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2006 Outlook of the U.S. and World Sugar Markets, 2005-2015

Won W. Koo
Richard D. Taylor

Center for Agricultural Policy and Trade Studies
Department of Agribusiness and Applied Economics
North Dakota State University
Fargo, North Dakota 58105-5636

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Abstract

This report evaluates the U.S. and world sugar markets for 2005-2015 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 improve over the next 10 years, mainly because higher world oil prices have increased the conversion of sugar into ethanol by Brazil. Brazil is the largest exporter of sugar, and it is expected that Brazilian sugar exports may be reduced due to high oil prices. World demand for sugar is expected to grow faster than world supply, resulting in Carribean sugar prices increasing from 11.35 cents/lb in 2005 to 18.05 cents/lb in 2015. The U.S. wholesale price of sugar is projected to increase from 27.04 cents/lb in 2005 to 32.70 cents/lb in 2015, if Brazil continues to convert sugar into ethanol. The CAFTA agreement is expected to increase U.S. imports slightly, but with little impact on U.S. prices. It is projected that Mexico will be able to export 410 thousand metric tons of sugar to the United States by 2015. 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 3% between 2005 and 2015, from 32.0 million metric tons to 33.0 million metric tons. Brazil's exports are projected to decrease from 18.2 million metric tons in 2005 to 16.6 million metric tons in 2015 because of increased ethanol production from sugar cane. World sugar prices also are projected to increase from 11.35 cents/lb in 2005 to 18.05 cents/lb in 2015. U.S. sugar price is projected to increase from 27.04 cents/lb in 2005 to 32.70 cents/lb in 2015.

U.S. sugar imports are predicted to decrease 2.15% over the 2005-2015 period because of higher domestic production due to price increases, assuming increased government allotments. U.S. sugar consumption is projected to decrease 7.2%, and ending stocks are predicted to decrease 14.6%.

Canada's production is predicted to increase 3.5% from 2005 to 2015. Canada's imports are expected to increase 17.0%. Consumption is predicted to increase 16.1%, and ending stocks are predicted to decrease 62.1%.

Mexico's production is expected to increase 16.2%, and exports are expected to increase to 0.4 million metric tons by 2015 due to increases in exports to the United States under the North American Free Trade Agreement (NAFTA).

The European Union's (EU) exports are predicted to increase 29.9%, due to higher world sugar prices. Their production and consumption are predicted to increase 9.0% and 9.5%, respectively.

Production in India is predicted to increase 25.4%, while consumption is predicted to increase 16.9% for the 2005-2015 period. India should export about 2.7 million metric tons by 2015.

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

Most importing countries, including Algeria, China, Japan, and Korea, are predicted to increase their imports for the 2005-2015 period.

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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, implying that only a small portion of production is traded internationally. 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, although in recent years the EU has revised their Common Agricultural Policy sugar program. 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/lb to over $0.18/lb, indicating that either production has decreased or consumption has increased. Since world production and consumption data are available only on an annual basis, the exact reason behind the price increase is not clear. One reason could be that because of the recent rise in world oil prices, Brazil has increased ethanol production, reducing the exportable supply of sugar. That reduced supply may be the main reason for the price increase.

This report evaluates the U.S. and world sugar industry for 2005-2015 using the Global Sugar Policy Simulation Model developed by Benirschka et al. (1996). This model was run utilizing 2005 data, but consideration was given to the high prices in late 2005 and early 2006. 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%.

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*Professor of Agribusiness and Applied Economics and Director, and Research Scientist, respectively, in the Center for Agricultural Policy and Trade Studies at North Dakota State University, Fargo.

OVERVIEW OF THE WORLD SUGAR INDUSTRY AND SUGAR POLICIES

For the 2001-2005 period, annual global sugar production was approximately 139 million metric tons, with about 30% of production exported from its country of origin. The largest sugar producing region is Brazil, followed by the EU and India (Table 1).

Table 1. World Sugar Supply and Utilization, 2001 to 2005 Average

Country/ Region	Beet/ Cane	Consumption	Production	Net Exports	Ending Stocks	Per Capita Consumption
		----------1,000 metric tons, raw value-----------				
Algeria	B	1,128	10	(1,086)	290	33
Australia	C	1,160	5,141	4,009	461	59
Brazil	C	10,316	25,497	15,224	466	56
Canada	B	1,396	91	(1,330)	271	43
China	B/C	11,157	10,149	(916)	1,696	9
Cuba	C	700	2,210	1,480	146	62
European Union	B	16,713	20,725	3,879	4,017	47
Egypt	B/C	2,354	1,354	(374)	405	34
Former Soviet Union	B/C	6,458	1,928	(4,004)	934	22
India	C	19,570	18,060	116	8,492	17
Indonesia	C	3,510	1,792	(1,569)	1,157	16
Japan	B/C	2,272	867	(725)	386	18
Korea	-	1,300	0	(1,311)	118	27
Mexico	C	5,384	5,575	69	1,593	50
South Africa	C	1,574	2,612	933	791	36
Thailand	C	1,980	6,042	4,123	847	30
United States	B/C	9,068	7,391	(1,638)	1,408	32
Rest of World	B/C	38,897	29,495	(16,882)	13,106	18
World	B/C	134,938	138,938		36,554	20

Per capita sugar consumption was highest in Cuba, followed by Australia and Brazil. Per capita sugar consumption in the United States was 32 kg, which was above world average per capita consumption (20 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 2001-2005 period was 135 million metric tons.

The major sugar exporting countries were Brazil, Thailand, Australia, the EU, and Cuba. These countries accounted for 85% of global exports from 2001 to 2005. A relatively small 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, Canada, Korea, Algeria, and Japan. Imports by these countries accounted for about 44% of all sugar imports from 2001 to 2005. Under the Lome Convention, the EU was required to import sugar under preferential terms from certain African, Caribbean, and Pacific countries.

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 $0.13 per pound (Figure 1). Both real Caribbean raw sugar prices and U.S. raw sugar import prices have long-term downward trends. Figure 1 shows the dramatic increase in Caribbean sugar price in late 2005 and early 2006. In 2003, the price averaged $0.07/lb; this had risen to $0.12/lb by 2005, and it was $0.18/lb in June 2006. The high Caribbean sugar price has also increased the U.S. wholesale price to over $0.30/lb.

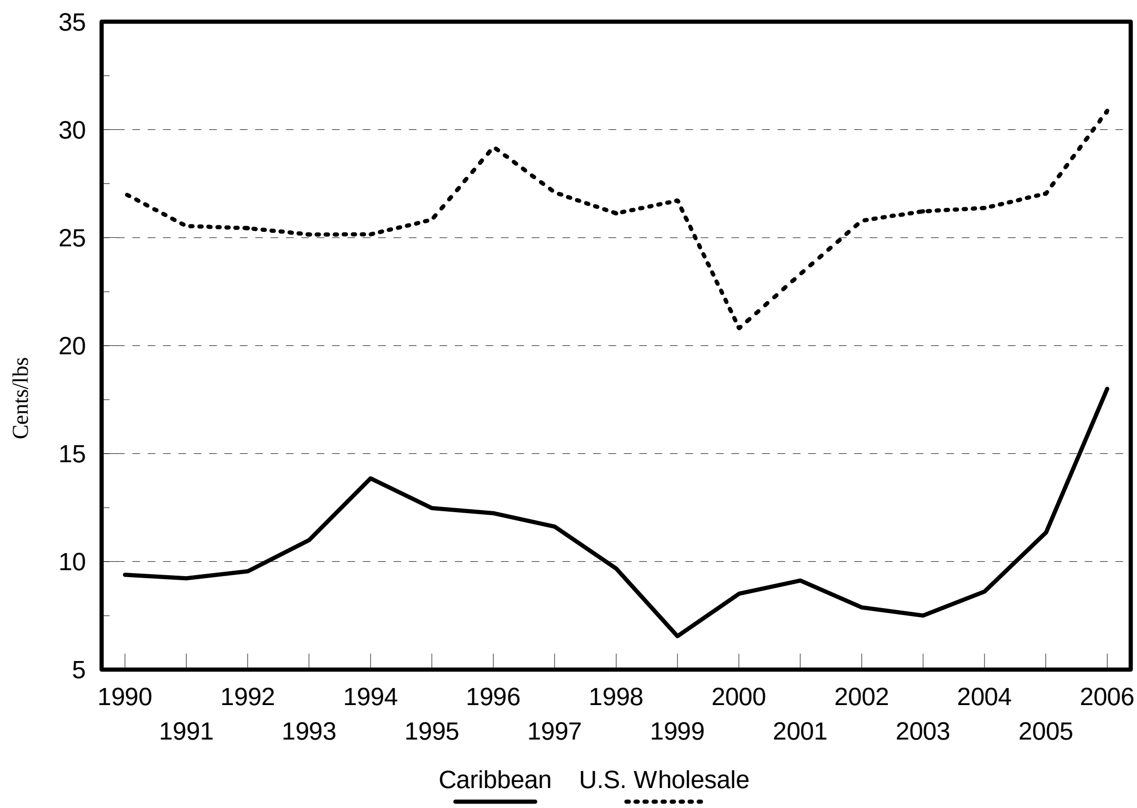

Figure 1. U.S. and World Sugar Prices

The volatility in world sugar prices could be due to the nature of the 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 investment 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 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 17.6% from 1990 to 2005, while cane sugar production increased 6.6% (Figure 2). U.S. total sugar production increased about 11%, from 6.2 million metric tons in 1990 to 6.9 million metric tons in 2005 (Figure 3).

