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2003 Outlook of the U.S. and World Sugar Markets, 2002-2012

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Abstract

This report evaluates the U.S. and world sugar markets for 2002-2012 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 after the current over-supply is reduced. World demand for sugar is expected to grow faster than world supply, resulting in Carribean sugar prices gradually increasing from 7.88 cents/lb in 2002 to 12.15 cents/lb in 2012. The U.S. wholesale price of sugar is projected to increase from 21.76 cents/lb in 2002 to 25.28 cents/lb in 2012, if the United States maintains its sugar programs. World trade volumes of sugar are expected to expand slightly.

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

Highlights

Total world sugar trade is projected to decrease by 3.6% between 2002 and 2012 from 28.0 million metric tons to 27.0 million metric tons. Brazil's exports increased from 7.7 million metric tons in 2001 to 13.1 million metric tons in 2002, but are projected to return to about 8.0 million metric tons in 2003. World sugar prices also are projected to increase from 7.88 cents/lb in 2002 to 12.15 cents/lb in 2012. The U.S. domestic wholesale price is expected to reach the lowest level in 2002 and should recover slowly for the 2002-2012 period. Sugar price is projected to be 21.78 cents/lb in 2002 and 25.28 cents/lb in 2012 if the U.S. sugar programs are maintained.

U.S. sugar imports are predicted to increase 56.2% for the 2002-2012 period due to increased sugar imports from Mexico. U.S. sugar consumption is projected to increase 15.6%. Ending stocks also are predicted to increase 15.9%.

Canada's production is predicted to increase 9.3% from 2002 to 2012. Canada's imports are expected to increase 11.3%. Consumption is predicted to increase 8.9%, and ending stocks are predicted to decrease 53.0%.

Mexico's production is expected to increase 23.7%, and exports are expected to increase 31.3% for the 2002-2012 period 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 38.8% under the assumption that their sugar program does not change. Their production and consumption are predicted to increase slightly.

Production in India is predicted to increase 6.5%, while consumption is predicted to increase 9.4% for the 2002-2012 period.

Exporting countries, such as Australia, South Africa, and Cuba, 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 2002-2012 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. 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 are very unstable in the world market.

This report evaluates the U.S. and world sugar industry for 2002-2012 using the Global Sugar Policy Simulation Model developed by Benirschka et al. (1996). 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 1998-2002 period, annual global sugar production was approximately 133 million metric tons with 30% of production exported from its country of origin. The largest sugar producing region is the EU, followed by India and Brazil (Table 1).

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Table 1. World Sugar Supply and Utilization, 1998 to 2002 Average

Country	Crop[a]	Consumption	Production	Net Exports	Ending Stocks	Per Capita Consumption
		----------1,000 metric tons, raw value----------				kg
Algeria	B	946	9	-930	94	29
Australia	C	1,034	4,697	3,597	587	54
Brazil	C	9,313	18,388	8,938	685	52
Canada	B	1,259	98	-1,151	82	40
China	B/C	8,801	7,810	-749	1,547	7
Cuba	C	733	3,620	2,883	214	65
Egypt	B/C	1,995	1,306	-598	247	30
European Union	B	17,815	20,526	4,575	3,444	50
Former Soviet Union	B	10,734	3,881	-7,391	3,712	36
India	C	17,659	19,219	-206	10,588	16
Indonesia	C	3,343	1,651	-1,717	1,070	16
Japan	B/C	2,290	807	-1,522	229	18
Mexico	C	4,687	5,044	454	722	45
South Africa	C	1,496	2,785	1,263	524	34
South Korea	-	1,160	0	-1,146	92	24
Thailand	C	1,796	5,476	3,688	449	28
United States	B/C	9,024	7,316	-1,385	1,772	35
Rest of World	B/C	38,659	30,956	-8,659	7,748	18
World Total	B/C	132,743	133,588		33,804	20

[a] B = Sugarbeet; C = Sugarcane.
Source: USDA, *PS&D View*, 2003.

Per capita sugar consumption was highest in Cuba (65 kg), followed by Australia and Brazil. Per capita sugar consumption in the United States was 35 kg, which was above world average per capita consumption (20 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 1998-2002 period was 133 million metric tons.

The major sugar exporting countries were the EU, Brazil, Australia, Thailand, Cuba, and Ukraine. These countries accounted for 73% of global exports from 1997 to 2001. Relatively few countries dominate world sugar exports, but imports are less concentrated. Major importing countries were the Former Soviet Union (FSU), China, the United States, Japan, Korea, Indonesia, and Canada. Imports by these countries accounted for about 46% of all sugar imports from 1997 to 2001. 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

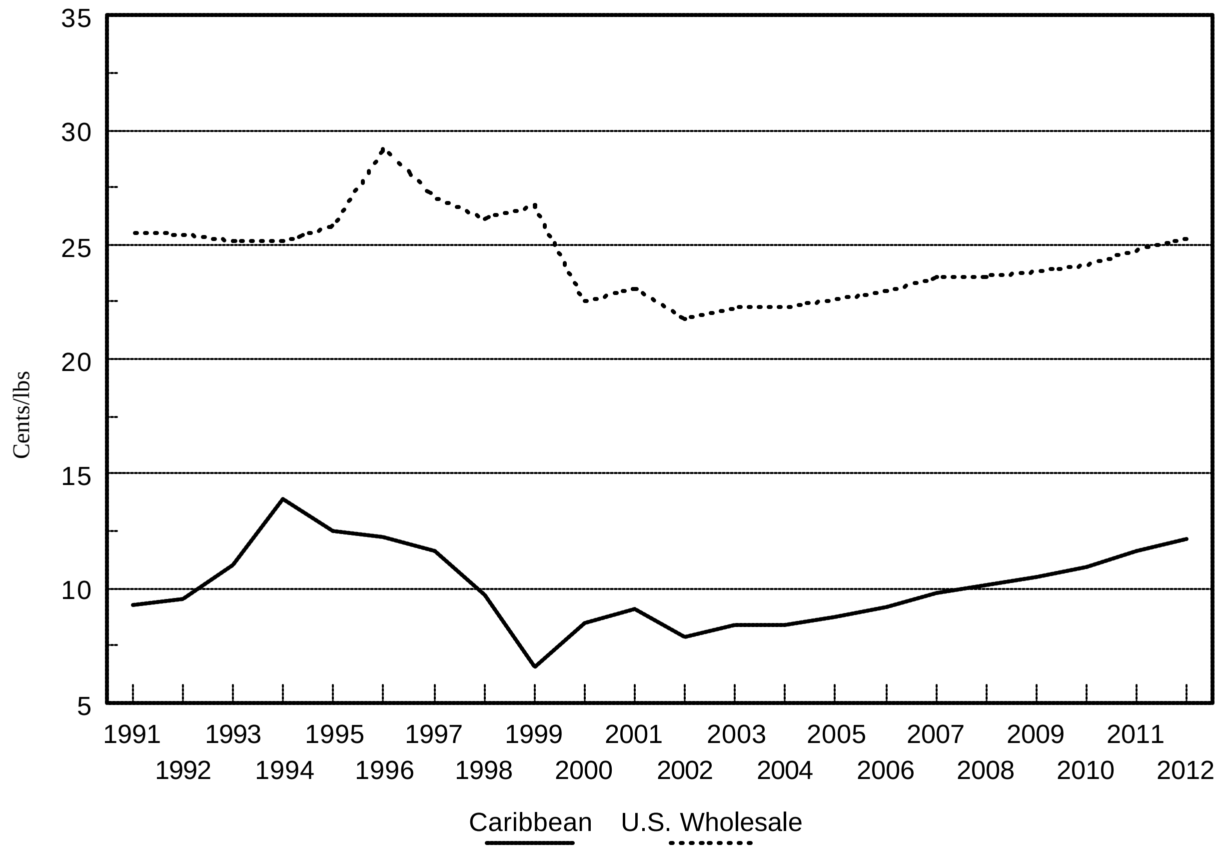

Figure 1. United States and World Sugar Price

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.

