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# 2011 Outlook of the U.S. and World Sugar Markets, 2010-2020

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## ABSTRACT

This report evaluates the U.S. and world sugar markets for 2010-2020 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 stable over the next ten years. Sugar prices were increased from 18.7 cents/ lb in 2009 to 27 cents/lb in 2010. World sugar production increased in 2010 along with consumption. Ending stocks did tighten in 2010. Ending stock projections by various organizations for 2011 were lower than previously estimated. World demand for sugar is expected to grow at a similar rate to world supply, resulting in Caribbean sugar prices remaining near the 16.0 -19.0 cents/lb range throughout the forecast period. The U.S. wholesale price of sugar is projected to remain in the 32 to 34 cents/lb range throughout the forecast period. It is projected that Mexico will be able to export 586 thousand metric tons of sugar to the United States by 2020. 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 19.9% from 34.5 million metric tons to 37.9 million metric tons between 2010 and 2020. Brazil's exports are projected to increase from 21.6 million metric tons in 2010 to 25.6 million metric tons in 2020 even though Brazil uses a substantial amount of sugar cane for ethanol production. World sugar prices are projected to decrease from 27.3 cents/lb in 2010 to 18.4 cents/lb in 2020. U.S. wholesale sugar price is projected to decrease from 42.55 cents/lb in 2010 to 33.1 cents/lb in 2020.

U.S. sugar imports are predicted to decrease by 17.7% over the 2010-2020 period compared to the recent average import. U.S. sugar production is projected to increase 11.5% between 2010 and 2020. U.S. sugar consumption is projected to increase by 10.0% and ending stocks are predicted to remain constant. However, the U.S. sugar industry could face some uncertainty, mainly because of potential increases in sugar imports from Mexico.

Brazil's production is expected to increase by 9.3% from the 2008-2010 average of 35.88 million metric tons to 39.2 million metric tons in 2020. Exports could increase by 6.4% to 25.8 million metric ton in 2020, while consumption increases by 13.6%.

Canada's production is predicted to increase slightly between 2010 and 2020. Canada's imports are expected to increase by 8.6%. Consumption is predicted to increase 10.3% and ending stocks are predicted to decrease by 5.8%.

Mexico's production is expected to increase by 10.6%, and exports are expected to decrease slightly from the 2008-2010 average due to decreases in exports to the United States under the North American Free Trade Agreement (NAFTA).

The European Union (EU) is expected to remain an importer due to the EU-25 sugar policy reform. Their production is predicted to increase by 2.6%, while consumption will increase by 4.6%.

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

Most importing countries, including Algeria and Egypt are predicted to increase their imports for the 2010-2020 period.

# 2011 Outlook of the U.S. and World Sugar Markets, 2010-2020

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## 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. 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 unstable in the world market.

During late 2005 and the first quarter of 2006, world sugar price increased from about $0.12/lb to over $0.18/lb because of increased use of sugarcane for ethanol production in Brazil. World sugar price fell to $0.12/lb in late 2006 and $0.11/lb by early 2007 due to increased production in other exporting nations. The yearly average price for 2009 was $0.187/lb which increased to $0.27/lb in 2010. The stocks to use ratio has varied between 34% in 1968 and 17% in 2010. Recently it has varied between 31% in 2000 and 17% in 2010. The Caribbean price follows an opposite relationship with the stocks to use ratio, ie, when the stocks to use ratio is high (low), prices are low (high). The recent decrease in the stocks to use ratio has increased price from $0.75/ lb in 2000 to $0.27/lb in 2010. Similar price increases occurred in 1974-1975 and 1980-1981. The current stocks to use ratio is lower and anytime in the past 45 years, this indicates that the recent sugar price increase is justified.

This report evaluates the U.S. and world sugar industry for 2010-2020 using the Global Sugar Policy Simulation Model developed by Benirschka et al. (1996). This model was run utilizing the 2010 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%.

OVERVIEW OF THE WORLD SUGAR INDUSTRY AND SUGAR POLICIES

For the 2006-2010 period, annual global sugar production was approximately 154 million metric tons with about 30% of production exported from its country of origin. The largest sugar producing region is Brazil, followed by the India and the EU (Table 1).

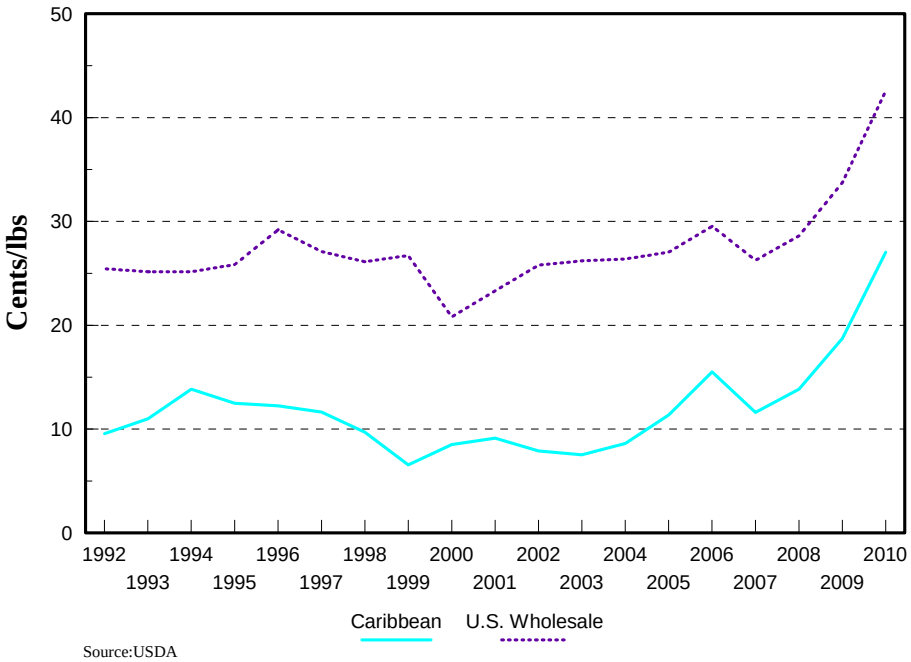
**Table 1. World Sugar Supply and Utilization, 2006 to 2010 Average**

| Country/ Region | Beet/ Cane | Consumption | Production | Net Exports | Ending Stocks | Per Capita Consumption |
|---|---|---|---|---|---|---|
| | | ----------1,000 metric tons, raw value---------- | | | | Kg |
| Algeria | B | 1,237 | 11 | (1,184) | 167 | 34 |
| Australia | C | 1,250 | 4,873 | 3,644 | 359 | 60 |
| Brazil | C | 11,530 | 34,140 | 22,610 | (505) | 56 |
| Canada | B | 1,352 | 111 | (1,269) | 336 | 43 |
| China | B/C | 14,428 | 13,248 | (1,282) | 2,453 | 7 |
| Cuba | C | 705 | 1,232 | 580 | 234 | 61 |
| European Union | B | 17,376 | 15,803 | (1,312) | 2,549 | 48 |
| Egypt | B/C | 2,693 | 1,672 | (1,081) | 697 | 34 |
| Former Soviet Union | B/C | 10,455 | 5,958 | (4,453) | 1,429 | 37 |
| India | C | 23,725 | 24,320 | 163 | 6,699 | 17 |
| Indonesia | C | 4,500 | 1,955 | (2,385) | 464 | 16 |
| Japan | B/C | 2,299 | 909 | (1,384) | 417 | 18 |
| Korea | - | 1,105 | 0 | (1,245) | 139 | 27 |
| Mexico | C | 5,054 | 5,462 | 394 | 1,253 | 50 |
| South Africa | C | 1,582 | 2,286 | 866 | 162 | 36 |
| Thailand | C | 2,066 | 7,108 | 5,103 | 1,979 | 30 |
| United States | B/C | 9,907 | 7,295 | (2,196) | 1,435 | 34 |
| Rest of World | B/C | 43,186 | 30,933 | (17,739) | 10,607 | 19 |
| World | B/C | 154,451 | 157,315 | 51,097 | 30,874 | 21 |

Source: USDA-FAS, PS&D website.

Per capita sugar consumption was highest in the Cuba followed by Australia, and Mexico. Per capita sugar consumption in the United States was 34 kg, which was above world average per capita consumption (21 kg). Per capita sugar consumption was lowest in China at 7 kg per capita, but that may increase substantially as per capita income increases. Annual global sugar consumption for the 2006-2010 period was 154 million metric tons.

The major sugar exporting countries were Brazil, Australia, Thailand, and South Africa. These countries accounted for 59% of global exports from 2006 to 2010. 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 28% of all sugar imports from 2006 to 2010. Under the Lome Convention, the EU was required to import sugar under preferential terms from certain African, Caribbean, and Pacific countries.