U.S. consumption of sugar also increased 15.6%, from 8.0 million metric tons in 1990 to 9.3 million metric tons in 2005 (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 1.6 million metric tons during the 1990 to 2005 period. Under the North American Free Trade Agreement (NAFTA), Mexico can currently export 260,000 metric tons of sugar to the United States, and its exports to the United States will be unlimited beginning in 2008 when implementation of NAFTA is completed. Mexico has exported less than 100,000 metric tons of sugar into the United States over 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 consisting of six Central American countries, provides additional sugar imports of 107,000 metric tons, with further increases of 3,000 metric tons per year.

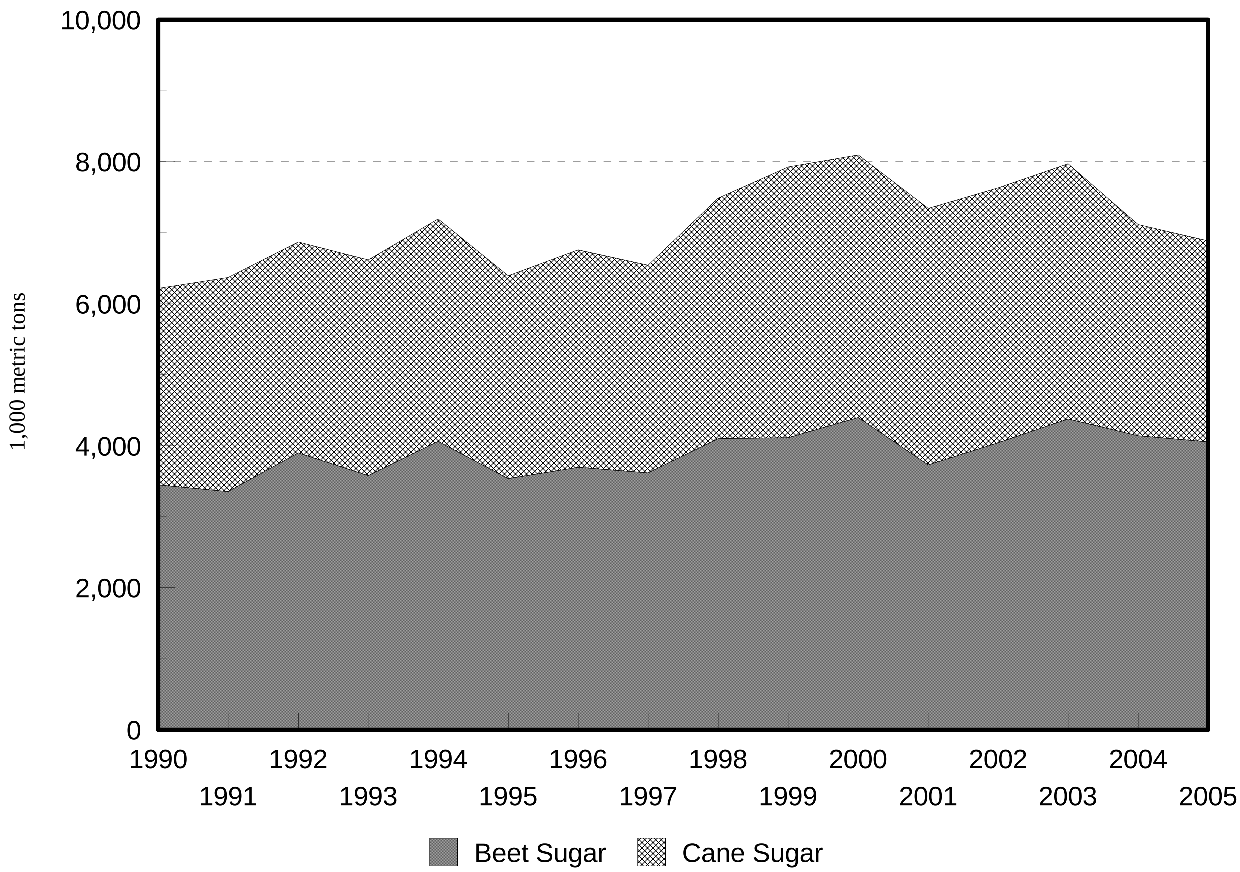

Figure 2. U.S. Beet and Cane Sugar Production

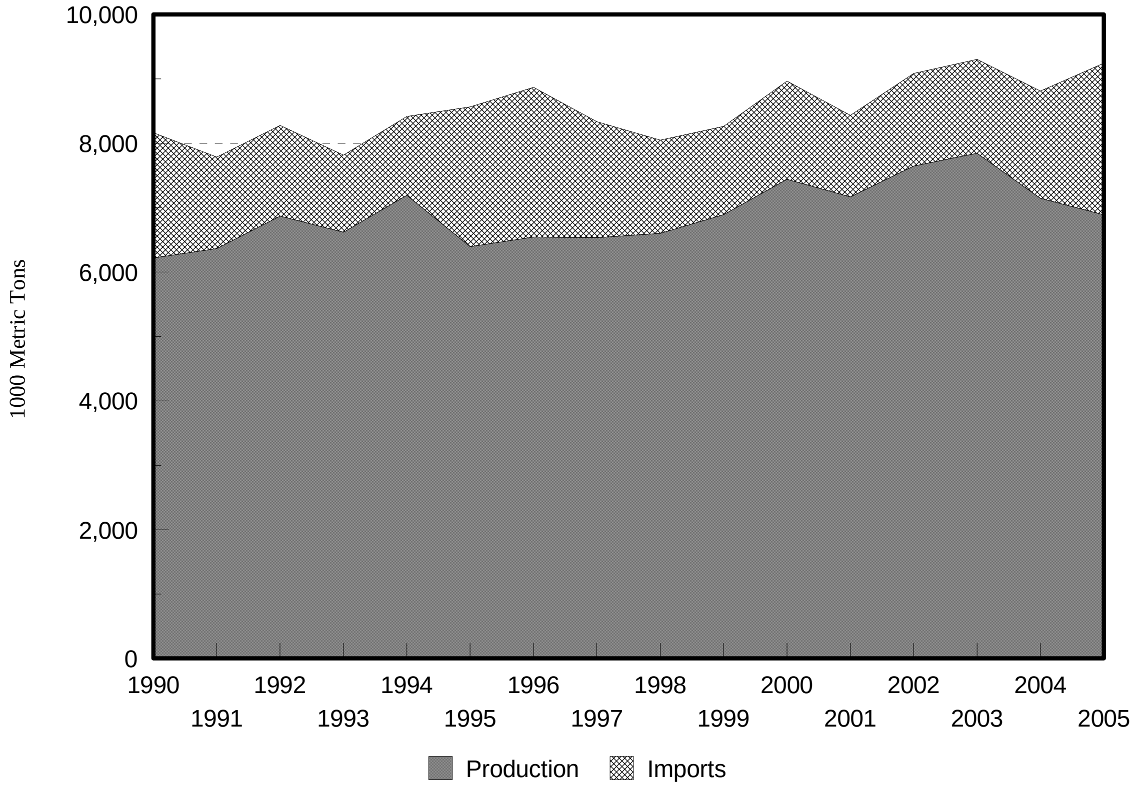

Figure 3. U.S. Sugar Production and Imports

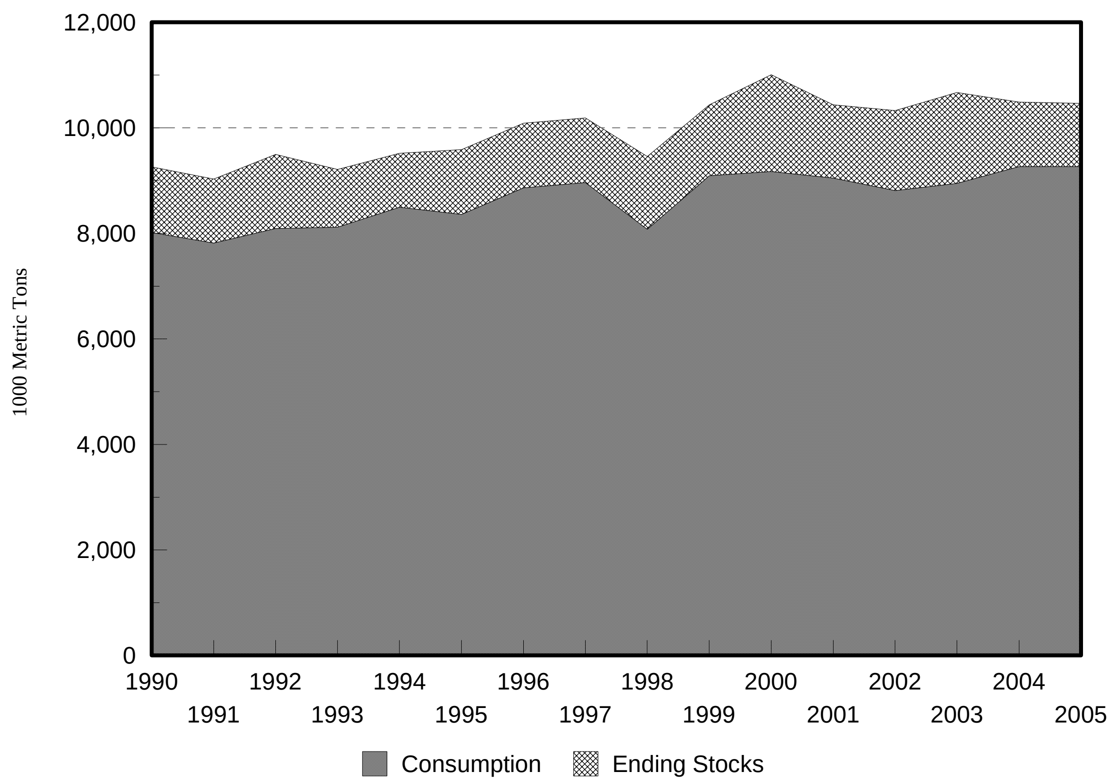

Figure 4. U.S. Consumption and Ending Stocks

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 because of production losses due to 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 allows a rapid reduction in the second-tier duty for Mexican sugar over the next several years. The second-tier duty for Mexican sugar will be reduced from 16.11 cents per pound in 1995 to zero in 2008. Duties 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. 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 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 and are currently legislated at these levels until 2004/05. 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 general, the EU's target price for white sugar is about 30 cents (Euro) per pound, and its intervention price is 28.72 cents (Euro) per pound. The EU's internal support is about 30% higher than that in the United States.

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, and they have not changed these export subsidy commitments under the Lome Convention. The EU is proposing to limit sugar production to about 14.9 million metric tons per year, down from its current production level of 21.2 million metric tons. If the EU limits sugar production to the stated level, it will become an importer. The limit is not included in the model.

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 2005 were 1.0 million metric tons. Mexico also subsidizes exports and is subsidizing raw sugar storage.

Brazil