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.

The United States produces both beet and cane sugar. Cane sugar is produced mainly in Florida, Louisiana, Texas, and Hawaii. Beet sugar is produced largely in the Great Lakes region, Upper Midwest, Great Plains, and far western states. U.S. total sugar production increased about 17% from 7.0 million metric tons in 1991 to 8.2 million metric tons in 2002. Beet sugar production increased 14% for the 1991 to 2002 period, while cane sugar production increased 19% (Figure 2).

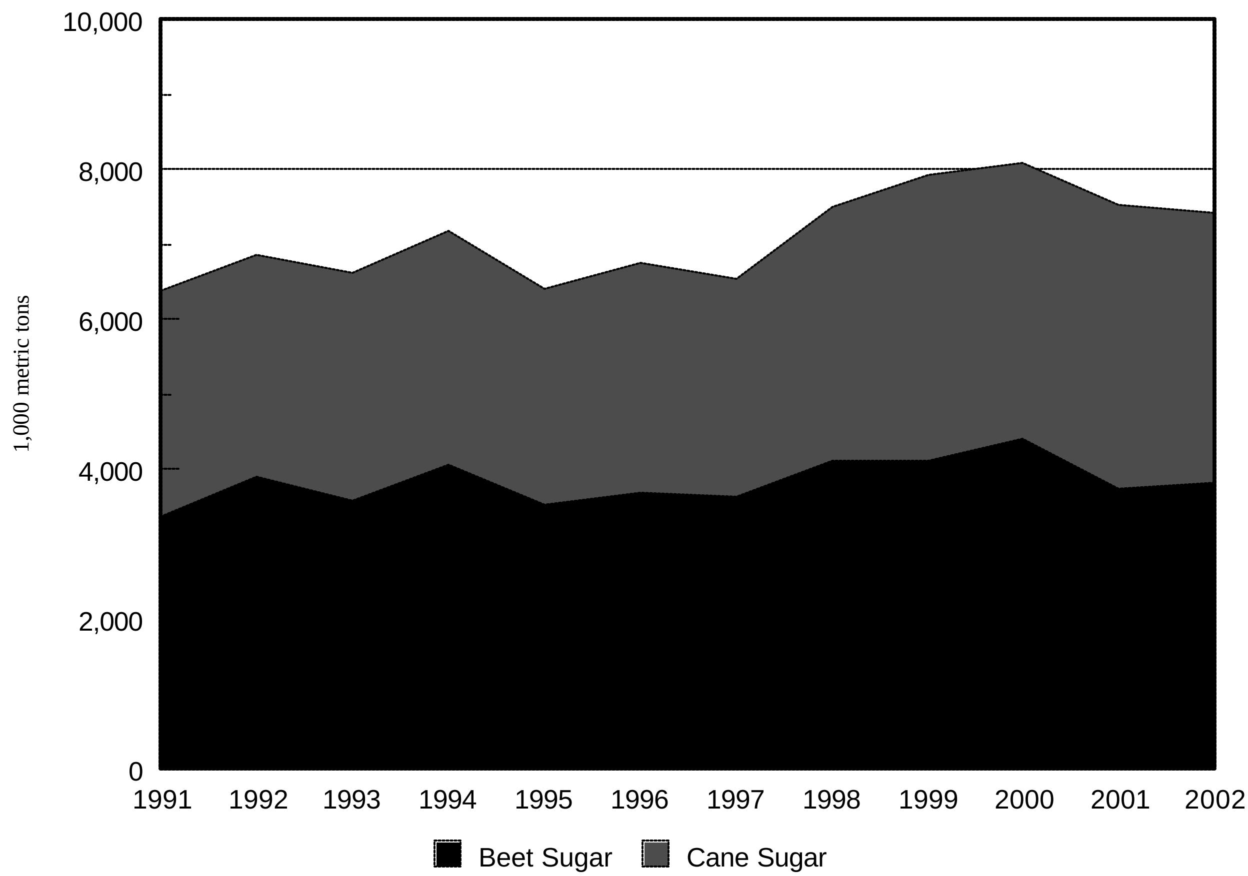

Figure 2. United States Beet and Cane Sugar Production

U.S. consumption of sugar also increased 11% from 8.6 million metric tons in 1991 to 9.5 million metric tons in 2002. 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 about 1.4 million metric tons annually for the 1989 to 2001 period. Under the North American Free Trade Agreement (NAFTA), Mexico can export 260,000 metric tons of sugar to the United States as of October 2000, and its exports to the United States will be unlimited beginning in 2009 when implementation of NAFTA is completed.

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 and import restrictions. 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 forfeits collateral (sugar) to the Commodity Credit Corporation (CCC) 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. 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 quota was the same level throughout the 1995 to 2000 period.

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 15.36 cents for raw cane sugar and 16.21 cents 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 5.1 million metric tons of sugar in 1998 and consumed 4.24 million metric tons in the same year. Its exports were 0.87 million metric tons in 1998. If Mexico starts to use High Fructose Corn Sweetener (HFCS) for beverages, more of its sugar could be exported to the United States.

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 2002/03.
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. 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.

South Africa has both internal price supports and export subsidies. South Africa reduced its subsidized exports by 200,000 tons to 702,208 tons by the year 2000 under the URA. Mexico also has subsidized exports and is subsidizing raw sugar storage.

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 included 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 decrease 3.6% from 28.5 to 27.1 million metric tons. Except for Brazil, trade of sugar in most countries will increase slowly for 2002-2012. Brazil's exports increased from 7.7 million tons in 2001 to 13.1 million metric tons in 2002, but are projected to return to about 8.0 million metric tons in 2003.

World sugar prices, referred to as the Caribbean price of sugar, are projected to increase about 54.2% from 7.88 cents/lb in 2002 to 12.15 cents/lb in 2012 (Figure 1), because of expected strong demand for sugar during the period. However, the price of sugar in 2012 is 43% higher than the average price for the 1998-2001 period. The domestic wholesale price of U.S. sugar is projected to increase 16.2% from 21.76 cents/lb in 2002 to 25.28 cents/lb in 2012. Slower increase in U.S. sugar price for the period, compared to world sugar price, is due mainly to substantial increases in U.S. sugar imports from Mexico under NAFTA. The expected increases in U.S. sugar imports tend to reduce the gap between world and U.S. wholesale 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 7.8 million metric tons in 2012 (Figure 2). Imports are predicted to increase 56.2% from 1.4 million metric tons for the 2000-2002 average to 2.2 million metric tons in 2012, under an assumption that Mexico increases its exports to the United States at NAFTA levels (Figure 3).