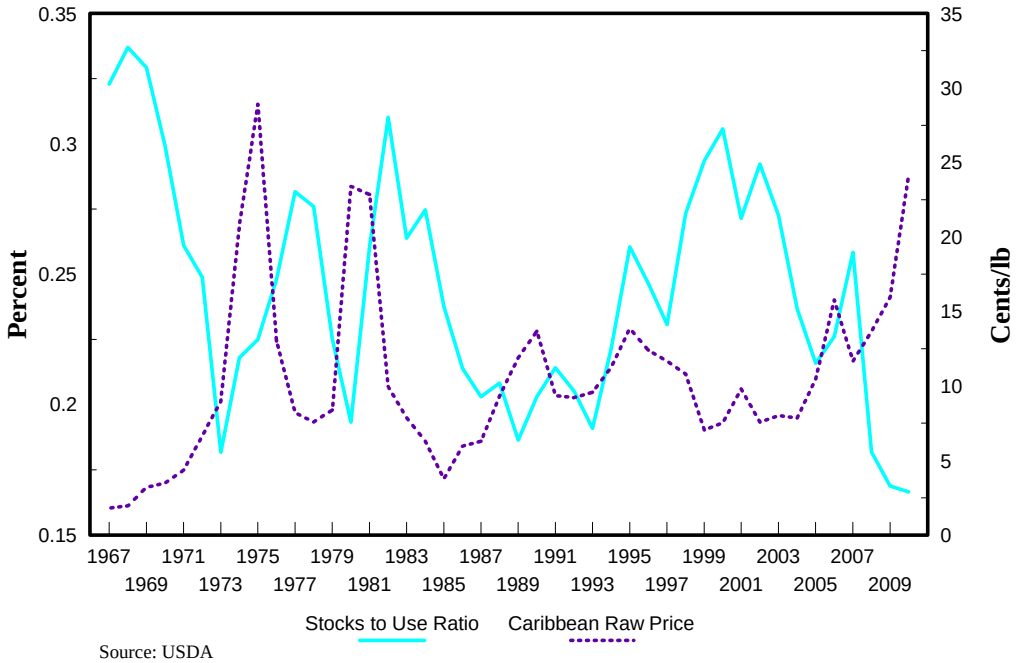



Source:USDA

**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 $0.44/lb. World market prices ranged between $0.06/lb. and $0.27/lb (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 9 years. Figure 1 shows the dramatic price increase in Caribbean sugar price in late 2005 and 2006. In 2003, the price averaged $0.07/lb, but it had risen to $0.12/lb in 2005 and it was $0.18/lb in June 2006 before falling to $0.11/lb in 2007. Caribbean sugar price increased to $0.19 in 2009 and $0.27 in 2010. The high Caribbean sugar price also increased the U.S. wholesale price to over $0.30/lb in 2006, falling to $0.26/lb in 2007, before increasing to $0.28/lb in 2008, $0.34 in 2009 and $.0.43 in 2010.

Figure 2 shows the relationship between world stocks to use ratio and the Caribbean raw sugar price. The correlation between the two series is -0.52 indicating that there is a strong negative correlation between them. The stocks to use ratio has fallen from 31% in 2000 to 17% in 2010. That decrease has increased price from 7.53 cents per lb in 2000 to 24.12 cents per lb in 2010. From figure 2 it can be seen that a similar price increases occurred in 1974-1975 and 1980-1981. The stocks to use ratio also fell from the low 30% range to about 18% in those time periods. The current stocks to use ratio is lower and anytime in the past 45 years, this indicates that the recent sugar price increase is justified.




Source: USDA

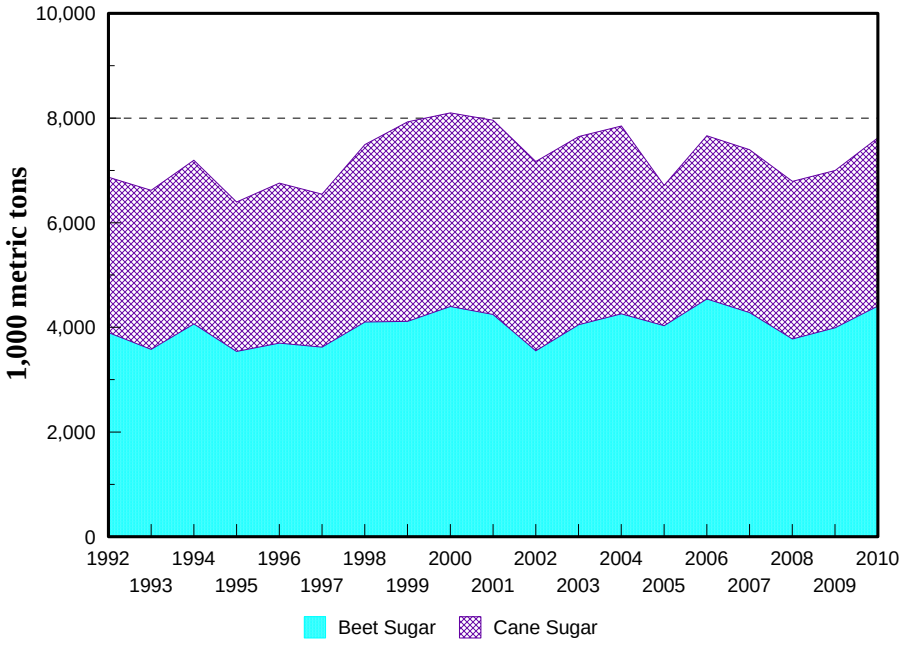
**Figure 2. World Stocks to Use Ratio and Caribbean Raw Sugar Price, 1967-2010**

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 of ethanol from sugar cane. 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 20% from 1992 to 2010, while cane sugar production remained about the same (Figure 3). U.S. total sugar production increased about 17% from 6.2 million metric tons in 1991 to 7.3 million metric tons in 2010 (Figure 4).

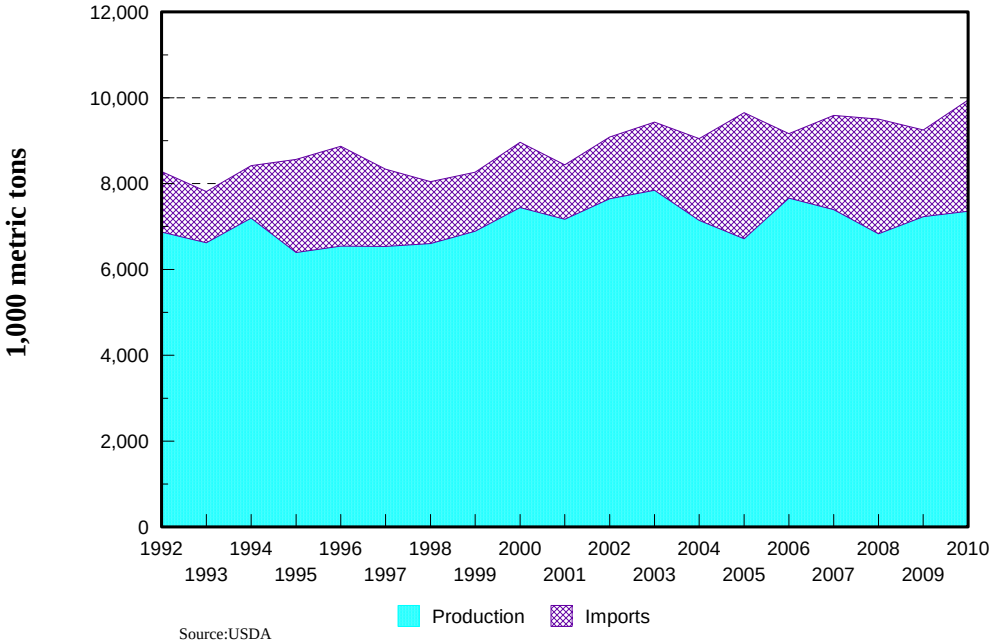
U.S. consumption of sugar increased by 23.8% from about 8.0 million metric tons in 1991 to 9.9 million metric tons in 2010 (Figure 5). The balance was imported from more than 40 countries. U.S. sugar imports decreased 71% from 4.5 million metric tons in 1974 to 1.3 million metric tons in 1987 and then increased to an average of 1.9 million metric tons during the 1991 to 2010 period. Under the North American Free Trade Agreement (NAFTA), Mexico currently is allowed to export excess sugar to the United States. Mexico exported 700 thousand metric tons of

sugar into the United States in 2009 and 900 thousand metric tons of sugar into the United States in 2010. 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.



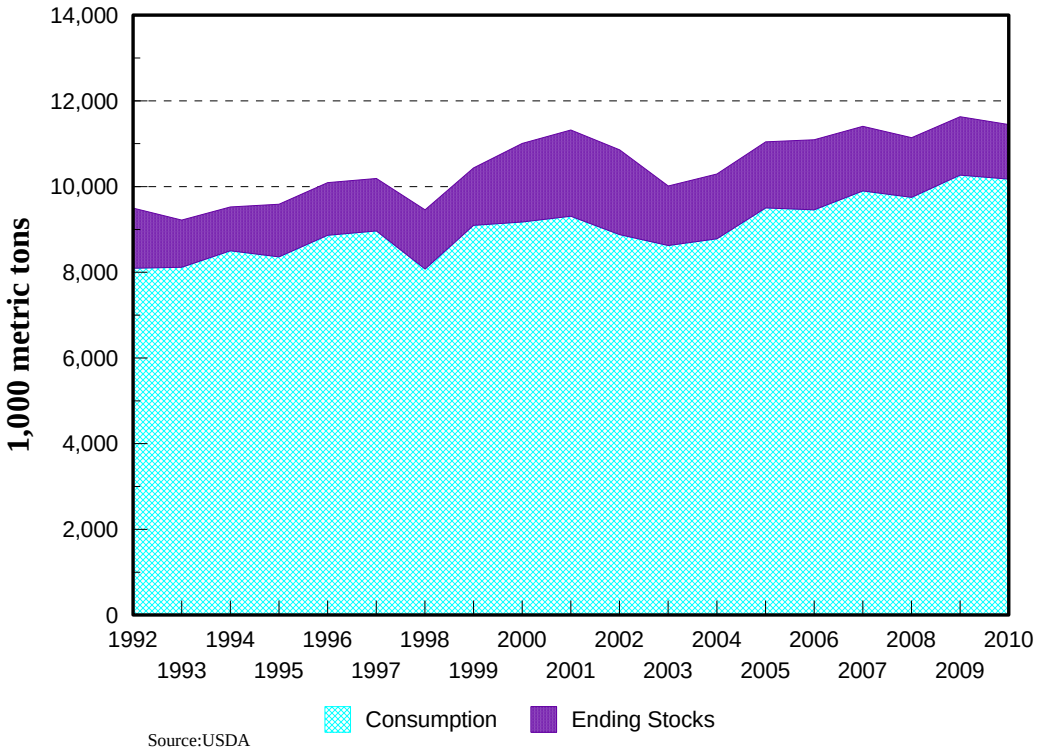

Source:USDA

**Figure 3. U.S. Beet and Cane Sugar Production**




Source:USDA

**Figure 4. U.S. Sugar Production and Imports**




Source:USDA

**Figure 5. 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; the Farm Security and Rural Investment (FSRI) Act of 2002; and the Food, Conservation, and Energy Act of 2008.