Brazil is the largest sugar producing country in the world. The production of sugar has increased 263% since 1990. About 50% of the Brazilian sugar consumed domestically is converted into ethanol for fuel. Sugar exports have risen from 1.2 million metic tons in 1990 to 18.2 million metric tons in 2005. Sugar that is converted into ethanol is subsidized at prices higher than world price. Recent increases in world oil prices have increased the price of ethanol which has in turn increased Brazil's conversion of sugar into ethanol, reducing potential sugar exports from Brazil. The reduction in exports has drastically 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 of 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 grown 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 3%, from 32.0 to 33.0 million metric tons over the 2005-2015 period, because the largest exporter, Brazil, is expected to reduce exports. Exports of sugar in most other countries will increase for 2005-2015. Exports for Thailand will increase 23.4%, and exports for Australia will increase 13.8%.

World sugar price, referred to as the Caribbean price of sugar, is projected to increase about 59%, from 11.35 cents/lb in 2005 to 18.05 cents/lb in 2015 (Figure 5), because of substantial diversion of sugar cane to ethanol production. The domestic wholesale price of U.S. sugar is projected to increase 20.9%, from 27.04 cents/lb in 2005 to 32.70 cents/lb in 2015. U.S. sugar price increases mainly in response to the higher world sugar prices.

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 8.1 million metric tons in 2015. Imports are predicted to decrease slightly from the 2003-05 average. The high world sugar price will provide other markets for excess world sugar supplies. U.S. sugar consumption is predicted to increase 7.2%, from 9.2 million metric tons (the 2003-2005 average) to 9.8 million metric tons in 2015. Ending stocks are also predicted to decrease 14.6% (Table 2).

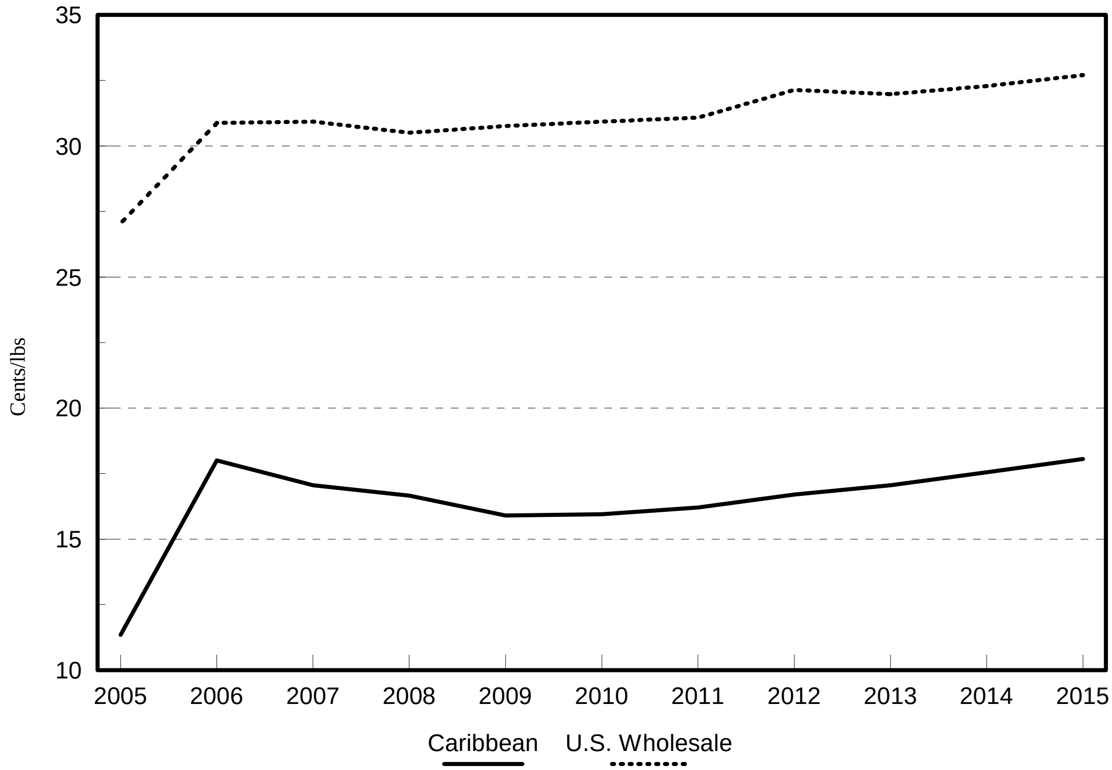

Figure 5. Estimated U.S. and World Sugar Prices

Table 2. U.S. Sugar Production, Consumption, Imports, and Carry-over Stock, 2005-2015 Average

	Average (2003-2005)	2005	2015	% Change (2003-05) to 2015
	----------1,000 metric tons-----------			
Production	7,736	6,889	8,054	9.94
Beet	4,192	4,056	4,922	17.44
Cane	3,134	2,833	3,132	-0.08
Net Imports	1,826	2,354	1,787	-2.15
Per capita Consumption	64	64	62	-2.66
Consumption	9,160	9,267	9,819	7.19
Carry-over Stocks	1,380	1,197	1,178	-14.61

Exporters

The EU's exports are predicted to increase from 3.2 million metric tons for 2003-2005 to 4.2 million metric tons in 2015 (Figure 6). Sugar production in the EU is predicted to increase 9.0%, and consumption is predicted to increase from 16.7 million metric tons for the 2003-2005 average to 18.3 million tons in 2015 (Table 3). Most of the increase is due to the additional countries now included in the EU.