Table 2. U.S. Sugar Production, Consumption, Exports, and Carry-over Stocks, Various Years

	Average (2000-2002)	2002	2012	% Change (2000-02) to 2012
	----thousand metric tons------			
Production	7,675	7,410	7,846	2.2
Beet Sugar	3,986	3,816	3,973	-0.3
Cane Sugar	3,690	3,594	3,873	5.0
Net Imports	1,389	1,186	2,169	56.2
Per Capita Consumption	32	31	33	0.8
Consumption	9,000	8,659	10,011	11.2
Carry-over Stocks	1,916	1,926	2,232	16.5

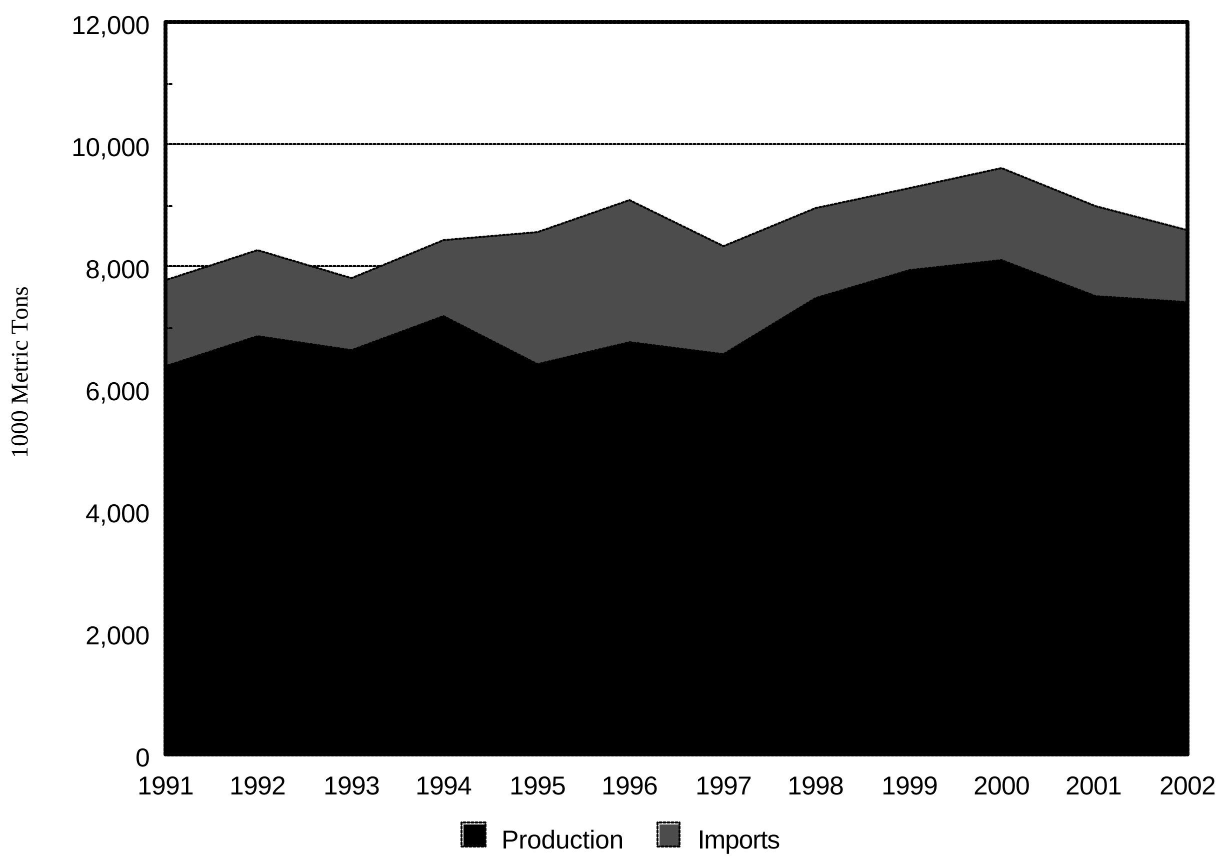

Figure 3. United States Sugar Production and Imports

The domestic wholesale price for U.S. sugar is projected to increase from 21.6 cents/lb in 2002 to 25.3 cents/lb in 2012 under the current TRQ system. The United States will increase imports to over 20% of its domestic sugar consumption. U.S. sugar consumption is predicted to increase 11.2% from 9.0 million metric tons for the 2000-2002 average to 10.0 million metric tons in 2012. Ending stocks are also predicted to increase 16.5% (Figure 4).