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 was set at 18 cents/lb for raw cane sugar and 22.9 cents/lb for refined beet sugar. However, loan rates are increased under the 2008 Farm Bill to 18.75 cents/lb for cane sugar and 24.09 cents/lb for beet sugar. Loans under the 2008 Farm Bill 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/lb) is imposed on the amount of sugar imported over the import quota. The first-tier duty ranges from zero to 0.625 cents/lb.

The second tier-duty for raw cane sugar was reduced from 17.62 cents/lb in 1995 to 15.82 cents/lb in 2000 under the URA. The duty for refined sugar was reduced from 18.6 cents/lb in 1995 to 16.21 cents/lb 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 1981 period.

NAFTA allowed a rapid reduction in the second-tier duty for Mexican sugar over the past several years. This implies that Mexico is in a unique position to increase its exports of sugar to the United States above the allocated quota. If Mexico starts to use High Fructose Corn Sweetener (HFCS) for beverages, more of its sugar could be exported to the United States. However, 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 in 2005 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.

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 2008, the EU produced 15.2 million metric tons of sugar compared to 21 million metric tons of sugar in 2004 and 2005. If the EU limits sugar production to the stated level, the EU will become an importer. Also in 2008 the EU

reduced the intervention price by 36% which will discourage sugar imports from preferential countries. In 2009, the EU reduced export subsidies and lowered tariffs on non-preferential countries.

South Africa has both internal price supports and export subsidies. South Africa reduced its subsidized exports by 200 thousand metric tons to 702 thousand metric tons although net exports for 2010 were 866 thousand metric tons. Mexico also has subsidized exports and is subsidizing raw sugar storage.

**Brazilian Production and Exports**

Brazil is the largest sugar producing country in the world. The production of sugar has increased 352% since 1990. About 34% of Brazilian sugar consumed domestically is converted into ethanol for fuel. Exports have risen from 1.2 million metric tons in 1990 to 26.9 million metric tons in 2010. 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. However, because of high sugar prices in 2010, Brazil increases its exports by 10.5% in 2010.

**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 quasi-government 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 19.9%, from 34.5 to 37.9 million metric tons over the 2010-2020 period. Exports of sugar in most countries will increase for 2010-2020. Exports will increase 6.4% for Brazil, and 1.6% for Australia. Exports are expected to decrease for Cuba, Mexico, South Africa and Thailand during the same time period.

World sugar price, referred to as the Caribbean price of sugar, is projected to decrease from 27.3 cents/lb in 2010 to 18.4 cents/lb in 2020 (Figure 6). The historically high prices will not be maintained into the future.

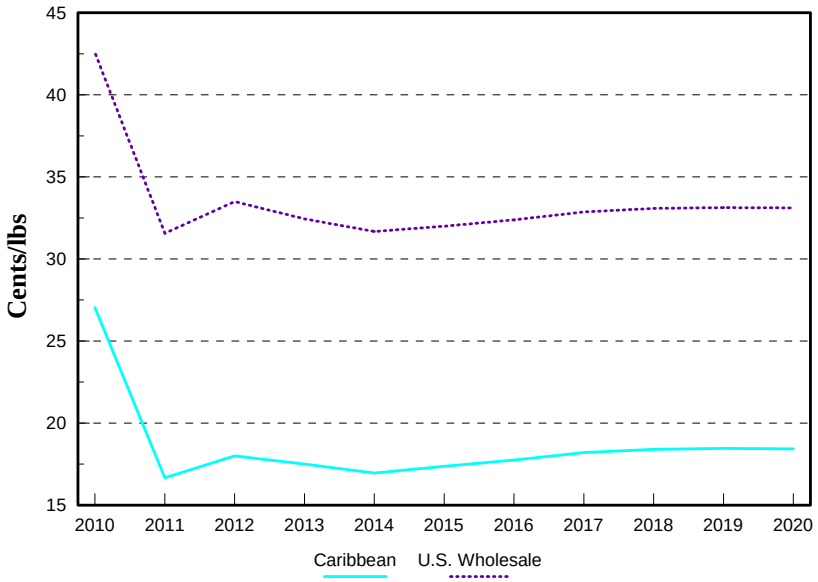



**Figure 6. Estimated U.S. and World Prices**

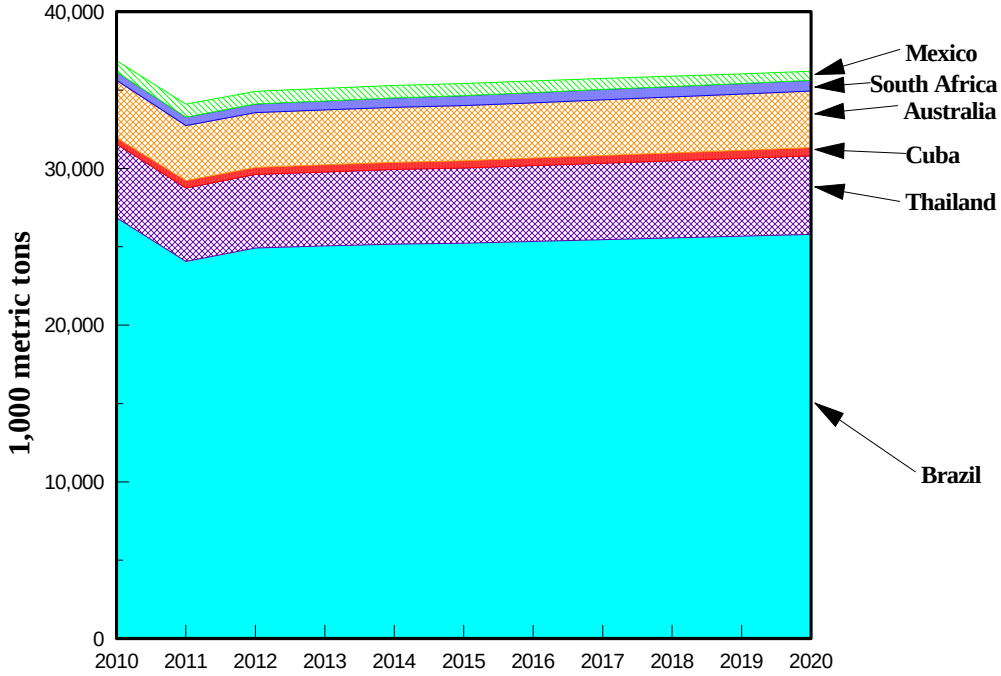



**Figure 7. World Sugar Exports by Country**

## 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 8.0 million metric tons in 2020. The increase in sugar production is due to an increase in both U.S. sugarbeet and sugar cane production. U.S. sugar consumption is predicted to increase 10.0% from 10.1 million metric tons (the 2008-2010 average) to 11.1 million metric tons in 2020. Ending stocks are also predicted to remain about the same (Table 2). Imports are predicted to decrease 19.5% from the 2008-2010 average. However, the imports depend upon Mexico's sugar production and consumption.

**Table 2. U.S. Sugar Production, Consumption, Imports, and Carry-over Stock, 2010-2020 Average**

| | Average (2008-2010) | 2010 | 2020 | % Change (2008-10) to 2020 |
|---|---|---|---|---|
| | ----------1,000 metric tons---------- | | | |
| Production | 7,137 | 7,622 | 7,960 | 11.5 |
| Beet | 4,060 | 4,408 | 4,470 | 10.1 |
| Cane | 3,077 | 3,214 | 3,490 | 13.4 |
| Net Imports | 2,478 | 2,591 | 1,996 | -19.5 |
| Per capita Consumption | 32 | 32 | 31 | -3.1 |
| Consumption | 10,061 | 10,170 | 11,068 | 10.0 |
| Carry-over Stocks | 1,344 | 1,278 | 1,342 | -0.0 |

## Exporters

Figure 7 shows the projected sugar exports for the largest exporting countries. Brazil is the largest sugar exporter followed by Thailand and Australia. Brazil's production is predicted to increase by 9.3% from 35.8 million metric tons in 2008-2010 to 39.2 million metric tons in 2020 (Table 3). Brazil's exports are predicted to increase from 24.2 million metric tons in 2008-2010 to 25.8 million metric tons in 2020. Its domestic consumption is predicted to increase by 13.6% from 11.8 million metric tons in 2008-2010 to 13.4 million metric tons in 2020. Much of the increase in consumption is due to ethanol production.

Thailand's exports are predicted to decrease by 5.3% from the 2008-2010 average of 5.3 million metric tons for the 2008-2010 average to 5.0 million metric tons in 2020 (Table 3). Consumption increases from 2.1 million metric tons for the 2008-2010 average to 2.4 million metric tons in 2020. Sugar production in the country also is predicted to increase by 5.6% from 7.0 million metric tons to 7.4 million metric tons in 2020.

Australia's exports are predicted to increase by 1.6% from the 2008-2010 average to 3.6 million metric tons in 2020 (Table 3). Production is predicted to increase by 5.8% from 4.7 million metric tons to 5.0 million metric tons in 2020. Sugar consumption is expected to increase by 11.8% from 1.3 million metric tons to 1.4 million metric tons in 2020.

Cuba's exports are predicted to decrease by 4.4% from the 2008-2010 level to 2020 (Table 3). It is predicted that Cuba will increase its sugar production by 5.0%, while consumption is predicted to increase by 3.8%. 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 10.6% from 5.3 million metric tons in 2008-2010 to 5.8 million metric tons in 2020. Mexico is expected to export 586 thousand metric tons by 2020, mainly to the United States under NAFTA. Sugar consumption is predicted to increase by 4.7% from 5.0 million metric tons in 2008-2010 to 5.2 million metric tons in 2020 under the assumption that Mexico does not convert to HFCS in their soft drink industry. Ending stocks are predicted to increase by 19.1%. 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 2.7% to 2.3 million metric tons in 2020. South Africa's exports are predicted to decrease 6.7% by 2020. Sugar consumption is predicted to increase by 2.9% and ending stocks are predicted to increase by 31.1%.