Brazil's production is predicted to increase 3.7%, from 27.8 million metric tons in 2003-2005 to 28.8 million metric tons in 2015 (Table 3). Brazil's exports are predicted to decrease from 16.8 million metric tons in 2003-2005 to 16.7 million metric tons in 2015. Its domestic consumption is predicted to increase 13.8%, from 10.6 million metric tons in 2003-2005 to 12.1 million metric tons in 2015. Much of the increase in consumption is due to ethanol production.

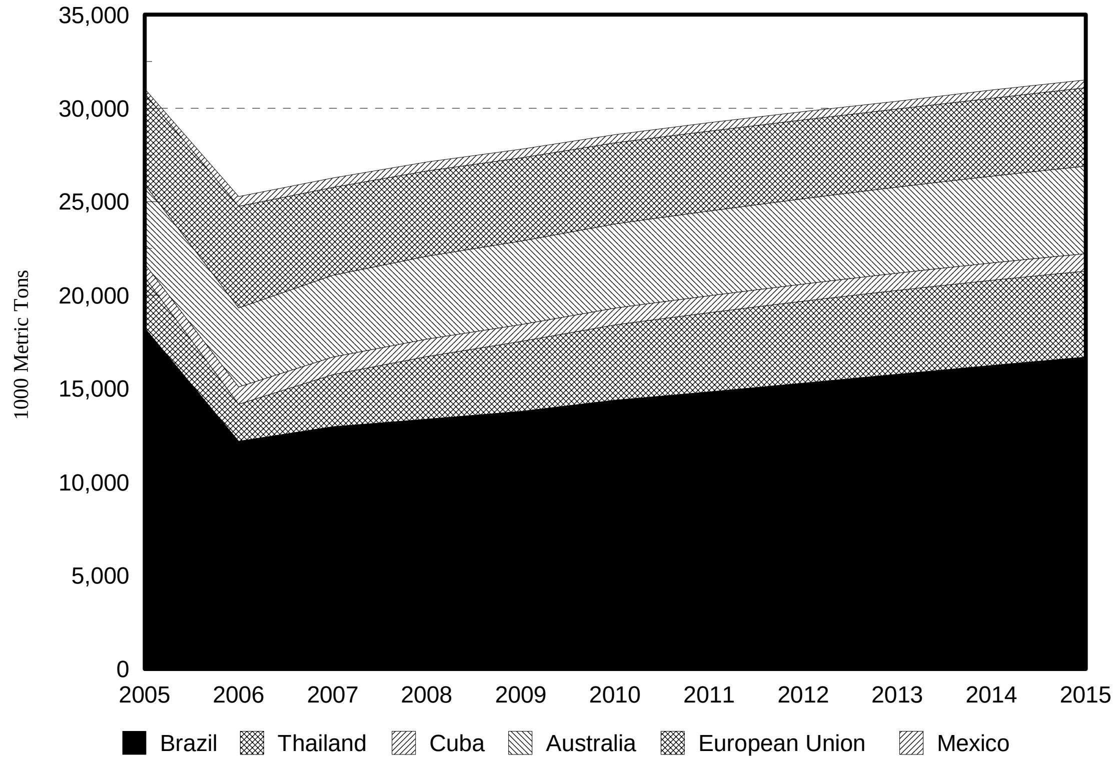

Figure 6. World Sugar Exports by Country

Thailand's exports are predicted to increase 23.4%, from 3.7 million metric tons for the 2003-2005 average to 4.6 million metric tons in 2015 (Table 3). Consumption increases from 2.0 million metric tons for the 2003-2005 average to 2.4 million metric tons in 2015. Sugar production in the country also is predicted to increase 26.5%, from 5.5 million metric tons to 7.0 million metric tons in 2015.

Australia's exports are predicted to increase 13.8%, from 4.1 million metric tons for the 2003-2005 average to 4.7 million metric tons in 2015 (Table 3), due mainly to increased sugar production. Australia's production is predicted to increase 14.7%, from 5.2 million metric tons to 6.0 million metric tons in 2015. Sugar consumption is expected to increase 7.6%, from 1.2 million metric tons to 1.3 million metric tons in 2015.

Cuba's exports are predicted to decrease 10.4%, from 1.0 million metric tons in 2003-2005 to 0.9 million metric tons in 2015 (Table 3). It is predicted that Cuba will decrease its sugar production slightly, while consumption is predicted to increase by 5.4%. 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 16.2%, from 5.8 million metric tons in 2003-2005 to 6.8 million metric tons in 2015. Mexico is expected to export 410 thousand metric tons by 2015, mainly to the United States under NAFTA. Sugar consumption is predicted to increase 15.3%, from 5.5 million metric tons in 2003-2005 to 6.3 million metric tons in 2015, under the assumption that Mexico does not convert to HFCS in their soft drink industry. Ending stocks are predicted to increase 27.1%. 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 14.1%, from 2.5 million metric tons in 2003-2005 to 2.9 million metric tons in 2015. South Africa's exports are predicted to increase 65.1%, from 0.9 million metric tons in 2003-2005 to 1.5 million metric tons in 2015, due mainly to increased production. Sugar consumption is predicted to decrease 6.3%, and ending stocks are predicted to increase 1.0%.

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

	Average (2003-2005)	2005	2015	% change (2003-05) to 2015
	----------1,000 metric tons--------			
European Union				
Production	20,677	21,233	22,536	9.0
Net Exports	3,236	4,873	4,202	29.9
Consumption	16,738	17,525	18,332	9.5
Carry-over	3,902	4,717	3,660	-18.4
Brazil				
Production	27,758	28,700	28,782	3.7
Net Exports	16,840	18,250	16,684	-0.9
Consumption	10,633	10,800	12,100	13.8
Carry-over	617	235	249	-59.6
Thailand				
Production	5,509	4,330	6,967	26.5
Net Exports	3,727	2,700	4,598	23.4
Consumption	2,043	2,100	2,354	15.2
Carry-over	736	262	993	34.9
Australia				
Production	5,194	5,200	5,956	14.7
Net Exports	4,113	4,230	4,681	13.8
Consumption	1,183	1,150	1,273	7.6
Carry-over	379	223	255	-32.7
Cuba				
Production	1,733	1,450	1,662	-4.1
Net Exports	1,044	732	935	-10.4
Consumption	700	700	738	5.4
Carry-over	88	150	100	13.6
Mexico				
Production	5,826	6,000	6,770	16.2
Net Exports	50	243	410	714.6
Consumption	5,502	5,482	6,345	15.3
Carry-over	1,866	2,318	2,371	27.1
South Africa				
Production	2,528	2,665	2,884	14.1
Net Exports	888	1,050	1,469	65.1
Consumption	1,509	1,555	1,413	-6.3
Carry-over	923	980	933	1.0

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 63.4% and 27.4%, respectively, for the 2005-2015 period. The FSU is the largest importer for the period, followed by Indonesia and Japan.

Canada's production is predicted to increase above the 2003-2005 average of 104 thousand metric tons to 108 thousand metric tons by the year 2015, and consumption is predicted to increase from 1.4 million metric tons to 1.7 million metric tons in 2015 (Table 4). As a result, Canada's imports are predicted to increase 17.0%, from 1.3 million metric tons to 1.6 million metric tons in 2015.

The FSU's production is predicted to increase 24.2%, from 2.1 million metric tons to 2.7 million metric tons in 2005-2015; consumption is predicted to increase 4.6%, from 6.3 million metric tons to 6.6 million metric tons for the same period. Imports are predicted to decrease slightly from the 2003-2005 average (Table 4).

China is expected to increase its imports about 217%, from 1.2 million metric tons in 2003-2005 to 3.7 million metric tons in 2015 (Table 4). China's production is predicted to decrease 3.7%, from 10.4 million metric tons for the 2003-2005 average to 10.9 million metric tons in 2015; consumption is predicted to increase 22.9%, from 11.8 million metric tons to 14.5 million metric tons for the period.