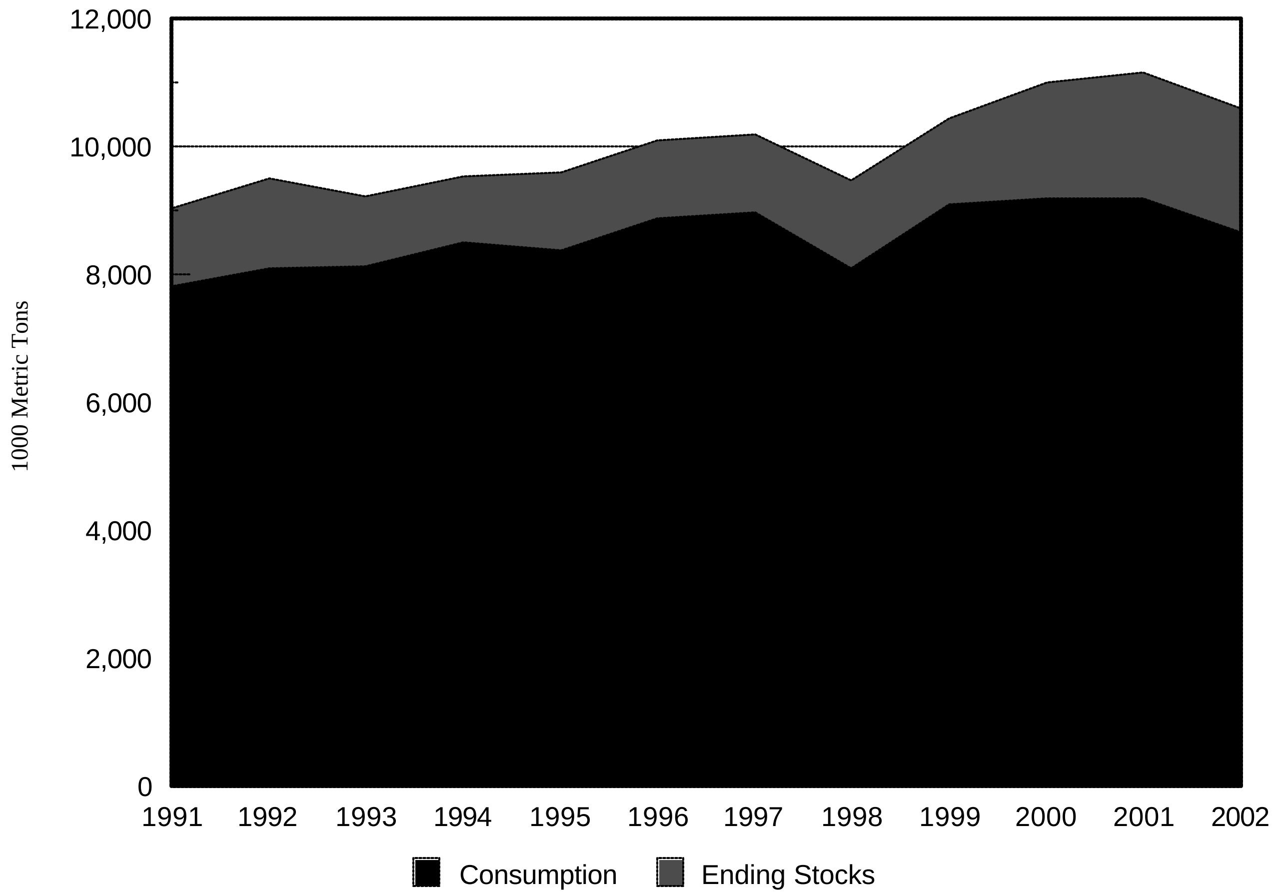

Figure 4. United States Consumption and Ending Stocks

Exporters

The EU's exports are predicted to increase 6.7% from 4.9 million metric tons for the 2000-2002 average to 5.2 million metric tons in 2012 (Figure 5). Sugar production in the EU is predicted to increase slightly, and consumption is predicted to decrease from 17.4 million metric tons for the 2000-2002 average to 16.1 million tons in 2012 (Table 3).

Brazil's production is predicted to increase 6.7% from 18.4 million metric tons for the 2000-2002 average to 19.6 million metric tons in 2012 (Table 3). Brazil's exports are predicted to decrease slightly from the 2000-2002 average because exports were substantially higher than usual in 2002. Consumption is predicted to increase 14.3% from 9.4 million metric tons for the 2000-2002 average to 10.7 million metric tons in 2012.

Thailand's exports are predicted to increase 11.3% from 3.8 million metric tons for the 2000-2002 average to 4.2 million metric tons in 2012 (Table 3). Consumption increases from 1.8 million metric tons for the 2000-2002 average to 2.1 million metric tons in 2012. Sugar production in the country also is predicted to increase 14.4% from 5.5 million metric tons to 6.3 million metric tons in 2012.

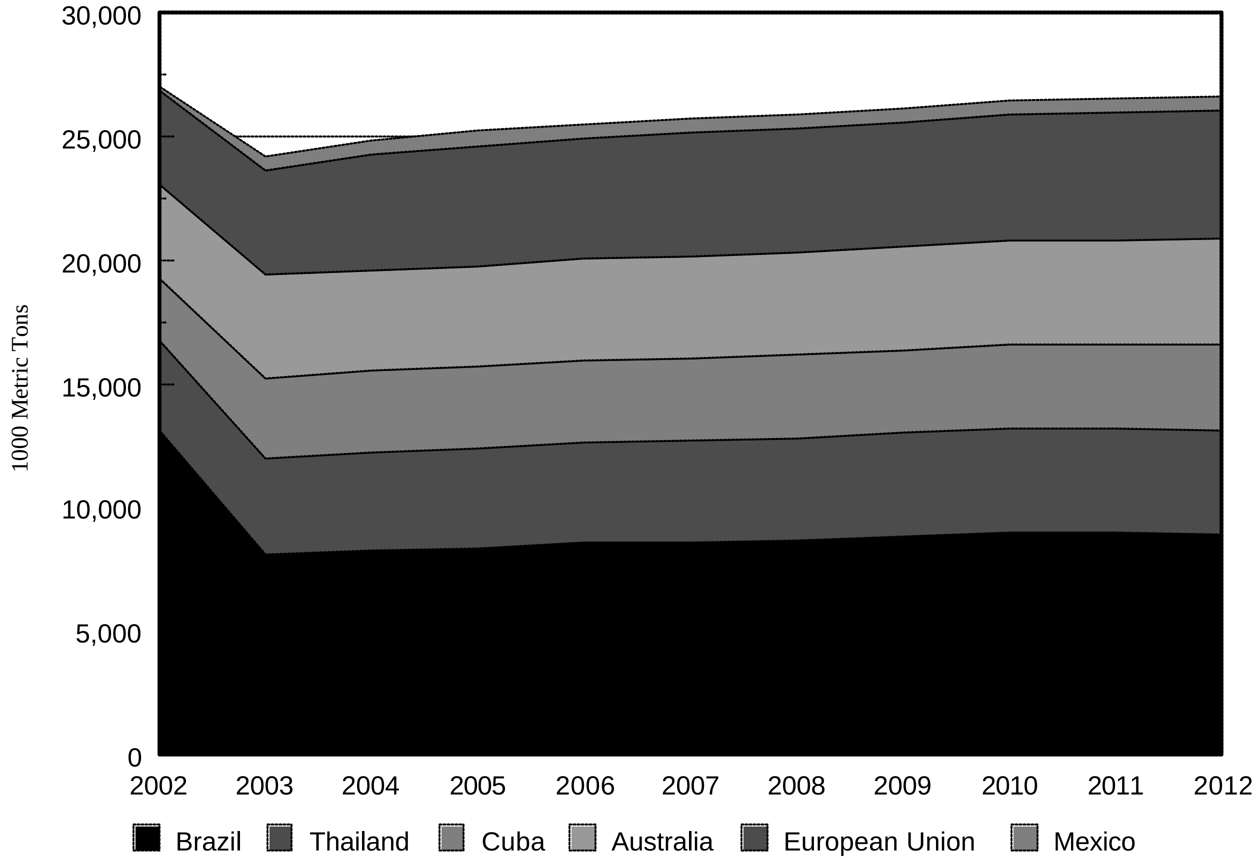

Figure 5. World Sugar Exports by Country

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

	Average (2000-2002)	2002	2012	% Change (2000-02) to 2012
	---------thousand metric tons------------			
European Union				
Production	20,851	17,826	21,357	2.4
Net Exports	4,899	3,769	5,230	6.7
Consumption	17,442	14,270	16,127	-7.5
	3,408	3,065	3,592	5.4
Carry-over Stocks				
Brazil				
Production	18,417	22,750	19,647	6.7
Net Exports	9,000	13,100	8,926	-0.8
Consumption	9,383	9,650	10,725	14.3
Carry-over Stocks	577	210	437	-24.2
Thailand				
Production	5,506	5,472	6,297	14.4
Net Exports	3,800	3,700	4,229	11.3
Consumption	1,787	1,761	2,054	15.0
Carry-over Stocks	379	375	519	36.8
Australia				
Production	4,597	5,027	5,462	18.8
Net Exports	3,439	3,859	4,284	24.6
Consumption	1,047	1,150	1,177	12.5
Carry-over Stocks	721	800	600	-16.8
Cuba				
Production	3,567	3,200	4,246	19.0
Net Exports	2,977	2,450	3,416	14.8
Consumption	737	750	846	14.9
Carry-over Stocks	235	208	368	56.6
Mexico				
Production	5,063	4,999	6,184	22.1
Net Exports	409	131	542	32.7
Consumption	4,782	5,322	5,625	17.6
Carry-over Stocks	740	846	833	12.5
South Africa				
Production	2,778	2,785	3,120	12.3
Net Exports	1,253	1,085	1,590	26.9
Consumption	1,537	1,590	1,526	-0.7
Carry-over Stocks	512	560	537	4.9

Australia's exports are predicted to increase 24.6% from 3.4 million metric tons for the 2000-2002 average to 4.3 million metric tons in 2012 (Table 3), due mainly to increased sugar production, which is predicted to increase 18.8% from 4.6 million metric tons to 5.5 million metric tons in 2012. Sugar consumption is expected to increase 12.5% from 1.0 million metric tons to 1.2 million metric tons in 2012.