**Importers**

Figures 8 through 10 show sugar imports by the major sugar importing countries. Sugar imports of selected Asian and African countries are expected to increase by 6.7% and 16.8%, respectively, for the 2010-2020 period. Major Asian importers are China and Indonesia and major African importers are Egypt and Algeria.

Canada's production is predicted to increase above the 2008-2010 average of 100 thousand metric tons to 127 thousand tons by the year 2020, and consumption is predicted to increase from 1.3 million metric tons to 1.5 million metric tons in 2020 (Table 4). As a result, Canada's imports are predicted to increase 8.6% from 1.3 million metric tons to 1.4 million metric tons in 2020.

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 increase from 1.4 million metric tons in 2010 to 2.0 million metric tons in 2020 (Figure 8). Sugar production in the EU is predicted to increase 2.6% and consumption is predicted to increase from 16.9 million metric tons for the 2008-2010 average to 17.6 million tons in 2020 (Table 4). Most of the increase in consumption is due to an increase in income for the Eastern European countries recently included in the EU.

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

| | Average (2008-2010) | 2010 | 2020 | % change (2008-10) to 2020 |
|---|---|---|---|---|
| | ----------1,000 metric tons-------- | | | |
| Brazil | | | | |
| Production | 35,883 | 39,400 | 39,204 | 9.3 |
| Net Exports | 24,233 | 26,850 | 25,784 | 6.4 |
| Consumption | 11,817 | 12,000 | 13,421 | 13.6 |
| Carry-over | (752) | (285) | 361 | NA |
| Thailand | | | | |
| Production | 7,000 | 6,870 | 7,389 | 5.6 |
| Net Exports | 5,298 | 4,700 | 5,020 | -5.3 |
| Consumption | 2,100 | 2,200 | 2,361 | 12.4 |
| Carry-over | 1,833 | 1,456 | 1,519 | -17.1 |
| Australia | | | | |
| Production | 4,738 | 4,800 | 5,015 | 5.8 |
| Net Exports | 3,557 | 3,670 | 3,615 | 1.6 |
| Consumption | 1,250 | 1,250 | 1,397 | 11.8 |
| Carry-over | 331 | 331 | 279 | -15.7 |
| Cuba | | | | |
| Production | 1,180 | 1,100 | 1,239 | 5.0 |
| Net Exports | 538 | 390 | 514 | -4.4 |
| Consumption | 703 | 700 | 730 | 3.8 |
| Carry-over | 211 | 150 | 115 | -45.5 |
| Mexico | | | | |
| Production | 5,275 | 5,450 | 5,832 | 10.6 |
| Net Exports | 611 | 713 | 586 | -4.0 |
| Consumption | 4,998 | 4,735 | 5,233 | 4.7 |
| Carry-over | 857 | 975 | 1,021 | 19.1 |
| South Africa | | | | |
| Production | 2,252 | 2,140 | 2,312 | 2.7 |
| Net Exports | 732 | 550 | 684 | -6.7 |
| Consumption | 1,583 | 1,625 | 1,630 | 2.9 |
| Carry-over | 45 | 35 | 59 | 31.1 |

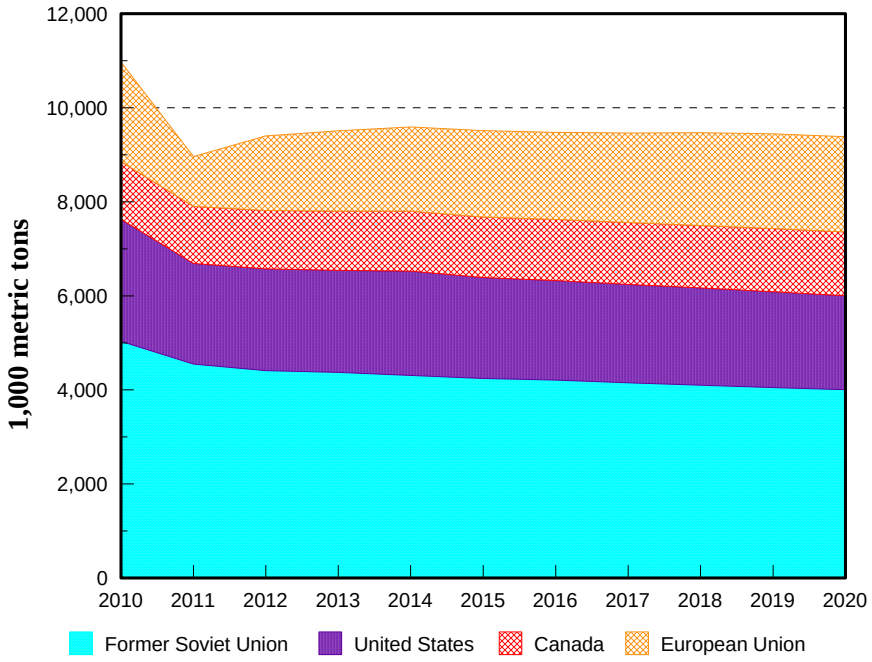



**Figure 8. World Sugar Imports by Countries, Major Importers**

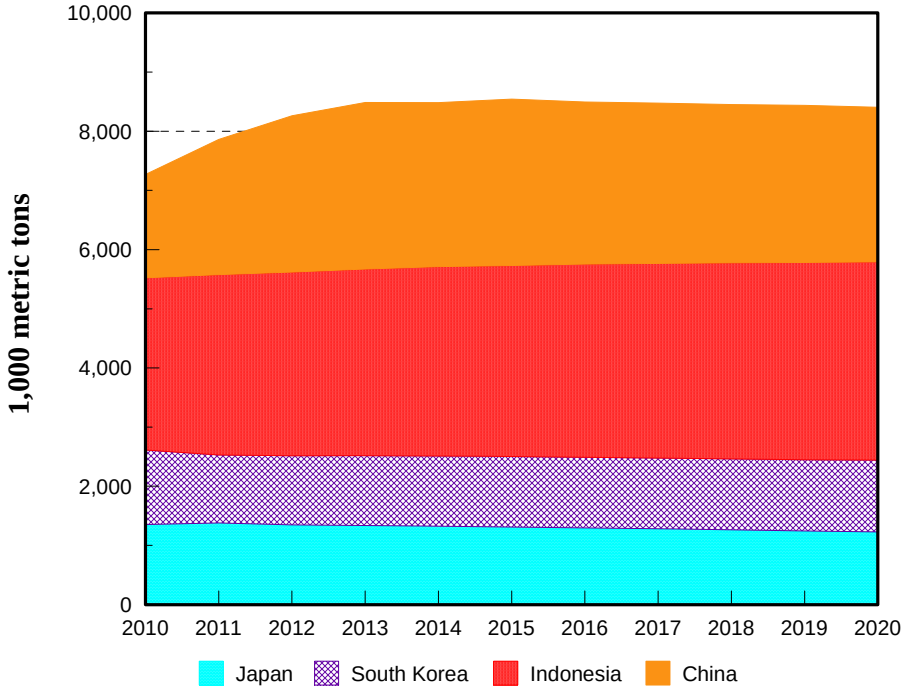



**Figure 9. World Sugar Imports by Country, Asian Countries**

The FSU's production is predicted to increase by 13.8% from the 2008-2010 average of 5.7 million metric tons to 6.5 million metric tons in 2020, and consumption is predicted to increase by 2.2% from 10.3 million metric tons to 10.5 million metric tons for the same period. Imports are predicted to decrease by 9.6% from the 2008-2010 average (Table 4).

China is expected to increase its imports by about 88.5% from 1.4 million metric tons in 2008-2010 to 2.6 million metric tons in 2020 (Table 4). China's production is predicted to

increase by 8.6% from 12.5 million metric tons for the 2008-2010 average to 13.6 million metric tons in 2020, and consumption is predicted to increase by 9.2% from 14.8 million metric tons to 16.2 million metric tons for the period.

India's production is predicted to increase by 35.6% from 20.7 million metric tons in 2008-2010 to 28.1 million metric tons in 2020. India's normal sugar production is between 24 to 28 million metric tons. Its crop in 2008 was only 16.0 million metric tons which lowered the 2008-2010 average.