India's production is predicted to increase 25.4%, from 15.9 million metric tons in 2003-2005 to 20.0 million metric tons in 2015. India is predicted to export 2.7 million metric tons of sugar by 2015, mainly because of the higher sugar prices.

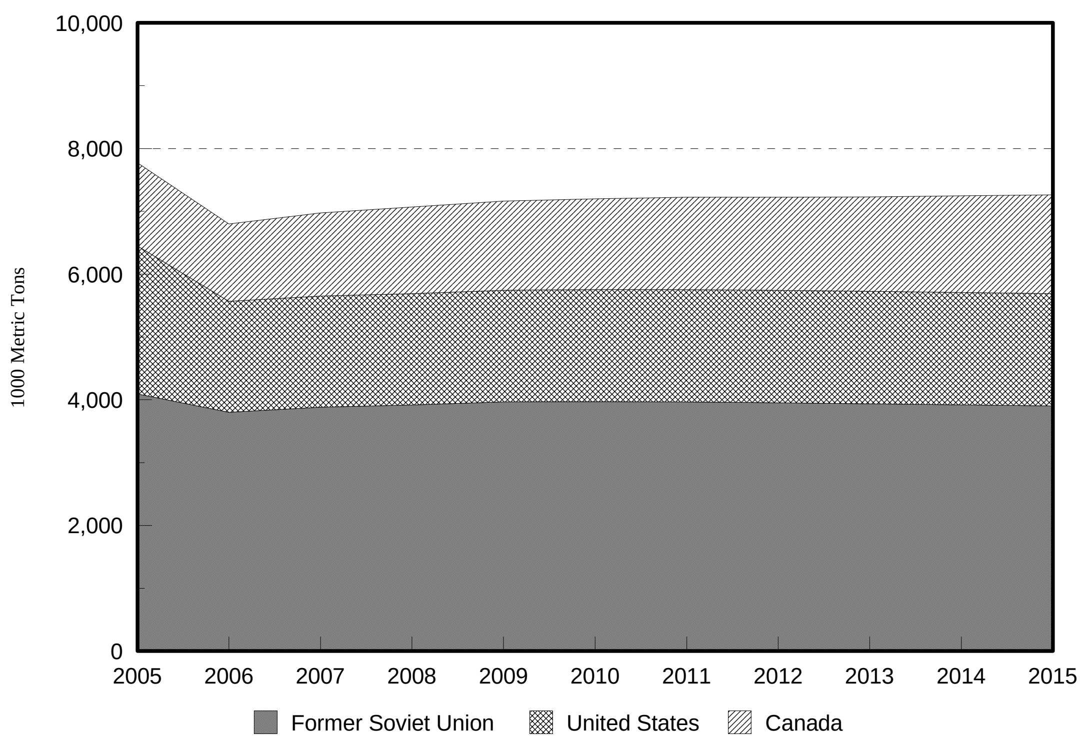

Figure 7. World Sugar Imports by Country, Major Importers

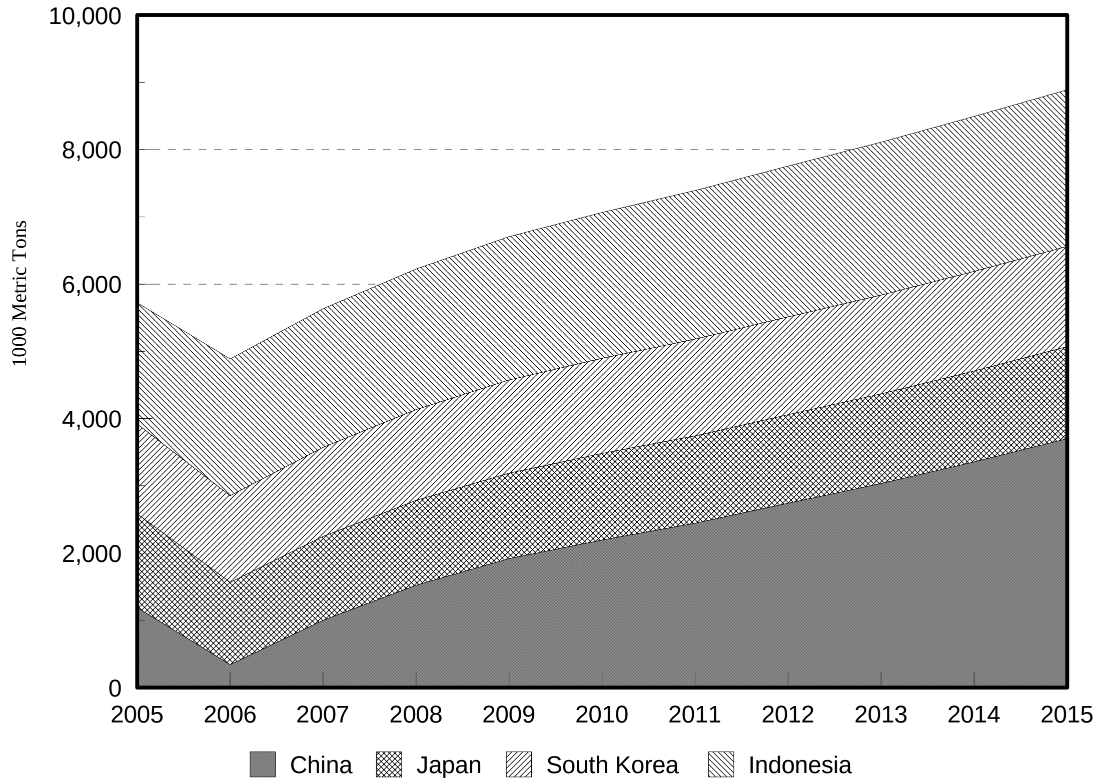

Figure 8. World Sugar Imports by Country, Asian Countries

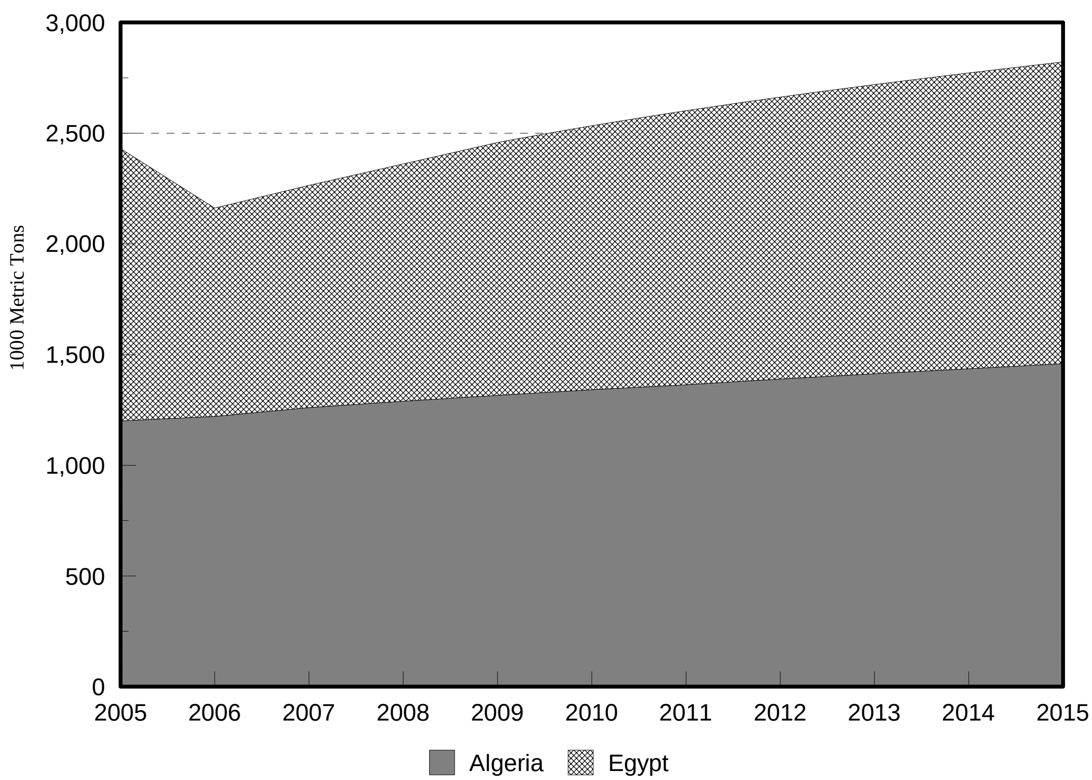

Figure 9. World Sugar Imports by Country, African Countries

Japan's imports are predicted to decrease 1.4% from the 2003-2005 average to 1.4 million metric tons in 2015, due mainly to slow domestic consumption increases (Table 4).