Cuba's exports are predicted to increase 14.8% from 3.0 million metric tons for the 2000-2002 average to 3.4 million metric tons in 2012 (Table 3). It is predicted that Cuba will increase its sugar production from 3.6 million metric tons for the 2000-2002 average to 4.2 million metric tons in 2012. Cuba's consumption is predicted to increase 14.9% from 0.74 million metric tons for the 2000-2002 average to 0.85 million metric tons in 2012. 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 22.1% from 5.1 million metric tons for the 2000-2002 average to 6.2 million metric tons in 2012. Mexico's exports are predicted to increase 32.7% from 0.4 million metric tons for the 2000-2002 average to 0.5 million metric tons in 2012, due mainly to its exports to the United States under NAFTA. Sugar consumption is predicted to increase 17.6% from 4.8 million metric tons for the 2000-2002 average to 5.6 million metric tons in 2012. Ending stocks are predicted to increase 12.5%. If Mexico replaces the sugar that is used in soft drinks with HFCS, the excess sugar will likely be exported into the United States under NAFTA.

South Africa's production is predicted to increase 12.3% from 2.8 million metric tons for the 2000-2002 average to 3.1 million metric tons in 2012. South Africa's exports are predicted to increase 26.9% from 1.3 million metric tons for the 2000-2002 average to 1.6 million metric tons in 2012, due mainly to increased production. Sugar consumption is predicted to decrease 0.7%. Ending stocks are predicted to increase 4.9%.

Importers

Figures 6 through 8 show sugar imports by the major sugar importing countries. Sugar imports of selected Asian and African countries are expected to increase 11.3% and 40%, respectively, for the 2002 to 2012 period. The FSU is the largest importer, followed by Japan and Indonesia for the period.

Canada's production is predicted to increase 15.0% above the 2000-2002 average by the year 2012, and consumption is predicted to increase from 1.3 million metric tons for the 2000-2002 average to 1.4 million metric tons in 2012 (Table 4). As a result, Canada's imports are predicted to increase 12.8% from 1.2 million metric tons to 1.3 million metric tons in 2012.

The FSU's production is predicted to increase 14.6% from 3.8 million metric tons to 4.4 million metric tons for the 2002-2012 period, and consumption is predicted to increase 6.6% from 11.1 million metric tons to 11.9 million metric tons for the same period. Imports are predicted to increase slightly and remain at the 7.5 million metric tons level (Table 4).

China is expected to increase its imports about 56.1% from 1.0 million metric tons for the 2000-2002 average to 1.5 million metric tons in 2012 (Table 4). China's production is predicted to increase 5.3% from 7.4 million metric tons for the 2000-2002 average to 7.8 million metric tons in 2012, and consumption is predicted to increase 7.1% from 8.7 million metric tons to 9.4 million metric tons for the period.