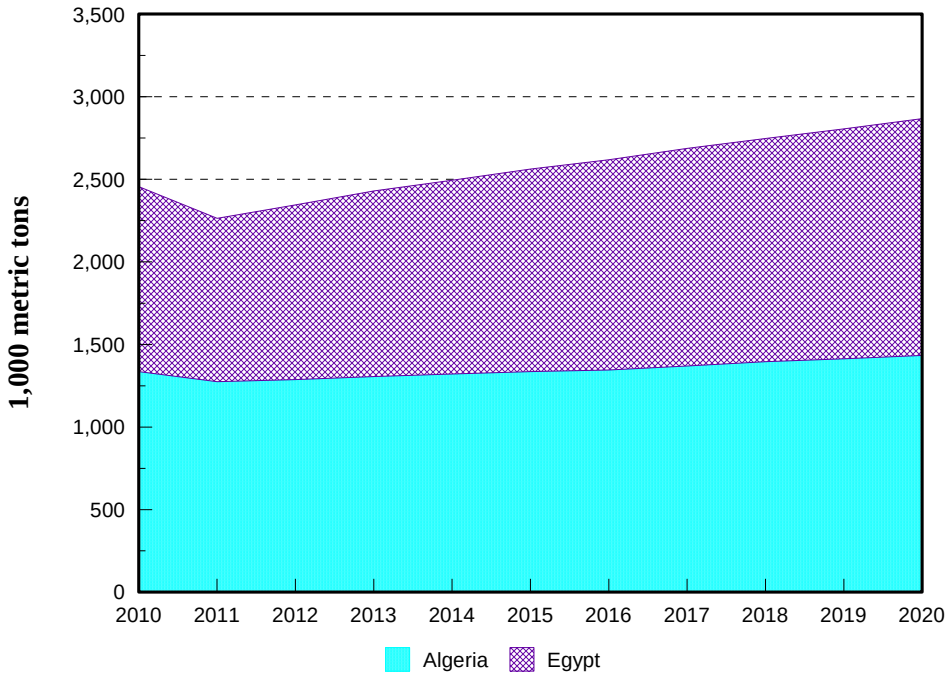



**Figure 10. World Sugar Imports by Country, African Countries**

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

| | Average (2008-10) | 2010 | 2020 | % change (2008-10) to 2020 |
|---|---|---|---|---|
| | ----------1,000 metric tons---------- | | | |
| Algeria | | | | |
| Production | 11 | 11 | 12 | 12.5 |
| Net Imports | 1,196 | 1,335 | 1,433 | 16.5 |
| Consumption | 1,267 | 1,300 | 1,444 | 14.0 |
| Carry-over | 88 | 65 | 66 | -25.3 |
| Canada | | | | |
| Production | 100 | 125 | 127 | 27.0 |
| Net Imports | 1,250 | 1,230 | 1,357 | 8.6 |
| Consumption | 1,343 | 1,350 | 1,482 | 10.3 |
| Carry-over | 361 | 366 | 340 | -5.8 |
| China | | | | |
| Production | 12,496 | 12,670 | 13,565 | 8.6 |
| Net Imports | 1,384 | 1,745 | 2,610 | 88.5 |
| Consumption | 14,797 | 15,100 | 16,151 | 9.2 |
| Carry-over | 2,300 | 1,215 | 1,463 | -36.4 |
| Egypt | | | | |
| Production | 1,754 | 1,830 | 1,997 | 13.9 |
| Net Imports | 1,193 | 1,120 | 1,434 | 20.2 |
| Consumption | 2,626 | 2,800 | 3,427 | 25.7 |
| Carry-over | 853 | 1,009 | 996 | 16.8 |
| European Union | | | | |
| Production | 15,215 | 14,800 | 15,611 | 2.6 |
| Net Imports | 1,392 | 2,115 | 2,022 | 45.3 |
| Consumption | 16,857 | 17,000 | 17,630 | 4.6 |
| Carry-over | 2,299 | 2,290 | 2,353 | 2.3 |
| Former Soviet Union | | | | |
| Production | 5,689 | 5,640 | 6,475 | 13.8 |
| Net Imports | 4,426 | 5,034 | 4,002 | -9.6 |
| Consumption | 10,249 | 10,470 | 10,477 | 2.2 |
| Carry-over | 1,202 | 1,288 | 1,317 | 9.6 |
| India | | | | |
| Production | 20,729 | 25,700 | 28,119 | 35.6 |
| Net Imports | 2,565 | 980 | 260 | -89.9 |
| Consumption | 24,233 | 25,000 | 28,331 | 16.9 |
| Carry-over | 4,832 | 6,333 | 6,827 | 41.3 |
| Indonesia | | | | |
| Production | 1,958 | 1,911 | 2,069 | 5.7 |
| Net Imports | 2,569 | 2,910 | 3,352 | 30.4 |
| Consumption | 4,600 | 4,900 | 5,422 | 17.8 |
| Carry-over | 387 | 371 | 370 | -4.4 |
| Japan | | | | |
| Production | 942 | 845 | 955 | 1.4 |
| Net Imports | 1,381 | 1,353 | 1,226 | -11.2 |
| Consumption | 2,282 | 2,242 | 2,178 | -4.6 |
| Carry-over | 444 | 461 | 447 | 0.8 |
| Korea | | | | |
| Production | 0 | 0 | 0 | NA |
| Net Imports | 1,258 | 1,260 | 1,214 | -3.5 |
| Consumption | 1,126 | 1,155 | 1,211 | 7.5 |
| Carry-over | 164 | 144 | 154 | -6.1 |

Japan's imports are predicted to decrease by 11.2% from the 2008-2010 average of 1.4 million metric ton to 1.2 million metric tons in 2020, due to a slight decrease in domestic consumption (Table 4).

In South Korea, consumption is predicted to increase by 7.5% for the time period and its imports are predicted to decrease 3.5% 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 14.0% from 1.3 million metric tons in 2008-2010 to 1.4 million metric tons in 2020. The increase in consumption results in increasing imports from 1.2 million metric tons for the 2008-2010 average to 1.4 million metric tons in 2020.

Egypt's imports are predicted to increase by 20.2% from 1.2 million metric tons in 2008-2010 to 1.4 million metric tons in 2020, due mainly to increased consumption. Consumption is predicted to increase 25.7% from 2.6 million metric tons to 3.4 million metric tons in 2020.

Indonesia's imports are predicted to increase by 30.4% from 2.6 million metric tons in 2008-2010 to 3.4 million metric tons in 2020. Consumption is predicted to increase from 4.6 million metric tons for the 2008-2010 average to 5.4 million metric tons in 2020.

## CONCLUDING REMARKS

This report provides an overview of the U.S. and world sugar markets for 2010-2020 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 19.9% from 34.5 million metric tons in 2010 to 37.9 million metric tons in 2020. The price of Caribbean sugar is expected to decrease from 27.3 cents/lb in 2010 to 18.4 cents/lb in 2020. The high sugar price is due mainly to low estimates of carry-over stocks for 2011 made in late 2010 and early 2011 and high energy prices. World sugar production increased 5.5% while consumption increased 2.6% in 2010.

Exports are predicted to increase in Brazil and Australia due mainly to production increases in those countries.

Imports by most importing countries are predicted to increase from the 2008-10 average to 2020. China's imports are predicted to increase by 88.5%, while Japan's imports are predicted to decrease by 11.2%. Imports by Egypt and Algeria are predicted to increase by 20.2% and 16.5%, respectively.

U.S. sugar consumption is predicted to increase by 10.0% for the forecasting period, while production is expected to increase by 10.1% for beet sugar and by 13.4% for cane sugar. Increases in beet sugar production may be limited due mainly to high prices for other commodities such as corn, soybeans, and wheat which compete for acres. Imports are predicted to

decrease by 17.7% for the period. Mexico could have an impact on the U.S. sugar industry if the country uses HFCS in its soft drink industry. Otherwise Mexico's sugar exports to the United States could be relatively small, even though NAFTA allows unlimited exports of sugar beginning in 2008.

The recent price increase in the world price of sugar that occurred in late 2009 and 2010 will not be maintained. In late 2010, Caribbean sugar price increased to 36 cents/lb from a low of 20 cents/lb in early 2010. The price in early 2011 is about 35 cents/lb. It is doubtful that the sugar prices will remain at that level in the near future.

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# Appendix

World Sugar Policy Simulation Model

2011 Baseline Solution

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 56.56 | 44.00 | 46.21 | 45.01 | 44.12 | 44.49 | 44.93 | 45.49 | 45.73 | 45.79 | 45.76 |
| Sugarcane | 45.57 | 32.61 | 34.89 | 33.65 | 32.73 | 33.12 | 33.57 | 34.14 | 34.39 | 34.45 | 34.43 |

United States - Nominal Sugar Prices (U.S. cents/pound)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Caribbean Price | 27.03 | 16.66 | 18.00 | 17.50 | 16.96 | 17.37 | 17.74 | 18.20 | 18.40 | 18.45 | 18.43 |
| TRQ Status | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota |
| Implicit Tariff | 6.10 | 6.00 | 6.50 | 6.00 | 5.80 | 5.70 | 5.70 | 5.70 | 5.70 | 5.70 | 5.70 |
| Import Price | 33.13 | 22.66 | 24.50 | 23.50 | 22.76 | 23.07 | 23.44 | 23.90 | 24.10 | 24.15 | 24.13 |
| Wholesale Price | 42.55 | 31.56 | 33.49 | 32.44 | 31.67 | 31.99 | 32.38 | 32.86 | 33.07 | 33.12 | 33.10 |
| Retail Price | 65.66 | 50.75 | 53.37 | 51.95 | 50.89 | 51.33 | 51.86 | 52.52 | 52.80 | 52.87 | 52.84 |

United States - Area Harvested (1000 acres)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 1171 | 1157 | 1160 | 1160 | 1161 | 1168 | 1181 | 1197 | 1214 | 1231 | 1247 |
| Sugarcane | 881 | 871 | 873 | 872 | 871 | 874 | 880 | 888 | 896 | 904 | 912 |
| Total Area | 2053 | 2028 | 2033 | 2032 | 2031 | 2042 | 2060 | 2085 | 2110 | 2135 | 2159 |

United States - Yields (short tons/acre)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 27.60 | 25.37 | 25.52 | 25.61 | 25.77 | 25.86 | 25.92 | 25.98 | 26.14 | 26.22 | 26.29 |
| Sugarcane | 33.90 | 34.10 | 34.28 | 34.45 | 34.62 | 34.78 | 34.94 | 35.09 | 35.25 | 35.41 | 35.56 |

United States - Sugar Beet and Sugarcane Production (1000 short tons)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 32331 | 29355 | 29608 | 29710 | 29907 | 30201 | 30603 | 31098 | 31734 | 32278 | 32782 |
| Sugarcane | 29873 | 29715 | 29926 | 30043 | 30140 | 30384 | 30731 | 31156 | 31593 | 32021 | 32436 |

United States - Sugar Extraction Rates (percent)

| Variable | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 | 15.03 |
| Sugarcane | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 | 11.86 |

United States - Sugar Production (1000 short tons)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beet Sugar | 4859 | 4412 | 4450 | 4465 | 4495 | 4539 | 4600 | 4674 | 4770 | 4851 | 4927 |
| Cane Sugar | 3543 | 3524 | 3549 | 3563 | 3575 | 3604 | 3645 | 3695 | 3747 | 3798 | 3847 |
| All Sugar | 8402 | 7936 | 7999 | 8028 | 8070 | 8143 | 8244 | 8369 | 8517 | 8649 | 8774 |

