10 |
| Production | 136839 | 115640 | 114444 | 115409 | 114681 | 114846 | 115371 | 115782 | 116254 | 116629 | 116970 | 117362 |


| European Union - Sugar Extraction Rates (percent) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Sugar Beets | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 | 15.04 |

European Union - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 5339 | 5088 | 4704 | 3840 | 3822 | 3834 | 3843 | 3854 | 3861 | 3869 | 3875 | 3876 | 3886 |
| Production | 21373 | 17450 | 17490 | 17648 | 17538 | 17563 | 17642 | 17704 | 17775 | 17831 | 17882 | 17941 | 18003 |
| Net Exports | 5585 | -1551 | -1551 | -704 | -981 | -1092 | -1153 | -1190 | -1222 | -1229 | -1205 | -1274 | -1333 |
| Exports | 8325 | 1369 | 1369 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 2740 | 2920 | 2920 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 16800 | 18000 | 18400 | 18369 | 18508 | 18646 | 18784 | 18886 | 18989 | 19055 | 19085 | 19206 | 19327 |
| Carry-out Stocks | 4173 | 4704 | 3840 | 3822 | 3834 | 3843 | 3854 | 3861 | 3869 | 3875 | 3876 | 3886 | 3895 |

European Union - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |  |
| Per Capita Consumption | 46.92 | 50.18 | 51.19 | 51.00 | 51.33 | 51.67 | 52.00 | 52.23 | 52.46 | 52.59 | 52.62 | 52.95 | 53.29 |  |
| Stocks/Consumption | 24.84 | 26.13 | 20.87 | 20.81 | 20.71 | 20.61 | 20.52 | 20.44 | 20.38 | 20.33 | 20.31 | 20.23 | 20.15 |  |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 5165 | 4775 | 11515 | 17295 | 17227 | 17246 | 17259 | 17298 | 17327 | 17371 | 17418 | 17459 | 17501 |
| Production | 21140 | 30640 | 31780 | 28739 | 27613 | 27120 | 26953 | 27068 | 27326 | 27659 | 28035 | 28435 | 28846 |
| Net Exports | 1460 | 1800 | 3000 | 5428 | 3826 | 2972 | 2404 | 2148 | 2004 | 1966 | 1977 | 1998 | 2025 |
| Exports | 1510 | 1800 | 3000 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 50 | 0 | 0 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 19785 | 21500 | 23000 | 23380 | 23767 | 24136 | 24511 | 24891 | 25278 | 25645 | 26017 | 26395 | 26779 |
| Carry-out Stocks | 4175 | 11515 | 17295 | 17227 | 17246 | 17259 | 17298 | 17327 | 17371 | 17418 | 17459 | 17501 | 17544 |

India - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 17.04 | 18.21 | 19.17 | 19.18 | 19.19 | 19.20 | 19.21 | 19.22 | 19.23 | 19.24 | 19.25 | 19.26 | 19.27 |
| Stocks/Consumption | 21.10 | 53.56 | 75.20 | 73.68 | 72.57 | 71.51 | 70.57 | 69.61 | 68.72 | 67.92 | 67.11 | 66.30 | 65.51 |

Indonesia - Sugarcane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 380 | 376 | 380 | 381 | 382 | 384 | 387 | 389 | 393 | 396 | 399 | 402 | 405 |
| Yield | 69.00 | 63.00 | 64.00 | 64.22 | 65.32 | 66.42 | 67.52 | 68.62 | 69.72 | 70.82 | 71.92 | 73.02 | 74.12 |
| Production | 26220 | 23688 | 24320 | 24452 | 24944 | 25483 | 26100 | 26725 | 27381 | 28030 | 28674 | 29332 | 30002 |

Indonesia - Sugar Extraction Rate

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 8.00 | 8.00 | 8.00 | 8.00 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugarcane | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8 |  |  |  |  |  |