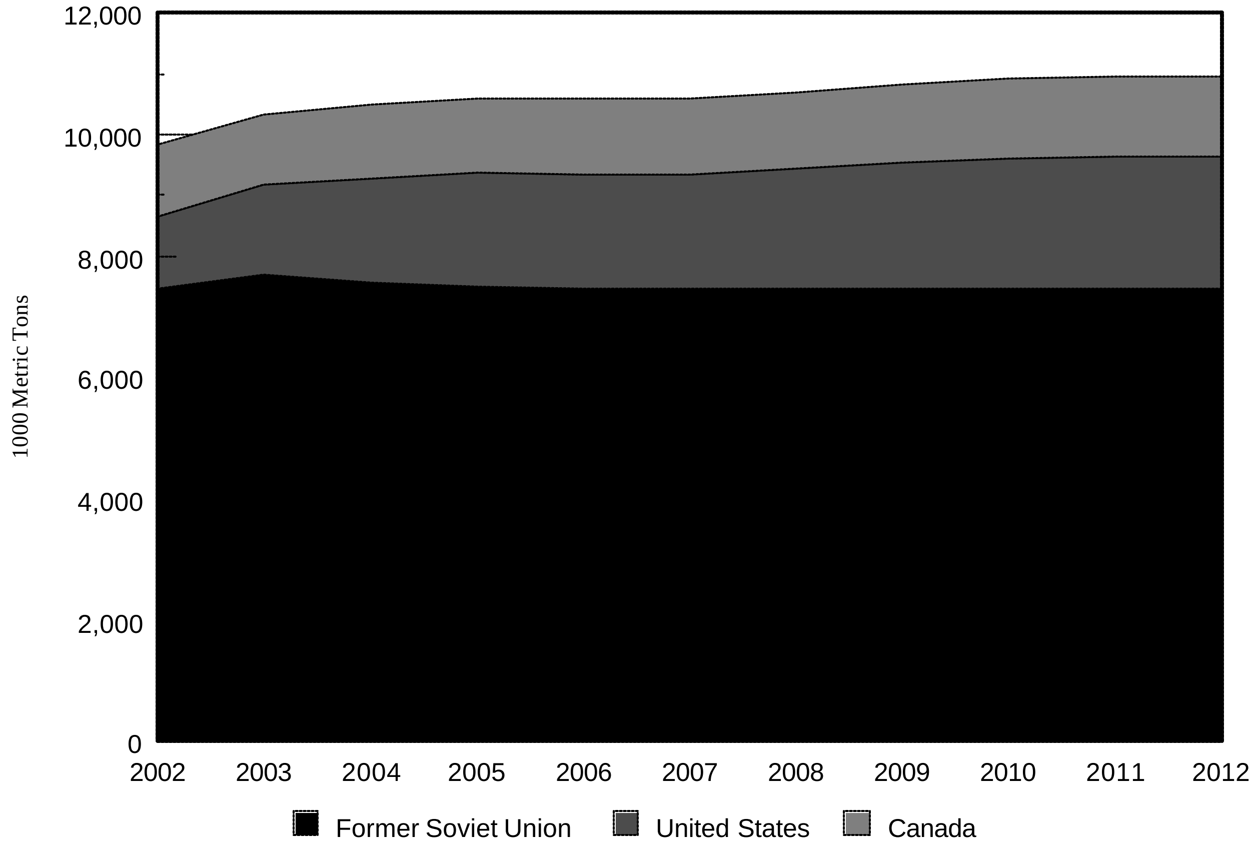

Figure 6. World Sugar Imports by Country, Major Importers

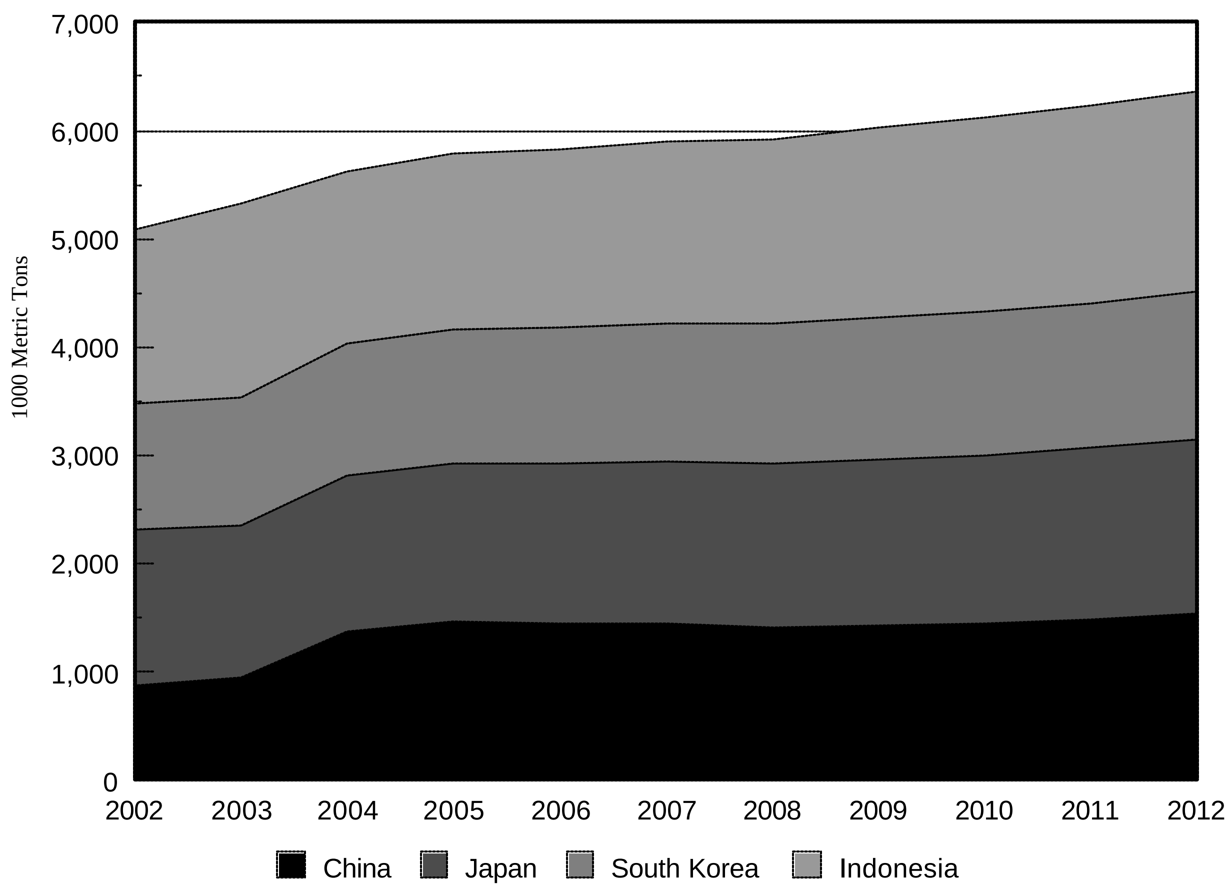

Figure 7. World Sugar Imports by Country, Asian Countries

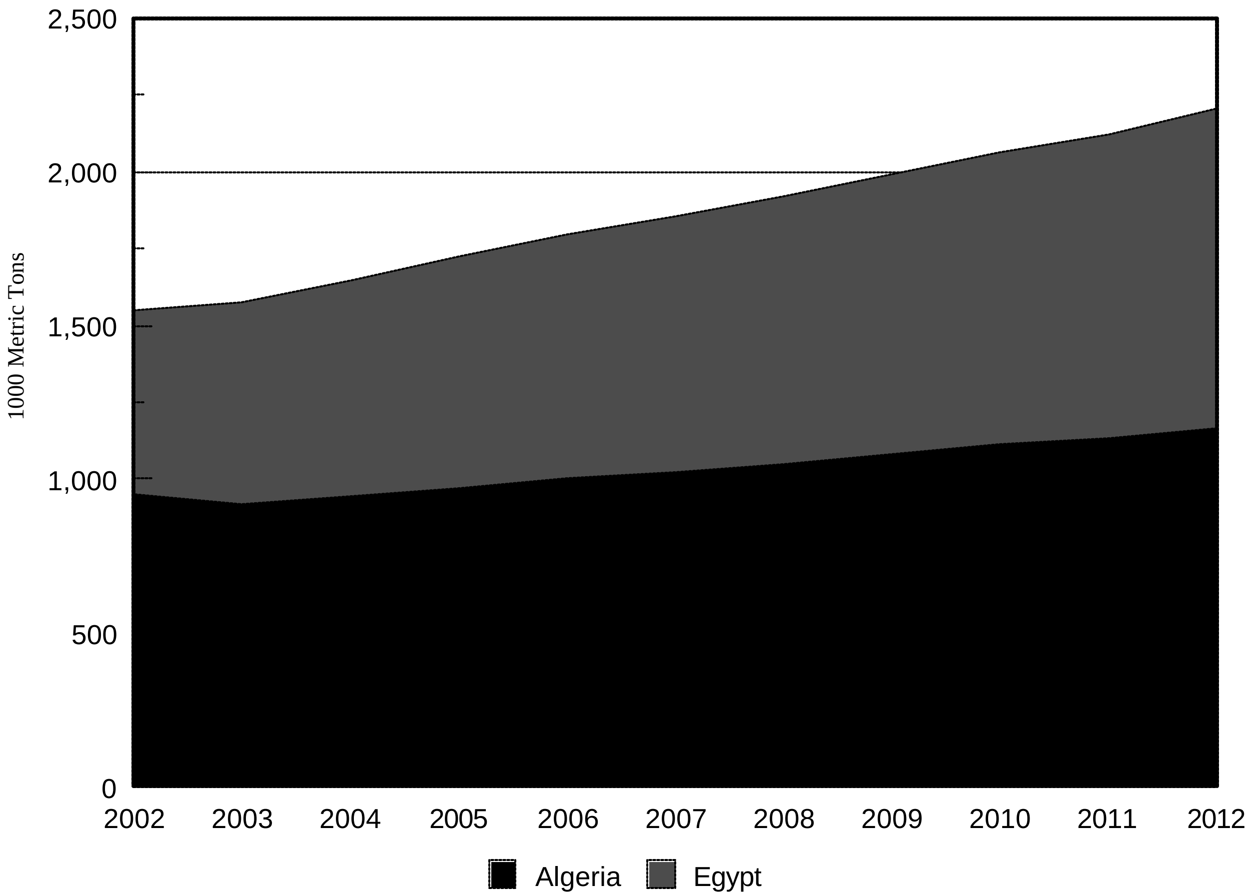

Figure 8. World Sugar Imports by Country, African Countries

India's production is predicted to increase 6.7% from 19.8 million metric tons for the 2000-2002 average to 21.1 million metric tons in 2012. Imports are projected to decrease from 0.6 million metric tons for the 2000-2002 average to 0.3 million metric tons in 2012.