In South Korea, consumption is predicted to increase 12.7% for the time period. As a result, South Korea's imports are predicted to increase 11.5% 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 23.8%, from 1.2 million metric tons in 2003-2005 to 1.5 million metric tons in 2015. This increase in consumption results in a growth in imports from 1.2 million metric tons for the 2003-2005 average to 1.5 million metric tons in 2015.

Egypt's imports are predicted to increase 31.1%, from 1.0 million metric tons in 2003-2005 to 1.4 million metric tons in 2015, due mainly to increased consumption. Consumption is predicted to increase 25.9%, from 2.4 million metric tons to 3.0 million metric tons in 2015.

Indonesia's imports are predicted to decrease 4.3%, from 1.6 million metric tons in 2003-2005 to 1.4 million metric tons in 2015. Consumption is predicted to decrease from 3.6 million metric tons for the 2003-2005 average to 3.3 million metric tons in 2015 in response to higher sugar prices.

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

	Average (2003-05)	2005	2015	% Change (2003-05) to 2015
		-----------1,000 metric tons------------		
Algeria				
Production	10	10	12	20.0
Net Imports	1,175	1,170	1,459	24.2
Consumption	1,188	1,150	1,471	23.8
Carry-over	426	449	399	-6.3
Canada				
Production	104	98	108	3.5
Net Imports	1,346	1,364	1,574	17.0
Consumption	1,444	1,431	1,676	16.1
Carry-over	277	288	105	-62.1
China				
Production	10,353	10,734	10,851	4.8
Net Imports	1,167	1,160	3,701	217.2
Consumption	11,827	11,600	14,530	22.9
Carry-over	1,863	2,311	1,633	-12.3
Egypt				
Production	1,355	1,335	1,651	21.8
Net Imports	1,040	950	1,363	31.1
Consumption	2,391	2,315	3,010	25.9
Carry-over	447	363	531	18.7
Former Soviet Union				
Production	2,143	1,930	2,663	24.2
Net Imports	3,947	3,560	3,900	-1.2
Consumption	6,283	6,100	6,570	4.6
Carry-over	497	440	270	-45.6
India				
Production	15,930	15,150	19,982	25.4
Net Imports	(673)	270	(2,689)	NA
Consumption	19,370	18,810	22,642	16.9
Carry-over	6,120	8,500	5,062	-17.3
Indonesia				
Production	1,827	1,730	1,978	8.3
Net Imports	1,550	1,500	1,484	-4.3
Consumption	3,583	3,247	3,262	-8.9
Carry-over	1,020	354	471	-53.8
Japan				
Production	879	896	894	1.7
Net Imports	1,386	1,346	1,367	-1.4
Consumption	2,253	2,247	2,262	0.4
Carry-over	417	354	471	12.9
Korea				
Production	0	0	0	0.0
Net Imports	1,338	1,344	1,492	11.5
Consumption	1,325	1,304	1,493	12.7
Carry-over	123	110	42	-65.9

CONCLUDING REMARKS

This report provides an overview of the U.S. and world sugar markets for 2005-2015 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 3%, from 32.0 million metric tons in 2005 to 33.0 million metric tons in 2015. The price of Caribbean sugar is expected to increase about 59%, from 11.35 cents/lb in 2005 to 18.05 cents/lb in 2015, because of substantial increases in ethanol production from sugar cane in Brazil. The wholesale price of U.S. sugar is projected to increase 20.9%, from 27.04 cents/lb in 2005 to 32.70 cents/lb in 2015. If Mexico is allowed to export additional sugar to the United States, that price increase could be smaller.

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

Imports by most importing countries are predicted to increase from the 2003-05 average to 2015. China's imports are predicted to increase 217%, while Japan's imports are predicted to decrease 1.4%. Imports by South Korea and Algeria are predicted to increase 11.5% and 24.2%, respectively.

U.S. sugar consumption is predicted to increase 7.2% for the forecasting period, while production is expected to increase 9.9%. Imports are predicted to decrease 2.2% for the period because of higher world sugar prices. However, the U.S. sugar industry could face greater uncertainty, mainly because of upcoming free trade agreements with the Western Hemisphere countries and Thailand.

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Appendix

World Sugar Policy Simulation Model

2006 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
Sugar Beets	40.00	41.21	41.27	40.79	41.09	41.27	41.45	42.65	42.47	42.83	43.31
Sugarcane	27.00	28.79	28.85	28.36	28.67	28.85	29.04	30.28	30.09	30.46	30.96

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Caribbean Price	11.35	18.00	17.05	16.65	15.90	15.95	16.20	16.70	17.05	17.55	18.05
TRQ Status	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota
Implicit Tariff	7.00	4.00	5.00	5.00	6.00	6.10	6.00	6.50	6.00	5.80	5.70
Import Price	18.35	22.00	22.05	21.65	21.90	22.05	22.20	23.20	23.05	23.35	23.75
Wholesale Price	27.04	30.87	30.92	30.50	30.76	30.92	31.08	32.13	31.97	32.28	32.70
Retail Price	43.61	43.81	43.88	43.31	43.67	43.88	44.10	45.52	45.31	45.73	46.30

United States - Area Harvested (1000 acres)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	1350	1388	1419	1445	1458	1471	1483	1499	1518	1541	1567
Sugarcane	866	878	890	899	895	893	894	899	906	917	929
Total Area	2216	2267	2309	2344	2354	2364	2377	2398	2424	2457	2496

United States - Yields (short tons/acre)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	23.00	22.95	23.09	23.18	23.26	23.38	23.46	23.59	23.67	23.85	24.05
Sugarcane	29.40	29.36	29.41	29.51	29.63	29.67	29.76	29.88	30.02	30.16	30.32

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	31050	31871	32771	33490	33918	34387	34790	35359	35931	36742	37679
Sugarcane	25472	25788	26171	26535	26526	26505	26605	26872	27212	27648	28157

United States - Sugar Extraction Rates (percent)

Variable	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40	14.40
Sugarcane	12.26	12.26	12.26	12.26	12.26	12.26	12.26	12.26	12.26	12.26	12.26

United States - Sugar Production (1000 short tons)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Beet Sugar	4471	4589	4719	4823	4884	4952	5010	5092	5174	5291	5426
Cane Sugar	3123	3162	3209	3253	3252	3250	3262	3295	3336	3390	3452
All Sugar	7594	7751	7928	8076	8136	8201	8272	8386	8510	8680	8878

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	1256	1256	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
TRQ Status	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota
Implicit Tariff	7.00	4.00	5.00	5.00	6.00	6.10	6.00	6.50	6.00	5.80	5.70
Total Imports	2100	2066	2071	2076	2081	2086	2091	2091	2091	2091	2090
Quota-sugar Imports	1600	1566	1571	1576	1581	1586	1591	1591	1591	1591	1591
Other Sugar Imports	500	500	500	500	500	500	500	500	500	500	500
Total Exports	120	120	120	120	120	120	120	120	120	120	120
Net Imports	1980	1946	1951	1956	1961	1966	1971	1971	1971	1971	1970

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	1347	1320	1244	1223	1227	1236	1301	1280	1275	1282	1291
Production	7593	7751	7928	8076	8136	8201	8272	8386	8510	8680	8878
Net Imports	2595	1946	1951	1956	1961	1966	1971	1971	1971	1971	1970
Consumption	10215	9780	9915	10106	10209	10326	10437	10500	10654	10738	10823
Carry-out Stocks	1320	1244	1223	1227	1236	1301	1280	1275	1282	1291	1299

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Per Capita Consumption	70.55	66.93	67.25	67.93	68.03	68.21	68.36	68.19	68.60	68.55	68.50
Stocks/Consumption	12.92	12.72	12.33	12.14	12.10	12.60	12.27	12.14	12.04	12.02	12.01

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
Area Harvested	20	21	22	22	22	22	21	21	21	21	21
Yield	41.50	41.14	41.74	42.13	42.56	42.99	43.41	43.84	44.27	44.69	45.12
Production	842	870	914	920	925	927	930	935	941	947	953