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

| Variable | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tariff Rate Quota | 1289 | 1383 | 1365 | 1392 | 1422 | 1370 | 1387 | 1387 | 1392 | 1392 | 1386 |
| 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TRQ Status | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota | Quota |
| Implicit Tariff | 6.10 | 6.00 | 6.50 | 6.00 | 5.80 | 5.70 | 5.70 | 5.70 | 5.70 | 5.70 | 5.70 |
| Total Imports | 3006 | 2582 | 2569 | 2577 | 2637 | 2552 | 2526 | 2492 | 2467 | 2435 | 2391 |
| Quota-sugar Imports | 1289 | 1383 | 1365 | 1392 | 1422 | 1370 | 1387 | 1387 | 1392 | 1392 | 1386 |
| Other Sugar Imports | 1255 | 1545 | 1199 | 1204 | 1184 | 1215 | 1182 | 1139 | 1104 | 1075 | 1043 |
| Total Exports | 150 | 224 | 185 | 181 | 190 | 186 | 193 | 187 | 188 | 189 | 189 |
| Net Imports | 2856 | 2358 | 2384 | 2395 | 2447 | 2366 | 2333 | 2305 | 2279 | 2246 | 2203 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 1503 | 1409 | 1408 | 1402 | 1411 | 1427 | 1437 | 1445 | 1451 | 1459 | 1469 |
| Production | 8110 | 7936 | 7999 | 8028 | 8070 | 8143 | 8244 | 8369 | 8517 | 8649 | 8774 |
| Net Imports | 2856 | 2358 | 2384 | 2395 | 2447 | 2366 | 2333 | 2305 | 2279 | 2246 | 2203 |
| Consumption | 11210 | 11362 | 11335 | 11492 | 11669 | 11745 | 11817 | 11883 | 11976 | 12084 | 12200 |
| Carry-out Stocks | 1409 | 1408 | 1402 | 1411 | 1427 | 1437 | 1445 | 1451 | 1459 | 1469 | 1479 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 73.99 | 74.34 | 73.52 | 73.90 | 74.40 | 74.26 | 74.10 | 73.90 | 73.87 | 73.94 | 74.05 |
| Stocks/Consumption | 12.57 | 12.39 | 12.36 | 12.28 | 12.23 | 12.24 | 12.23 | 12.21 | 12.19 | 12.15 | 12.13 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 23 | 24 | 23 | 23 | 22 | 22 | 22 | 22 | 22 | 22 | 22 |
| Yield | 47.60 | 47.40 | 47.96 | 48.36 | 48.79 | 49.22 | 49.64 | 50.07 | 50.49 | 50.92 | 51.35 |
| Production | 1109 | 1121 | 1090 | 1093 | 1095 | 1098 | 1105 | 1111 | 1116 | 1120 | 1123 |

Canada - Sugar Beet Exogenous Variables

| Variable | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Extraction Rate (%) | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 361 | 366 | 352 | 348 | 348 | 347 | 343 | 342 | 342 | 340 | 339 |
| Production | 125 | 127 | 123 | 123 | 124 | 124 | 125 | 126 | 126 | 127 | 127 |
| Net Imports | 1230 | 1214 | 1243 | 1262 | 1275 | 1285 | 1298 | 1316 | 1326 | 1341 | 1357 |
| Imports | 1300 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Exports | 70 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 1350 | 1354 | 1370 | 1385 | 1400 | 1412 | 1425 | 1441 | 1454 | 1469 | 1482 |
| Carry-out Stocks | 366 | 352 | 348 | 348 | 347 | 343 | 342 | 342 | 340 | 339 | 340 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 39.41 | 39.23 | 39.37 | 39.49 | 39.60 | 39.66 | 39.72 | 39.88 | 39.94 | 40.05 | 40.15 |
| Stocks/Consumption | 27.11 | 25.97 | 25.39 | 25.13 | 24.77 | 24.32 | 23.97 | 23.70 | 23.38 | 23.07 | 22.93 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 625 | 626 | 627 | 628 | 630 | 631 | 633 | 635 | 637 | 639 | 641 |
| Yield | 74.00 | 74.12 | 74.35 | 74.61 | 74.88 | 75.15 | 75.42 | 75.69 | 75.96 | 76.23 | 76.50 |
| Production | 46250 | 46362 | 46623 | 46889 | 47148 | 47440 | 47747 | 48065 | 48384 | 48699 | 49012 |

Mexico - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarcane | 11.80 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 | 11.90 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 973 | 975 | 960 | 953 | 953 | 957 | 963 | 972 | 983 | 995 | 1008 |
| Production | 5450 | 5517 | 5548 | 5580 | 5611 | 5645 | 5682 | 5720 | 5758 | 5795 | 5832 |
| Net Imports | -713 | -827 | -811 | -801 | -795 | -780 | -739 | -696 | -662 | -623 | -586 |
| Exports | 938 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 225 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 4735 | 4706 | 4743 | 4778 | 4812 | 4860 | 4934 | 5012 | 5083 | 5159 | 5233 |
| Carry-out Stocks | 975 | 960 | 953 | 953 | 957 | 963 | 972 | 983 | 995 | 1008 | 1021 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 40.52 | 39.83 | 39.71 | 39.57 | 39.43 | 39.41 | 39.60 | 39.83 | 40.00 | 40.21 | 40.41 |
| Stocks/Consumption | 20.59 | 20.40 | 20.10 | 19.95 | 19.89 | 19.81 | 19.70 | 19.61 | 19.57 | 19.54 | 19.51 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| Yield | 20 | 20 | 20 | 20 | 21 | 21 | 21 | 21 | 21 | 21 | 21 |
| Production | 146 | 151 | 152 | 152 | 153 | 153 | 153 | 154 | 154 | 155 | 155 |

Algeria - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarbeet | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 | 7.41 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 30 | 65 | 63 | 62 | 62 | 63 | 63 | 64 | 64 | 65 | 65 |
| Production | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 12 |
| Net Imports | 1335 | 1274 | 1286 | 1305 | 1321 | 1336 | 1345 | 1370 | 1396 | 1413 | 1433 |
| Exports | 40 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 1375 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 1300 | 1287 | 1298 | 1317 | 1332 | 1347 | 1355 | 1381 | 1407 | 1424 | 1444 |
| Carry-out Stocks | 65 | 63 | 62 | 62 | 63 | 63 | 64 | 64 | 65 | 65 | 66 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 34.69 | 33.94 | 33.84 | 33.93 | 33.93 | 33.93 | 33.77 | 34.05 | 34.32 | 34.38 | 34.54 |
| Stocks/Consumption | 5.00 | 4.91 | 4.79 | 4.73 | 4.71 | 4.69 | 4.69 | 4.64 | 4.60 | 4.59 | 4.56 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 422 | 423 | 418 | 416 | 416 | 416 | 417 | 418 | 419 | 420 | 421 |
| Yield | 86 | 86 | 86 | 87 | 87 | 87 | 88 | 88 | 89 | 89 | 90 |
| Production | 36081 | 36257 | 35995 | 36057 | 36199 | 36383 | 36621 | 36882 | 37157 | 37434 | 37708 |

Australia - Sugar Extraction Rate (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarcane | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 | 13.30 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 313 | 193 | 251 | 254 | 258 | 260 | 263 | 267 | 270 | 274 | 277 |
| Production | 4800 | 4822 | 4787 | 4796 | 4814 | 4839 | 4871 | 4905 | 4942 | 4979 | 5015 |
| Net Exports | 3670 | 3510 | 3513 | 3505 | 3509 | 3519 | 3534 | 3552 | 3569 | 3593 | 3615 |
| Exports | 3750 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 80 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 1250 | 1254 | 1271 | 1288 | 1302 | 1317 | 1334 | 1350 | 1369 | 1383 | 1397 |
| Carry-out Stocks | 193 | 251 | 254 | 258 | 260 | 263 | 267 | 270 | 274 | 277 | 279 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 59.84 | 59.34 | 59.45 | 59.58 | 59.60 | 59.62 | 59.74 | 59.86 | 60.08 | 60.10 | 60.12 |
| Stocks/Consumption | 15.44 | 20.00 | 20.00 | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | -835 | -285 | 352 | 371 | 366 | 366 | 365 | 364 | 363 | 363 | 362 |
| Production | 39400 | 36929 | 37323 | 37550 | 37787 | 38023 | 38259 | 38496 | 38732 | 38968 | 39204 |
| Net Exports | 26850 | 24064 | 24922 | 25049 | 25170 | 25231 | 25336 | 25445 | 25555 | 25669 | 25784 |
| Exports | 26850 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 12000 | 12228 | 12383 | 12506 | 12617 | 12794 | 12924 | 13052 | 13177 | 13300 | 13421 |
| Carry-out Stocks | -285 | 352 | 371 | 366 | 366 | 365 | 364 | 363 | 363 | 362 | 361 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 60.36 | 60.80 | 60.88 | 60.82 | 60.72 | 60.94 | 60.95 | 60.96 | 60.97 | 60.98 | 60.98 |
| Stocks/Consumption | -2.38 | 2.88 | 2.99 | 2.93 | 2.90 | 2.85 | 2.82 | 2.78 | 2.75 | 2.72 | 2.69 |

China - Area Harvested (1000 hectares)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 230 | 228 | 231 | 225 | 233 | 225 | 231 | 229 | 232 | 232 | 233 |
| Sugarcane | 1810 | 1817 | 1784 | 1782 | 1785 | 1791 | 1800 | 1810 | 1820 | 1830 | 1840 |
| Total Area | 2040 | 2045 | 2015 | 2007 | 2019 | 2015 | 2031 | 2039 | 2052 | 2062 | 2073 |