Indonesia - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 1120 | 1170 | 1390 | 1410 | 1431 | 1430 | 1428 | 1426 | 1424 | 1423 | 1423 | 1421 | 1420 |
| Production | 2100 | 1900 | 1950 | 1956 | 1996 | 2039 | 2088 | 2138 | 2191 | 2242 | 2294 | 2347 | 2400 |
| Net Imports | 1800 | 2420 | 2370 | 2426 | 2418 | 2421 | 2422 | 2421 | 2415 | 2409 | 2404 | 2394 | 2383 |
| Exports | 0 | 0 | 0 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 1800 | 2420 | 2370 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 3850 | 4100 | 4300 | 4362 | 4414 | 4462 | 4511 | 4561 | 4606 | 4653 | 4699 | 4741 | 4784 |
| Carry-out Stocks | 1170 | 1390 | 1410 | 1431 | 1430 | 1428 | 1426 | 1424 | 1423 | 1423 | 1421 | 1420 | 1419 |

Indonesia - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 17.03 | 17.90 | 18.55 | 18.60 | 18.60 | 18.59 | 18.59 | 18.59 | 18.59 | 18.59 | 18.59 | 18.59 | 18.59 |
| Stocks/Consumption | 30.39 | 33.90 | 32.79 | 32.80 | 32.40 | 31.99 | 31.62 | 31.23 | 30.90 | 30.58 | 30.24 | 29.95 | 29.66 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sugar Beets | 87 | 83 | 82 | 81 | 80 | 79 | 78 | 77 | 76 | 75 | 73 | 72 | 70 |
| Sugarcane | 19 | 19 | 19 | 18 | 19 | 18 | 19 | 19 | 19 | 19 | 19 | 19 | 19 |
| Total Area | 106 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 95 | 94 | 92 | 91 | 89 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sugar Beets | 54.00 | 53.00 | 54.10 | 54.78 | 55.30 | 55.74 | 56.14 | 56.53 | 56.91 | 57.29 | 57.67 | 58.04 | 58.42 |
| Sugarcane | 60.31 | 60.30 | 60.40 | 60.44 | 60.48 | 60.53 | 60.57 | 60.61 | 60.66 | 60.70 | 60.75 | 60.79 | 60.83 |

Japan - Production (1000 metric tons)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Sugar Beets | 4000 | 4200 | 4436 | 4447 | 4440 | 4421 | 4394 | 4360 | 4319 | 4273 | 4225 | 4174 | 4114 |
| Sugarcane | 1100 | 1100 | 1148 | 1118 | 1153 | 1114 | 1141 | 1157 | 1164 | 1164 | 1160 | 1152 | 1140 |


| Japan - Sugar Extraction Rates (percent) |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| Sugar Beets | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 | 18.94 |
| Sugarcane | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 | 12.13 |

Japan - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carry-in Stocks | 372 | 372 | 422 | 423 | 425 | 427 | 427 | 428 | 428 | 428 | 428 | 429 | 429 |
| Production | 880 | 880 | 940 | 978 | 981 | 973 | 971 | 966 | 959 | 951 | 941 | 930 | 918 |
| Beet Sugar | 750 | 750 | 810 | 842 | 841 | 837 | 832 | 826 | 818 | 809 | 800 | 791 | 779 |
| Cane Sugar | 130 | 130 | 130 | 136 | 140 | 135 | 138 | 140 | 141 | 141 | 141 | 140 | 138 |
| Net Imports | 1390 | 1395 | 1400 | 1369 | 1366 | 1369 | 1370 | 1372 | 1372 | 1372 | 1371 | 1370 | 1373 |
| Exports | 10 | 10 | 10 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 1400 | 1405 | 1410 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 2300 | 2350 | 2350 | 2344 | 2344 | 2341 | 2341 | 2338 | 2331 | 2322 | 2311 | 2300 | 2290 |
| Carry-out Stocks | 372 | 422 | 423 | 425 | 427 | 427 | 428 | 428 | 428 | 428 | 429 | 429 | 430 |

Japan - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 18.09 | 18.48 | 18.48 | 18.43 | 18.45 | 18.45 | 18.46 | 18.47 | 18.46 | 18.44 | 18.41 | 18.38 |
| Stocks/Consumption | 16.17 | 17.96 | 17.99 | 18.14 | 18.21 | 18.26 | 18.28 | 18.29 | 18.36 | 18.45 | 18.56 | 18.66 |