Canada - Sugar Beet Exogenous Variables

Variable	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	288	256	140	99	86	84	86	89	92	95	100
Production	95	98	103	104	105	105	105	106	106	107	108
Net Imports	1323	1231	1326	1379	1420	1446	1470	1488	1501	1538	1574
Imports	1335	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Exports	12	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1450	1445	1470	1496	1526	1549	1572	1590	1605	1641	1676
Carry-out Stocks	256	140	99	86	84	86	89	92	95	100	105

Canada - 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	44.15	43.59	43.98	44.37	44.88	45.18	45.46	45.62	45.68	46.32	46.97
Stocks/Consumption	17.66	9.71	6.73	5.75	5.52	5.55	5.66	5.79	5.91	6.07	6.28

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
Area Harvested	678	682	686	691	695	701	706	713	719	725	732
Yield	75.10	75.30	75.56	75.82	76.09	76.36	76.63	76.90	77.17	77.44	77.71
Production	50888	51333	51828	52366	52911	53501	54130	54800	55482	56180	56890

Mexico - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugarcane	11.80	11.80	11.80	11.80	11.80	11.80	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
Carry-in Stocks	2043	2318	2286	2275	2276	2284	2296	2310	2325	2340	2355
Production	6000	6057	6116	6179	6243	6313	6441	6521	6602	6685	6770
Net Imports	-243	-528	-503	-480	-457	-432	-461	-439	-424	-419	-410
Exports	344	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	101	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	5482	5561	5624	5698	5778	5870	5966	6068	6163	6251	6345
Carry-out Stocks	2318	2286	2275	2276	2284	2296	2310	2325	2340	2355	2371

Mexico - 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	49.71	49.84	49.83	49.91	50.04	50.27	50.53	50.82	51.07	51.26	51.49
Stocks/Consumption	42.28	41.11	40.45	39.94	39.52	39.11	38.71	38.31	37.98	37.68	37.37

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
Area Harvested	7	7	7	8	8	8	8	8	8	8	8
Yield	20	20	20	20	20	20	20	20	20	21	21
Production	138	143	148	151	153	153	154	155	156	156	157

Algeria - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	429	400	397	396	396	396	397	398	398	398	399
Production	10	11	11	11	11	11	11	11	12	12	12
Net Imports	1200	1220	1260	1289	1316	1341	1364	1390	1413	1436	1459
Exports	130	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1330	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1240	1234	1272	1301	1327	1352	1375	1401	1424	1447	1471
Carry-out Stocks	400	397	396	396	396	397	398	398	398	399	399

Algeria - 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	35.35	34.62	35.15	35.40	35.57	35.71	35.78	35.94	36.02	36.09	36.16
Stocks/Consumption	32.26	32.16	31.10	30.41	29.86	29.36	28.91	28.40	27.97	27.55	27.13

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
Area Harvested	428	439	449	454	457	458	460	462	464	466	468
Yield	92	92	93	93	93	94	94	95	95	95	96
Production	39162	40514	41662	42260	42684	43030	43352	43688	44047	44408	44779

Australia - Sugar Extraction Rate (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	403	223	232	234	237	240	243	246	249	251	253
Production	5200	5388	5541	5621	5677	5723	5766	5811	5858	5906	5956
Net Exports	4230	4220	4367	4432	4473	4503	4531	4565	4602	4641	4681
Exports	4240	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1150	1159	1172	1185	1201	1216	1232	1243	1254	1264	1273
Carry-out Stocks	223	232	234	237	240	243	246	249	251	253	255

Australia - 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	58.34	58.31	58.43	58.64	58.95	59.25	59.56	59.66	59.76	59.77	59.77
Stocks/Consumption	19.39	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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	585	235	262	254	255	253	254	252	252	251	250
Production	28700	23354	24266	24813	25381	25948	26515	27082	27648	28215	28782
Net Exports	18250	12187	12965	13371	13793	14383	14845	15293	15772	16261	16684
Exports	18250	#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	10800	11141	11309	11442	11589	11564	11671	11790	11878	11955	12100
Carry-out Stocks	235	262	254	255	253	254	252	252	251	250	249

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	57.69	58.88	59.16	59.27	59.45	58.77	58.79	58.87	58.80	58.70	58.92
Stocks/Consumption	2.18	2.35	2.25	2.23	2.18	2.19	2.16	2.13	2.11	2.09	2.06

China - Area Harvested (1000 hectares)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	233	268	320	277	291	275	285	283	290	291	297
Sugarcane	1570	1573	1610	1614	1608	1600	1594	1590	1588	1585	1584
Total Area	1803	1841	1930	1891	1899	1875	1879	1873	1878	1877	1880

China - Yields (metric tons/hectare)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	36.00	36.15	36.27	36.36	36.53	36.66	36.76	36.83	36.88	36.91	36.93
Sugarcane	67.20	67.20	67.21	67.21	67.21	67.21	67.21	67.21	67.21	67.21	67.21

China - Production (1000 metric tons)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	8388	9707	11596	10083	10645	10088	10483	10436	10703	10755	10955
Sugarcane	105504	105706	108202	108450	108061	107543	107143	106865	106710	106556	106440

China - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	1671	1607	985	1089	1222	1388	1473	1526	1555	1588	1611
Production	10500	10657	11078	10947	10968	10864	10868	10837	10850	10842	10851
Beet Sugar	851	985	1177	1023	1080	1024	1064	1059	1086	1092	1112
Cane Sugar	9654	9672	9900	9923	9888	9840	9804	9778	9764	9750	9739
Net Imports	1190	341	999	1521	1917	2194	2442	2742	3034	3357	3701
Exports	110	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1300	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	11700	11621	11973	12334	12718	12973	13257	13550	13852	14176	14530
Carry-out Stocks	1607	985	1089	1222	1388	1473	1526	1555	1588	1611	1633

China - 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	8.89	8.78	8.99	9.20	9.43	9.56	9.70	9.85	10.01	10.17	10.36
Stocks/Consumption	13.74	8.47	9.09	9.91	10.92	11.36	11.51	11.48	11.46	11.36	11.24

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
Area Harvested	470	473	491	489	488	486	486	487	488	489	490
Yield	30	31	31	31	32	32	32	32	32	33	33
Production	14100	14484	15225	15313	15398	15441	15544	15664	15805	15934	16075

Cuba - Sugar Extraction Rate (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	132	150	87	68	57	60	57	51	41	32	21
Production	1450	1498	1574	1583	1592	1597	1607	1620	1634	1648	1662
Net Exports	732	934	945	930	904	903	907	915	921	928	935
Consumption	700	626	648	665	685	697	707	714	723	731	738
Carry-out Stocks	150	87	68	57	60	57	51	41	32	21	10

Cuba - 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	60.53	53.86	55.51	56.67	58.13	58.89	59.47	59.82	60.31	60.66	61.02
Stocks/Consumption	21.43	13.97	10.52	8.52	8.75	8.18	7.15	5.81	4.39	2.90	1.39

Egypt - Area Harvested (1000 hectares)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	63	63	64	64	64	65	65	65	65	65	66
Sugarcane	120	121	122	123	125	127	128	130	132	134	136
Total Area	183	184	186	187	189	191	193	195	197	199	202

Egypt - Yields (metric tons/hectare)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	49.00	48.54	49.07	49.32	49.64	49.95	50.26	50.57	50.88	51.19	51.50
Sugarcane	103.90	103.27	102.86	102.63	102.55	102.61	102.77	103.03	103.38	103.79	104.26

Egypt - Production (1000 metric tons)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	3067	3043	3136	3156	3196	3231	3250	3269	3290	3335	3376
Sugarcane	12468	12491	12567	12673	12828	13005	13205	13424	13662	13917	14188

Egypt - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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	8.50	8.50	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
Carry-in Stocks	459	520	515	513	513	514	516	518	521	524	527
Production	1370	1450	1481	1492	1511	1530	1550	1571	1594	1622	1651
Beet Sugar	390	388	400	402	408	412	414	417	419	425	430
Cane Sugar	980	1062	1081	1090	1103	1118	1136	1154	1175	1197	1220
Net Imports	1230	941	1004	1072	1142	1191	1238	1272	1308	1335	1363
Exports	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1230	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	2539	2396	2486	2565	2652	2720	2786	2840	2899	2954	3010
Carry-out Stocks	520	515	513	513	514	516	518	521	524	527	531

Egypt - 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	35.31	32.74	33.39	33.87	34.44	34.75	35.04	35.18	35.37	35.51	35.64
Stocks/Consumption	20.48	21.50	20.63	19.98	19.37	18.96	18.61	18.35	18.08	17.85	17.63