China - Yields (metric tons/hectare)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 38.00 | 38.18 | 38.38 | 38.58 | 38.79 | 39.00 | 39.33 | 39.63 | 39.93 | 40.23 | 40.51 |
| Sugarcane | 71.00 | 71.68 | 72.24 | 72.72 | 73.13 | 73.49 | 73.82 | 74.11 | 74.38 | 74.64 | 74.89 |

China - Production (1000 metric tons)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 9450 | 8698 | 8867 | 8666 | 9052 | 8776 | 9100 | 9091 | 9279 | 9320 | 9426 |
| Sugarcane | 128510 | 130272 | 128856 | 129589 | 130553 | 131590 | 132836 | 134107 | 135383 | 136608 | 137791 |

China - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarbeets | 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 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 1900 | 1215 | 1117 | 1105 | 1192 | 1240 | 1305 | 1346 | 1377 | 1403 | 1438 |
| Production | 12670 | 12803 | 12690 | 12737 | 12864 | 12931 | 13078 | 13193 | 13329 | 13446 | 13565 |
| Beet Sugar | 950 | 883 | 900 | 880 | 919 | 891 | 924 | 923 | 942 | 946 | 957 |
| Cane Sugar | 11720 | 11920 | 11790 | 11857 | 11946 | 12040 | 12155 | 12271 | 12388 | 12500 | 12608 |
| Net Imports | 1745 | 2288 | 2640 | 2816 | 2768 | 2811 | 2737 | 2711 | 2673 | 2655 | 2610 |
| Exports | 55 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 1800 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 15100 | 15189 | 15342 | 15466 | 15584 | 15677 | 15774 | 15873 | 15977 | 16065 | 16151 |
| Carry-out Stocks | 1215 | 1117 | 1105 | 1192 | 1240 | 1305 | 1346 | 1377 | 1403 | 1438 | 1463 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 11.17 | 11.18 | 11.24 | 11.27 | 11.31 | 11.33 | 11.35 | 11.38 | 11.42 | 11.45 | 11.48 |
| Stocks/Consumption | 8.05 | 7.35 | 7.20 | 7.71 | 7.96 | 8.32 | 8.53 | 8.67 | 8.78 | 8.95 | 9.06 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 370 | 371 | 345 | 349 | 349 | 349 | 352 | 355 | 357 | 360 | 361 |
| Yield | 29 | 30 | 31 | 32 | 32 | 32 | 32 | 33 | 33 | 33 | 33 |
| Production | 10730 | 11248 | 10717 | 11006 | 11131 | 11226 | 11389 | 11548 | 11713 | 11856 | 11984 |

Cuba - Sugar Extraction Rate (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarcane | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 140 | 150 | 158 | 154 | 152 | 150 | 145 | 139 | 131 | 125 | 120 |
| Production | 1100 | 1163 | 1108 | 1138 | 1151 | 1161 | 1178 | 1194 | 1211 | 1226 | 1239 |
| Net Exports | 390 | 473 | 436 | 452 | 450 | 460 | 475 | 489 | 500 | 508 | 514 |
| Consumption | 700 | 682 | 676 | 689 | 703 | 706 | 709 | 713 | 717 | 723 | 730 |
| Carry-out Stocks | 150 | 158 | 154 | 152 | 150 | 145 | 139 | 131 | 125 | 120 | 115 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 59.63 | 57.96 | 57.33 | 58.35 | 59.40 | 59.60 | 59.74 | 60.00 | 60.30 | 60.72 | 61.31 |
| Stocks/Consumption | 21.43 | 23.18 | 22.81 | 21.99 | 21.29 | 20.48 | 19.57 | 18.43 | 17.45 | 16.60 | 15.77 |

Egypt - Area Harvested (1000 hectares)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 99 | 98 | 98 | 98 | 98 | 99 | 99 | 99 | 100 | 100 | 100 |
| Sugarcane | 125 | 125 | 125 | 125 | 125 | 126 | 127 | 128 | 129 | 131 | 132 |
| Total Area | 224 | 223 | 222 | 223 | 224 | 225 | 226 | 227 | 229 | 231 | 233 |

Egypt - Yields (metric tons/hectare)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 60.00 | 59.34 | 59.93 | 60.16 | 60.50 | 60.80 | 61.11 | 61.42 | 61.73 | 62.04 | 62.35 |
| Sugarcane | 101.50 | 101.63 | 101.84 | 102.13 | 102.46 | 102.85 | 103.28 | 103.75 | 104.24 | 104.76 | 105.31 |

Egypt - Production (1000 metric tons)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 5940 | 5831 | 5863 | 5890 | 5947 | 5996 | 6050 | 6104 | 6158 | 6211 | 6265 |
| Sugarcane | 12688 | 12673 | 12697 | 12756 | 12846 | 12965 | 13111 | 13282 | 13476 | 13692 | 13928 |

Egypt - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 | 12.75 |
| Sugarcane | 8.60 | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 859 | 1009 | 1009 | 1000 | 994 | 991 | 989 | 989 | 990 | 991 | 994 |
| Production | 1830 | 1833 | 1839 | 1848 | 1863 | 1880 | 1899 | 1920 | 1944 | 1969 | 1997 |
| Beet Sugar | 755 | 743 | 748 | 751 | 758 | 765 | 771 | 778 | 785 | 792 | 799 |
| Cane Sugar | 1075 | 1090 | 1092 | 1097 | 1105 | 1115 | 1128 | 1142 | 1159 | 1178 | 1198 |
| Net Imports | 1120 | 989 | 1059 | 1125 | 1173 | 1226 | 1273 | 1317 | 1351 | 1393 | 1434 |
| Exports | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 1120 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 2800 | 2822 | 2908 | 2978 | 3040 | 3107 | 3172 | 3237 | 3294 | 3360 | 3427 |
| Carry-out Stocks | 1009 | 1009 | 1000 | 994 | 991 | 989 | 989 | 990 | 991 | 994 | 996 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 35.23 | 34.82 | 35.18 | 35.35 | 35.42 | 35.56 | 35.66 | 35.76 | 35.79 | 35.92 | 36.05 |
| Stocks/Consumption | 36.04 | 35.74 | 34.39 | 33.38 | 32.60 | 31.83 | 31.18 | 30.58 | 30.10 | 29.57 | 29.07 |

European Union - Sugar Quota (1000 metric tons, white sugar equivalent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A-Quota | #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 |
| A plus B Quota | 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 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 1900 | 1850 | 1796 | 1791 | 1784 | 1778 | 1775 | 1774 | 1772 | 1770 | 1767 |
| Yield | 56.00 | 56.22 | 56.40 | 56.56 | 56.71 | 56.87 | 57.02 | 57.18 | 57.33 | 57.48 | 57.64 |
| Production | 106400 | 104018 | 101294 | 101273 | 101196 | 101089 | 101230 | 101406 | 101611 | 101759 | 101867 |

European Union - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 2375 | 2290 | 2291 | 2297 | 2309 | 2319 | 2323 | 2327 | 2333 | 2343 | 2350 |
| Production | 14800 | 15934 | 15525 | 15522 | 15510 | 15494 | 15515 | 15542 | 15572 | 15595 | 15611 |
| Net Exports | -2115 | -1059 | -1585 | -1705 | -1789 | -1838 | -1853 | -1900 | -1976 | -2016 | -2022 |
| Exports | 1460 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 3575 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 17000 | 16993 | 17103 | 17214 | 17289 | 17328 | 17365 | 17435 | 17539 | 17604 | 17630 |
| Carry-out Stocks | 2290 | 2291 | 2297 | 2309 | 2319 | 2323 | 2327 | 2333 | 2343 | 2350 | 2353 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 47.03 | 46.93 | 47.15 | 47.38 | 47.51 | 47.54 | 47.57 | 47.70 | 47.93 | 48.06 | 48.10 |
| Stocks/Consumption | 13.47 | 13.48 | 13.43 | 13.42 | 13.41 | 13.40 | 13.40 | 13.38 | 13.36 | 13.35 | 13.35 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 4653 | 6333 | 6407 | 6445 | 6497 | 6558 | 6603 | 6647 | 6689 | 6733 | 6780 |
| Production | 25700 | 25276 | 25252 | 25631 | 26022 | 26328 | 26688 | 27076 | 27379 | 27735 | 28119 |
| Net Exports | -980 | -146 | -479 | -457 | -413 | -425 | -395 | -332 | -358 | -325 | -260 |
| Exports | 20 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 1000 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 25000 | 25349 | 25694 | 26036 | 26374 | 26708 | 27039 | 27367 | 27692 | 28013 | 28331 |
| Carry-out Stocks | 6333 | 6407 | 6445 | 6497 | 6558 | 6603 | 6647 | 6689 | 6733 | 6780 | 6827 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 19.99 | 20.00 | 20.00 | 20.01 | 20.01 | 20.02 | 20.02 | 20.03 | 20.03 | 20.04 | 20.04 |
| Stocks/Consumption | 25.33 | 25.27 | 25.08 | 24.95 | 24.87 | 24.72 | 24.58 | 24.44 | 24.31 | 24.20 | 24.10 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 380 | 381 | 375 | 373 | 372 | 372 | 373 | 374 | 376 | 378 | 380 |
| Yield | 63.00 | 63.52 | 64.02 | 64.52 | 65.02 | 65.52 | 66.02 | 66.52 | 67.02 | 67.52 | 68.02 |
| Production | 23940 | 24188 | 24036 | 24059 | 24183 | 24364 | 24609 | 24892 | 25204 | 25531 | 25868 |