Japan's imports are predicted to increase 6.8% from 1.5 million metric tons for the 2000-2002 average to 1.6 million metric tons in 2012, due mainly to increased domestic consumption. Consumption is predicted to increase 8.6% from 2.3 million metric tons to 2.5 million metric tons for the period (Table 4).

In South Korea, consumption is predicted to increase 16.6% for the time period. As a result, South Korea's imports are predicted to increase 16.5% for the period. There is no domestic production of either sugar cane or sugar beet in South Korea.

In Algeria, consumption is predicted to increase 23.9% from 1.0 million metric tons for the 2000-2002 average to 1.2 million metric tons in 2012. This increase in consumption results in imports increasing from 0.9 million metric tons for the 2000-2002 average to 1.2 million metric tons in 2012.

Egypt's imports are predicted to increase 31.3% from 0.6 million metric tons for the 2000-2002 average to 0.8 million metric tons in 2012, due mainly to increased consumption. Consumption is predicted to increase 11.8% from 2.0 million metric tons to 2.2 million metric tons in 2012.

Indonesia's imports are predicted to increase 7.7% from 1.7 million metric tons for the 2000-2002 average to 1.9 million metric tons in 2012. Consumption is predicted to increase 15.5% from 3.5 million metric tons for the 2000-2002 average to 4.1 million metric tons in 2012.

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

	Average (2000-2002)	2002	2012	% Change (2000-02) to 2012
	--------------thousand metric tons------------------			
Canada				
Production	100	80	115	15.0
Net Imports	1,170	1,185	1,319	12.8
	1,265	1,315	1,432	13.2
Consumption				
Carry-over Stocks	95	140	66	-30.8
Former Soviet Union				
Production	3,846	3,852	4,407	14.6
Net Imports	7,439	7,455	7,464	0.3
Consumption	11,126	11,301	11,865	6.6
Carry-over Stocks	3,805	3,750	4,314	13.4
China				
Production	7,423	8,410	7,818	5.3
Net Imports	977	860	1,524	56.1
Consumption	8,734	8,779	9,352	7.1
Carry-over Stocks	1,214	1,408	1,419	16.9
India				
Production	19,813	18,850	21,137	6.7
Net Imports	629	950	334	-46.9
Consumption	17,887	19,000	20,792	16.2
Carry-over Stocks	11,659	11,900	12,777	9.6
Japan				
Production	792	800	857	8.3
Net Imports	1,518	1,443	1,621	6.8
Consumption	2,283	2,243	2,479	8.6
Carry-over Stocks	251	283	231	-7.9
South Korea				
Carry-in Stocks	89	91	107	20.5
Net Imports	1,170	1,175	1,363	16.5
Consumption	1,173	1,185	1,369	16.6
Carry-over Stocks	91	100	102	11.7
Algeria				
Production	10	10	11	14.5
Net Imports	932	950	1,167	25.2
Consumption	950	951	1,177	23.9
Carry-over Stocks	94	87	96	2.8
Egypt				
Production	1,348	1,470	1,412	4.7
Net Imports	636	600	835	31.3
Consumption	2,009	2,040	2,247	11.8
Carry-over Stocks	205	277	200	-2.7
Indonesia				
Production	1,705	1,800	2,210	29.6
Net Imports	1,723	1,600	1,857	7.7
Consumption	3,524	3,500	4,069	15.5
Carry-over Stocks	1,123	1,115	1,332	18.6

CONCLUDING REMARKS

This report provides an overview of the U.S. and world sugar markets for 2002-2012 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 decrease by 3.6% from 28.5 million metric tons in 2002 to 27.1 million metric tons in 2012. The price of Caribbean sugar is expected to increase about 54.2% from 7.88 cents/lb in 2002 to 12.15 cents/lb in 2012 because of faster growth in world consumption of sugar compared to world production. The wholesale price of U.S. sugar is projected to increase 16.2% from 21.76 cents/lb in 2002 to 25.28 cents/lb in 2012.

Exports are predicted to increase for the EU, Australia, Mexico, South Africa, Thailand, and Cuba, while exports are predicted to decrease for Brazil.

Imports from all importing countries except the FSU and India are predicted to increase over the forecasting period. China's imports are predicted to increase 56.1%, while Japan's imports are predicted to increase only 6.8%. South Korea's imports are predicted to increase 16.5%, while Algeria's imports are predicted to increase 25.2%.

U.S. sugar consumption and ending stocks are predicted to increase for the forecasting period. Imports are predicted to increase 56.2% for the period because of increased sugar from Mexico.

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Appendix

World Sugar Policy Simulation Model

2003 Baseline Solution

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	31.78	32.43	32.47	32.92	33.40	34.19	34.26	34.56	34.94	35.82	36.53
Sugarcane	21.07	21.63	21.67	22.06	22.49	23.18	23.23	23.50	23.83	24.60	25.22

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Caribbean Price	7.88	8.35	8.38	8.70	9.15	9.80	10.17	10.52	10.91	11.65	12.15
TRQ Status	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota
Implicit Tariff	11.92	11.91	11.91	11.91	11.80	11.71	11.38	11.25	11.13	11.01	11.01
Import Price	19.80	20.26	20.29	20.61	20.95	21.51	21.55	21.77	22.04	22.66	23.16
Wholesale Price	21.76	22.24	22.27	22.60	22.96	23.55	23.60	23.82	24.10	24.76	25.28
Retail Price	33.68	34.33	34.37	34.82	35.31	36.11	36.17	36.48	36.86	37.74	38.45

United States - Area Harvested (1000 acres)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	1361	1354	1349	1346	1346	1351	1345	1334	1327	1331	1340
Sugarcane	974	966	961	958	957	958	958	959	960	962	963
Total Area	2335	2320	2309	2304	2303	2308	2303	2293	2288	2293	2303

United States - Yields (short tons/acre)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	20.20	21.20	21.64	21.92	22.14	22.36	22.47	22.55	22.73	22.93	23.13
Sugarcane	35.20	35.36	35.52	35.68	35.83	35.99	36.15	36.30	36.36	36.46	36.59

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	27492	28715	29182	29495	29801	30199	30228	30089	30164	30507	30993
Sugarcane	34299	34155	34132	34193	34309	34465	34636	34820	34918	35070	35252

United States - Sugar Extraction Rates (percent)

Variable	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	15.30	14.13	14.13	14.13	14.13	14.13	14.13	14.13	14.13	14.13	14.13
Sugarcane	11.55	12.11	12.11	12.11	12.11	12.11	12.11	12.11	12.11	12.11	12.11

United States - Sugar Production (1000 short tons)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Beet Sugar	4206	4057	4123	4168	4211	4267	4271	4252	4262	4311	4379
Cane Sugar	3962	4136	4133	4141	4155	4174	4194	4217	4229	4247	4269
All Sugar	8168	8194	8257	8308	8366	8441	8466	8468	8491	8558	8648