Korea - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carry-in Stocks | 150 | 150 | 150 | 155 | 157 | 160 | 159 | 158 | 156 | 156 | 156 |
| Net Imports | 1331 | 1340 | 1340 | 1238 | 1261 | 1276 | 1294 | 1307 | 1321 | 1333 | 1341 |
| Exports | 338 | 340 | 340 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 1669 | 1680 | 1680 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| \#N/A | \#N/A |  |  |  |  |  |  |  |  |  |  |
| Consumption | 1196 | 1205 | 1200 | 1236 | 1259 | 1278 | 1295 | 1309 | 1321 | 1332 | 1341 |
| Carry-out Stocks | 150 | 150 | 155 | 157 | 160 | 159 | 158 | 156 | 156 | 156 | 156 |


| Korea - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Per Capita Consumption | 24.50 | 24.58 | 24.38 | 25.01 | 25.37 | 25.68 | 25.95 | 26.14 | 26.35 | 26.50 | 26.63 | 26.68 | 26.77 |
| Stocks/Consumption | 12.54 | 12.45 | 12.92 | 12.74 | 12.71 | 12.43 | 12.21 | 11.95 | 11.79 | 11.73 | 11.66 | 11.58 | 11.47 |

South Africa - Sugarcane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

| South Africa - Sugarcane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |  |
| Area Harvested | 325 | 295 | 305 | 304 | 307 | 312 | 318 | 324 | 331 | 338 | 346 | 353 | 361 |  |
| Yield | 72.00 | 71.00 | 74.00 | 74.01 | 74.16 | 74.31 | 74.46 | 74.61 | 74.76 | 74.91 | 75.06 | 75.21 | 75.36 |  |
| Production | 23400 | 20945 | 22570 | 22532 | 22779 | 23171 | 23659 | 24195 | 24766 | 25353 | 25950 | 26556 | 27169 |  |

South Africa - Sugar Extraction Rates (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sugarcane | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 | 11.07 |
| South Africa - Sugar Supply and Utilization (1000 metric tons, raw value) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Carry-in Stocks | 860 | 850 | 400 | 275 | 279 | 272 | 266 | 255 | 265 | 277 | 291 | 304 | 318 |
| Production | 2595 | 2300 | 2500 | 2494 | 2522 | 2565 | 2619 | 2678 | 2742 | 2807 | 2873 | 2940 | 3008 |
| Net Exports | 1050 | 1175 | 1035 | 915 | 972 | 1024 | 1116 | 1113 | 1128 | 1142 | 1160 | 1172 | 1104 |
| Exports | 1230 | 1300 | 1200 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 180 | 125 | 165 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Consumption | 1550 | 1570 | 1585 | 1576 | 1557 | 1547 | 1514 | 1556 | 1601 | 1651 | 1700 | 1754 | 1871 |
| Carry-out Stocks | 850 | 400 | 275 | 279 | 272 | 266 | 255 | 265 | 277 | 291 | 304 | 318 | 351 |

South Africa - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 35.04 | 35.63 | 36.12 | 36.09 | 35.83 | 35.79 | 35.19 | 36.35 | 37.60 | 38.97 | 40.32 | 41.81 | 44.83 | 17.15 |
| Stocks/Consumption | 54.84 | 25.48 | 17.35 | 17.69 | 17.48 | 17.19 | 16.86 | 17.01 | 17.31 | 17.62 | 17.87 | 18.15 | 18.76 |  |

Former Soviet Union - Sugar Beet Area Harvested (1000 hectares), Yield (metric tons/acre), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 1400 | 1700 | 1650 | 1650 | 1654 | 1661 | 1674 | 1689 | 1706 | 1723 | 1739 | 1756 |
| Yield | 15.20 | 16.00 | 15.70 | 15.77 | 15.85 | 15.93 | 16.01 | 16.10 | 16.18 | 16.26 | 16.34 | 16.43 |
| Production | 21280 | 27200 | 25905 | 26032 | 26220 | 26460 | 26811 | 27182 | 27601 | 28013 | 28415 | 28835 |


| Former Soviet Union - Sugar Extraction Rates (percent) |
| :--- | |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Sugar Beets | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |

Former Soviet Union - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carry-in Stocks | 580 | 470 | 440 | 400 | 420 | 432 | 422 | 414 | 401 | 393 | 390 | 384 | 375 | 314 |
| Production | 2500 | 3150 | 3000 | 3009 | 3031 | 3059 | 3099 | 3142 | 3191 | 3238 | 3285 | 3333 | 3384 |  |
| Net Imports | 2790 | 2770 | 2950 | 3145 | 3140 | 3088 | 3069 | 3027 | 3008 | 2989 | 2955 | 2918 | 2881 |  |
| Exports | 110 | 180 | 200 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N |
| Imports | 2900 | 2950 | 3150 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N |
| Consumption | 5400 | 5950 | 5990 | 6134 | 6159 | 6156 | 6176 | 6183 | 6206 | 6230 | 6246 | 6260 | 6275 | 390 |
| Carry-out Stocks | 470 | 440 | 400 | 420 | 432 | 422 | 414 | 401 | 393 | 390 | 384 | 375 | 365 |  |

Former Soviet Union - Per Capita Sugar Consumption (kilograms) and Stocks to Use Ratio (percent)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Per Capita Consumption | 18.32 | 2005 | 20.21 | 20.37 | 20.86 | 20.94 | 20.93 | 21.00 | 21.02 | 21.10 | 21.18 | 21.24 | 21.29 |
| Stocks/Consumption | 8.70 | 7.39 | 6.68 | 6.84 | 7.01 | 6.85 | 6.71 | 6.48 | 6.33 | 6.26 | 6.15 | 6.00 | 5.82 |

Thailand - Sugar Cane Area Harvested (1000 hectares), Yield (metric tons/hectare), and Production (1000 metric tons)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Area Harvested | 760 | 1060 | 1100 | 1099 | 1099 | 1099 | 1100 | 1101 | 1102 | 1103 | 1105 | 1106 |
| Yield | 58.00 | 58.00 | 59.50 | 60.27 | 60.91 | 61.50 | 62.08 | 62.66 | 63.24 | 63.81 | 64.39 | 64.96 |
| Production | 44080 | 61480 | 65450 | 66252 | 66919 | 67607 | 68290 | 69003 | 69711 | 70414 | 71129 | 71853 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sugarcane | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 | 11.00 |

Thailand - Sugar Supply and Utilization (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Carry-in Stocks | 1217 | 1760 | 1280 | 980 | 973 | 976 | 982 | 990 | 1000 | 1010 | 1020 |
| Production | 4835 | 6720 | 7200 | 7288 | 7361 | 7437 | 7512 | 7590 | 7668 | 7746 | 7824 |
| Net Exports | 2242 | 5100 | 5300 | 5066 | 5098 | 5142 | 5186 | 5235 | 5285 | 5335 | 5385 |
| Exports | 2242 | 5100 | 5300 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| Imports | 0 | 0 | 0 | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A | \#N/A |
| \#N/A | \#N/A | \#N/A | \#984 |  |  |  |  |  |  |  |  |
| Consumption | 2050 | 2100 | 2200 | 2229 | 2260 | 2289 | 2318 | 2347 | 2374 | 2400 | 2429 |
| Carry-out Stocks | 1760 | 1280 | 980 | 973 | 976 | 982 | 990 | 1000 | 1010 | 1020 | 1030 |


|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Per Capita Consumption | 30.85 | 31.38 | 32.65 | 32.85 | 33.11 | 33.33 | 33.55 | 33.76 | 33.98 | 34.19 | 34.42 | 34.71 | 35.00 |
| Stocks/Consumption | 85.85 | 60.95 | 44.55 | 43.66 | 43.17 | 42.89 | 42.72 | 42.60 | 42.53 | 42.49 | 42.42 | 42.33 | 42.24 |

Rest of the World - Sugar Net Exports (1000 metric tons, raw value)

|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Exports | -13118 | -11617 | -13391 | -15613 | -15713 | -15354 | -15003 | -14738 | -14564 | -14603 | -14531 | -14330 | -14108 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| World - Sugar Prices (U.S. cents/pound) |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Caribbean | 11.35 | 15.50 | 11.60 | 11.65 | 11.80 | 12.75 | 13.05 | 13.70 | 13.90 | 14.05 | 14.45 | 14.90 | 15.35 |


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