Indonesia - Sugar Extraction Rate

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarcane | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 | 8.00 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 450 | 371 | 375 | 375 | 374 | 374 | 374 | 373 | 372 | 371 | 370 |
| Production | 1911 | 1935 | 1923 | 1925 | 1935 | 1949 | 1969 | 1991 | 2016 | 2043 | 2069 |
| Net Imports | 2910 | 3044 | 3105 | 3155 | 3197 | 3232 | 3262 | 3288 | 3311 | 3332 | 3352 |
| Exports | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 2910 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Consumption | 4900 | 4975 | 5028 | 5080 | 5132 | 5182 | 5231 | 5280 | 5328 | 5375 | 5422 |
| Carry-out Stocks | 371 | 375 | 375 | 374 | 374 | 374 | 373 | 372 | 371 | 370 | 370 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 20.41 | 20.50 | 20.50 | 20.51 | 20.51 | 20.51 | 20.51 | 20.51 | 20.51 | 20.51 | 20.51 |
| Stocks/Consumption | 7.57 | 7.54 | 7.45 | 7.37 | 7.30 | 7.21 | 7.13 | 7.04 | 6.97 | 6.89 | 6.82 |

Japan - Area Harvested (1000 hectares)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 76 | 77 | 78 | 78 | 79 | 80 | 80 | 80 | 80 | 79 | 78 |
| Sugarcane | 17 | 17 | 17 | 17 | 17 | 18 | 18 | 18 | 18 | 17 | 17 |
| Total Area | 93 | 94 | 95 | 96 | 97 | 97 | 98 | 98 | 97 | 97 | 95 |

Japan - Yields (metric tons/hectare)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 51.50 | 52.17 | 52.68 | 53.11 | 53.52 | 53.91 | 54.29 | 54.67 | 55.04 | 55.42 | 55.79 |
| Sugarcane | 58.00 | 60.78 | 60.60 | 60.66 | 60.70 | 60.75 | 60.79 | 60.83 | 60.88 | 60.92 | 60.96 |

Japan - Production (1000 metric tons)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 3914 | 4008 | 4089 | 4168 | 4240 | 4303 | 4352 | 4382 | 4393 | 4390 | 4375 |
| Sugarcane | 957 | 1020 | 1033 | 1049 | 1062 | 1072 | 1077 | 1075 | 1067 | 1056 | 1042 |

Japan - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 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 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 505 | 461 | 449 | 442 | 439 | 439 | 439 | 439 | 440 | 442 | 444 |
| Production | 845 | 883 | 900 | 917 | 932 | 945 | 955 | 960 | 962 | 960 | 955 |
| Beet Sugar | 735 | 759 | 775 | 789 | 803 | 815 | 824 | 830 | 832 | 831 | 829 |
| Cane Sugar | 110 | 124 | 125 | 127 | 129 | 130 | 131 | 130 | 129 | 128 | 126 |
| Net Imports | 1353 | 1378 | 1346 | 1333 | 1326 | 1312 | 1299 | 1281 | 1261 | 1243 | 1226 |
| Exports | 2 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 1355 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 2242 | 2272 | 2253 | 2252 | 2258 | 2257 | 2254 | 2240 | 2221 | 2201 | 2178 |
| Carry-out Stocks | 461 | 449 | 442 | 439 | 439 | 439 | 439 | 440 | 442 | 444 | 447 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 17.73 | 18.02 | 17.92 | 17.97 | 18.08 | 18.15 | 18.20 | 18.17 | 18.11 | 18.04 | 17.96 |
| Stocks/Consumption | 20.56 | 19.76 | 19.61 | 19.50 | 19.43 | 19.43 | 19.49 | 19.65 | 19.90 | 20.19 | 20.53 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 164 | 144 | 135 | 134 | 139 | 142 | 144 | 146 | 147 | 149 | 152 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Imports | 1260 | 1151 | 1168 | 1181 | 1190 | 1188 | 1194 | 1195 | 1203 | 1207 | 1214 |
| Exports | 340 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 1600 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 1155 | 1160 | 1170 | 1176 | 1186 | 1186 | 1192 | 1194 | 1202 | 1204 | 1211 |
| Carry-out Stocks | 144 | 135 | 134 | 139 | 142 | 144 | 146 | 147 | 149 | 152 | 154 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 23.31 | 23.36 | 23.51 | 23.59 | 23.74 | 23.71 | 23.80 | 23.81 | 23.93 | 23.96 | 24.09 |
| Stocks/Consumption | 12.47 | 11.66 | 11.44 | 11.78 | 12.00 | 12.17 | 12.25 | 12.34 | 12.41 | 12.61 | 12.74 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 280 | 280 | 281 | 283 | 286 | 288 | 291 | 292 | 293 | 293 | 295 |
| Yield | 69.00 | 69.46 | 69.61 | 69.76 | 69.91 | 70.06 | 70.21 | 70.36 | 70.51 | 70.56 | 70.71 |
| Production | 19320 | 19477 | 19572 | 19748 | 19964 | 20208 | 20401 | 20566 | 20643 | 20709 | 20886 |

South Africa - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarcane | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 70 | 35 | 34 | 43 | 45 | 49 | 50 | 52 | 55 | 58 | 61 |
| Production | 2140 | 2156 | 2167 | 2186 | 2210 | 2237 | 2258 | 2277 | 2285 | 2293 | 2312 |
| Net Exports | 550 | 534 | 542 | 574 | 604 | 638 | 653 | 664 | 667 | 666 | 684 |
| Exports | 800 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 250 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 1625 | 1623 | 1616 | 1610 | 1601 | 1598 | 1603 | 1609 | 1615 | 1623 | 1630 |
| Carry-out Stocks | 35 | 34 | 43 | 45 | 49 | 50 | 52 | 55 | 58 | 61 | 59 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 35.99 | 36.02 | 36.02 | 36.04 | 36.01 | 36.01 | 36.07 | 36.18 | 36.27 | 36.41 | 36.54 |
| Stocks/Consumption | 2.15 | 2.13 | 2.67 | 2.78 | 3.09 | 3.12 | 3.25 | 3.41 | 3.57 | 3.76 | 3.63 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 2400 | 2534 | 2571 | 2609 | 2636 | 2656 | 2675 | 2694 | 2713 | 2732 | 2748 |
| Yield | 20.50 | 20.11 | 20.05 | 20.07 | 20.22 | 20.23 | 20.18 | 20.19 | 20.24 | 20.31 | 20.38 |
| Production | 49200 | 50951 | 51567 | 52359 | 53293 | 53724 | 53977 | 54403 | 54928 | 55474 | 56011 |

Former Soviet Union - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugar Beets | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 | 11.56 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 1082 | 1288 | 1320 | 1311 | 1320 | 1339 | 1343 | 1339 | 1329 | 1321 | 1317 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Production | 5640 | 5890 | 5961 | 6053 | 6161 | 6210 | 6240 | 6289 | 6350 | 6413 | 6475 |
| Net Imports | 5034 | 4549 | 4409 | 4369 | 4306 | 4243 | 4209 | 4152 | 4099 | 4050 | 4002 |
| Exports | 697 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 5731 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 10470 | 10406 | 10379 | 10413 | 10447 | 10449 | 10452 | 10451 | 10457 | 10466 | 10477 |
| Carry-out Stocks | 1288 | 1320 | 1311 | 1320 | 1339 | 1343 | 1339 | 1329 | 1321 | 1317 | 1317 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 35.76 | 35.59 | 35.53 | 35.69 | 35.85 | 35.90 | 35.96 | 36.01 | 36.09 | 36.18 | 36.28 |
| Stocks/Consumption | 12.30 | 12.69 | 12.64 | 12.68 | 12.82 | 12.85 | 12.81 | 12.72 | 12.63 | 12.59 | 12.57 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Area Harvested | 1114 | 1113 | 1113 | 1113 | 1113 | 1113 | 1113 | 1114 | 1115 | 1115 | 1116 |
| Yield | 56.00 | 56.01 | 56.35 | 56.80 | 57.27 | 57.76 | 58.24 | 58.73 | 59.22 | 59.71 | 60.20 |
| Production | 62384 | 62330 | 62715 | 63213 | 63724 | 64270 | 64836 | 65420 | 66006 | 66590 | 67174 |

Thailand - Sugar Extraction Rates (percent)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sugarcane | 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)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Carry-in Stocks | 1486 | 1456 | 1455 | 1458 | 1464 | 1473 | 1480 | 1488 | 1495 | 1503 | 1511 |
| Production | 6870 | 6856 | 6899 | 6953 | 7010 | 7070 | 7132 | 7196 | 7261 | 7325 | 7389 |
| Net Exports | 4700 | 4677 | 4691 | 4722 | 4753 | 4796 | 4840 | 4886 | 4933 | 4972 | 5020 |
| Exports | 4700 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Imports | 0 | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| Consumption | 2200 | 2181 | 2205 | 2225 | 2248 | 2266 | 2285 | 2303 | 2320 | 2344 | 2361 |
| Carry-out Stocks | 1456 | 1455 | 1458 | 1464 | 1473 | 1480 | 1488 | 1495 | 1503 | 1511 | 1519 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Per Capita Consumption | 31.98 | 31.50 | 31.65 | 31.76 | 31.91 | 31.98 | 32.08 | 32.17 | 32.26 | 32.45 | 32.54 |
| Stocks/Consumption | 66.18 | 66.71 | 66.14 | 65.80 | 65.50 | 65.33 | 65.13 | 64.95 | 64.77 | 64.47 | 64.35 |

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

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Net Exports | -13535 | -14638 | -14211 | -13998 | -14068 | -14157 | -14373 | -14559 | -14644 | -14815 | -15085 |

World - Sugar Prices (U.S. cents/pound)

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 27.03 | 16.66 | 18.00 | 17.50 | 16.96 | 17.37 | 17.74 | 18.20 | 18.40 | 18.45 | 18.43 |
| $/ton | 595.90 | 367.29 | 396.83 | 385.81 | 373.90 | 382.94 | 391.10 | 401.24 | 405.65 | 406.75 | 406.31 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| World Exp | 50408 | 48722.2 | 49126.4 | 49101.3 | 49349.3 | 49580.3 | 49949.6 | 50291.1 | 50531.8 | 50845.7 | 51286.7 |
| World Imp | | | | | | | | | | | |