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Area Harvested	2400	2462	2505	2499	2490	2488	2489	2488	2488	2487	2487
Yield	58.02	58.12	58.26	58.41	58.56	58.71	58.86	59.02	59.17	59.32	59.48
Production	139239	143114	145940	145947	145831	146073	146488	146862	147230	147557	147910

European Union - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	5773	4608	3619	3636	3653	3662	3674	3685	3694	3702	3708
Production	21233	21814	22239	22240	22223	22259	22322	22378	22433	22483	22536
Net Exports	4873	5431	4702	4560	4441	4335	4258	4218	4175	4168	4202
Exports	7130	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	2257	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	17525	17372	17519	17664	17772	17913	18052	18152	18249	18310	18332
Carry-out Stocks	4608	3619	3636	3653	3662	3674	3685	3694	3702	3708	3710

European Union - 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	48.95	48.44	48.76	49.09	49.32	49.65	49.98	50.22	50.45	50.58	50.61
Stocks/Consumption	26.29	20.83	20.76	20.68	20.61	20.51	20.41	20.35	20.29	20.25	20.24

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	5730	5160	4703	4684	4745	4831	4886	4932	4966	5002	5033
Production	18430	18614	18711	19073	19273	19403	19598	19730	19827	19909	19982
Net Exports	-800	-1018	-1646	-1652	-1760	-1883	-1961	-2099	-2284	-2480	-2689
Exports	200	#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	19800	20089	20376	20663	20948	21231	21513	21795	22075	22358	22642
Carry-out Stocks	5160	4703	4684	4745	4831	4886	4932	4966	5002	5033	5062

India - 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	17.10	17.11	17.12	17.13	17.14	17.15	17.16	17.17	17.18	17.19	17.20
Stocks/Consumption	26.06	23.41	22.99	22.97	23.06	23.02	22.92	22.78	22.66	22.51	22.36

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
Area Harvested	333	333	341	345	346	347	348	349	352	354	357
Yield	67.60	67.52	67.72	67.92	68.12	68.32	68.52	68.72	68.92	69.12	69.32
Production	22511	22463	23105	23403	23575	23689	23836	24017	24237	24471	24723

Indonesia - Sugar Extraction Rate

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	1120	920	900	903	905	906	905	904	903	902	901
Production	1800	1797	1848	1872	1886	1895	1907	1921	1939	1958	1978
Net Imports	1800	2033	2062	2091	2130	2170	2208	2243	2274	2303	2330
Exports	0	#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	3800	3851	3907	3961	4014	4066	4116	4165	4214	4262	4309
Carry-out Stocks	920	900	903	905	906	905	904	903	902	901	900

Indonesia - 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	16.78	16.76	16.77	16.78	16.78	16.78	16.78	16.78	16.78	16.78	16.78
Stocks/Consumption	24.21	23.36	23.11	22.84	22.57	22.27	21.98	21.68	21.41	21.14	20.88

Japan - Area Harvested (1000 hectares)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	87	84	83	81	80	78	77	75	73	72	70
Sugarcane	19	19	19	18	18	18	18	18	18	18	18
Total Area	106	104	101	99	98	96	95	93	92	90	88

Japan - Yields (metric tons/hectare)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	54.30	54.47	54.75	55.08	55.44	55.80	56.17	56.55	56.92	57.29	57.67
Sugarcane	60.31	60.35	60.40	60.44	60.48	60.53	60.57	60.61	60.66	60.70	60.75

Japan - Production (1000 metric tons)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Sugar Beets	4697	4600	4534	4476	4420	4362	4302	4239	4170	4097	4019
Sugarcane	1146	1167	1125	1089	1118	1075	1097	1109	1112	1108	1098

Japan - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	433	465	460	461	464	467	469	471	471	471	471
Production	890	1013	995	980	973	957	948	937	925	910	894
Beet Sugar	750	871	859	848	837	826	815	803	790	776	761
Cane Sugar	140	142	136	132	136	130	133	134	135	134	133
Net Imports	1392	1224	1248	1263	1270	1288	1302	1317	1334	1351	1367
Exports	10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1402	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	2250	2242	2242	2240	2240	2243	2248	2254	2258	2261	2262
Carry-out Stocks	465	460	461	464	467	469	471	471	471	471	471

Japan - 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	17.70	17.63	17.63	17.61	17.63	17.67	17.74	17.82	17.90	17.96	18.01
Stocks/Consumption	20.67	20.50	20.58	20.73	20.87	20.93	20.94	20.90	20.87	20.84	20.82

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	102	74	57	50	48	46	45	44	43
Net Imports	1340	1286	1323	1349	1387	1414	1436	1453	1468	1481	1492
Exports	340	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1680	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1340	1334	1351	1367	1394	1417	1437	1454	1469	1482	1493
Carry-out Stocks	150	102	74	57	50	48	46	45	44	43	42

Korea - 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	27.39	27.10	27.29	27.47	27.88	28.22	28.51	28.74	28.95	29.11	29.24
Stocks/Consumption	11.19	7.63	5.46	4.15	3.62	3.36	3.22	3.09	3.01	2.91	2.80

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
Area Harvested	325	325	327	329	331	333	336	338	340	343	345
Yield	74.10	74.11	74.26	74.41	74.56	74.71	74.86	75.01	75.16	75.31	75.46
Production	24083	24098	24287	24486	24697	24909	25129	25355	25587	25820	26055

South Africa - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	920	980	967	953	942	935	929	915	921	928	931
Production	2665	2668	2689	2711	2734	2757	2782	2807	2832	2858	2884
Net Exports	1050	1140	1215	1276	1321	1367	1447	1430	1433	1448	1469
Exports	1300	#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	1555	1541	1487	1446	1419	1397	1349	1372	1393	1407	1413
Carry-out Stocks	980	967	953	942	935	929	915	921	928	931	933

South Africa - 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	35.22	35.12	34.15	33.51	33.24	33.15	32.44	33.43	34.41	35.19	35.80
Stocks/Consumption	63.02	62.74	64.08	65.12	65.94	66.52	67.87	67.15	66.58	66.21	66.05

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
Area Harvested	1268	1267	1308	1335	1355	1369	1381	1395	1411	1427	1445
Yield	15.20	15.24	15.30	15.37	15.45	15.53	15.61	15.69	15.78	15.86	15.94
Production	19274	19311	20021	20531	20943	21255	21565	21894	22259	22636	23039

Former Soviet Union - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	580	470	319	262	246	260	273	281	281	281	276
Production	2250	2232	2314	2373	2421	2457	2493	2531	2573	2617	2663
Net Imports	4090	3799	3880	3915	3964	3969	3964	3947	3938	3919	3900
Exports	110	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	4200	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	6450	6182	6251	6304	6372	6413	6449	6477	6511	6541	6570
Carry-out Stocks	470	319	262	246	260	273	281	281	281	276	270

Former Soviet Union - 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	21.86	20.93	21.14	21.29	21.47	21.57	21.64	21.68	21.74	21.78	21.83
Stocks/Consumption	7.29	5.15	4.19	3.90	4.08	4.25	4.35	4.34	4.31	4.22	4.11

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
Area Harvested	683	685	794	876	936	980	1014	1039	1057	1071	1082
Yield	57.60	57.40	57.43	57.55	57.68	57.82	57.96	58.11	58.25	58.39	58.54
Production	39341	39322	45618	50384	53960	56676	58757	60352	61570	62544	63336

Thailand - Sugar Extraction Rates (percent)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
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)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Carry-in Stocks	732	262	560	720	810	864	898	923	943	961	977
Production	4330	4325	5018	5542	5936	6234	6463	6639	6773	6880	6967
Net Exports	2700	1981	2780	3344	3741	4026	4231	4375	4475	4548	4598
Exports	2700	#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	2100	2046	2077	2109	2141	2174	2207	2243	2280	2316	2354
Carry-out Stocks	262	560	720	810	864	898	923	943	961	977	993

Thailand - 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	31.54	30.47	30.68	30.90	31.14	31.39	31.66	31.97	32.29	32.61	32.95
Stocks/Consumption	12.48	27.35	34.69	38.41	40.35	41.33	41.82	42.05	42.16	42.20	42.18

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Net Exports	-15118	-11371	-10774	-10887	-10855	-11100	-11308	-11303	-11272	-11225	-11116

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

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
0	11.35	18.00	17.05	16.65	15.90	15.95	16.20	16.70	17.05	17.55	18.05
$/ton	250.22	396.83	375.88	367.07	350.53	351.63	357.15	368.17	375.88	386.91	397.93