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

Variable	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012

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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
TRQ Status	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota	Quota
Implicit Tariff	11.92	11.91	11.91	11.91	11.80	11.71	11.38	11.25	11.13	11.01	11.01
Total Imports	1420	1763	2019	2172	2184	2182	2241	2297	2260	2161	2161
Quota-sugar Imports	1220	1563	1819	1972	1984	1982	2041	2097	2060	1961	1961
Other Sugar Imports	200	200	200	200	200	200	200	200	200	200	200
Total Exports	113	120	120	120	120	120	120	120	120	120	120
Net Imports	1307	1643	1899	2052	2064	2062	2121	2177	2140	2041	2041

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	2194	2123	2208	2263	2343	2384	2403	2419	2432	2443	2452
Production	8168	8194	8257	8308	8366	8441	8466	8468	8491	8558	8648
Net Imports	1307	1643	1899	2052	2064	2062	2181	2288	2382	2391	2391
Consumption	9545	9710	10102	10262	10414	10484	10632	10737	10852	10947	11035
Carry-out Stocks	2123	2208	2263	2343	2384	2403	2419	2432	2443	2452	2461

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	67.76	68.29	70.40	70.87	71.26	71.10	71.47	71.55	71.69	71.70	71.66
Stocks/Consumption	22.25	22.74	22.40	22.84	22.89	22.92	22.75	22.65	22.51	22.40	22.30

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	17	20	21	21	21	21	21	21	21	21	21
Yield	42.00	45.47	45.22	45.80	46.19	46.63	47.05	47.48	47.90	48.33	48.76
Production	714	929	956	970	977	985	993	1000	1006	1012	1020

Canada - Sugar Beet Exogenous Variables

Variable	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	190	140	81	60	54	53	55	57	59	61	63
Production	80	105	108	110	110	111	112	113	114	114	115

Net Imports	1185	1139	1188	1217	1237	1253	1268	1282	1295	1306	1319
Imports	1190	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Exports	5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1315	1303	1317	1333	1348	1363	1378	1393	1406	1419	1432
Carry-out Stocks	140	81	60	54	53	55	57	59	61	63	66

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	41.20	40.41	40.47	40.58	40.68	40.77	40.86	40.96	41.03	41.08	41.17
Stocks/Consumption	10.65	6.24	4.59	4.06	3.96	4.01	4.11	4.24	4.36	4.48	4.59

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	616	620	625	632	639	646	653	661	669	676	684
Yield	72.50	73.33	73.74	74.05	74.33	74.60	74.88	75.15	75.42	75.69	75.96
Production	44660	45456	46116	46781	47473	48188	48922	49670	50427	51191	51963

Mexico - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugarcane	11.20	11.50	11.50	11.60	11.60	11.70	11.70	11.80	11.80	11.90	11.90

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	1300	846	836	786	765	759	763	773	786	801	816
Production	4999	5227	5303	5427	5507	5638	5724	5861	5950	6092	6184
Net Imports	-131	-566	-599	-603	-567	-578	-544	-565	-537	-566	-542
Exports	180	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	49	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	5322	4672	4754	4845	4946	5057	5171	5283	5398	5511	5625
Carry-out Stocks	846	836	786	765	759	763	773	786	801	816	833

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	50.01	43.27	43.42	43.65	43.96	44.36	44.78	45.18	45.61	46.01	46.42
Stocks/Consumption	15.90	17.89	16.53	15.78	15.35	15.09	14.94	14.87	14.83	14.81	14.80

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	7	7	7	8	8	8	8	8	8	8	8
Yield	19	20	20	20	20	20	20	20	20	20	20
Production	136	143	147	149	151	152	152	153	153	154	154

Algeria - Sugar Extraction Rates
(percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	87	87	88	89	90	91	92	93	94	94	95
Production	10	11	11	11	11	11	11	11	11	11	11
Net Imports	950	919	945	973	1000	1025	1049	1079	1110	1135	1167
Exports	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	950	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	951	929	955	983	1011	1035	1059	1090	1121	1146	1177
Carry-out Stocks	87	88	89	90	91	92	93	94	94	95	96

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	28.45	27.27	27.54	27.84	28.13	28.33	28.52	28.89	29.26	29.47	29.84
Stocks/Consumption	9.15	9.51	9.35	9.17	9.00	8.88	8.76	8.59	8.42	8.32	8.18

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	419	422	424	425	426	427	429	430	432	433	434
Yield	90	91	92	92	92	93	93	93	94	94	95
Production	37792	38466	38861	39123	39373	39639	39926	40216	40514	40778	41064

Australia - Sugar Extraction Rate
(percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	573	800	600	600	600	600	600	600	600	600	600
Production	5027	5116	5169	5203	5237	5272	5310	5349	5388	5423	5462
Net Exports	3859	4218	4060	4084	4107	4133	4163	4192	4224	4252	4284
Exports	3864	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1150	1098	1109	1120	1130	1139	1148	1156	1164	1171	1177
Carry-out Stocks	800	600	600	600	600	600	600	600	600	600	600

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	60.00	56.85	57.02	57.18	57.29	57.38	57.45	57.53	57.56	57.56	57.54
Stocks/Consumption	69.57	54.64	54.11	53.58	53.11	52.69	52.29	51.88	51.55	51.24	50.96

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	210	210	330	386	415	432	438	442	444	445	441
Production	22750	17937	18109	18283	18559	18690	18869	19098	19379	19465	19647
Net Exports	13100	8078	8233	8347	8554	8602	8683	8825	8995	8951	8926
Exports	13100	#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	9650	9739	9819	9907	9989	10082	10182	10270	10382	10518	10725
Carry-out Stocks	210	330	386	415	432	438	442	444	445	441	437

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	53.33	53.19	53.02	52.92	52.80	52.74	52.74	52.69	52.77	52.98	53.55
Stocks/Consumption	2.18	3.38	3.93	4.19	4.32	4.34	4.34	4.33	4.29	4.19	4.08

China - Area Harvested (1000 hectares)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	450	344	408	375	397	390	400	398	404	407	413
Sugarcane	1200	1157	1144	1138	1139	1142	1147	1151	1156	1158	1161
Total Area	1650	1501	1551	1514	1536	1531	1547	1549	1559	1565	1574

China - Yields (metric tons/hectare)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	35.00	34.34	34.28	34.32	34.35	34.26	34.37	34.36	34.43	34.49	34.53
Sugarcane	62.00	61.79	61.54	61.26	60.96	60.74	60.48	60.40	60.25	60.14	59.97

China - Production (1000 metric tons)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	15750	11822	13972	12888	13631	13355	13734	13671	13910	14031	14274
Sugarcane	74400	71485	70375	69715	69430	69338	69399	69516	69615	69637	69605

China - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	923	1408	1144	1325	1365	1417	1446	1446	1455	1453	1429

Production	8410	7741	7858	7687	7736	7700	7744	7748	7782	7796	7818
Beet Sugar	1599	1200	1418	1308	1384	1356	1394	1388	1412	1424	1449
Cane Sugar	6808	6541	6439	6379	6353	6344	6350	6361	6370	6372	6369
Net Imports	860	932	1372	1464	1442	1442	1397	1416	1432	1470	1524
Exports	660	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1520	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	8779	8937	9049	9111	9127	9112	9141	9156	9216	9290	9352
Carry-out Stocks	1408	1144	1325	1365	1417	1446	1446	1455	1453	1429	1419

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	6.79	6.87	6.92	6.92	6.89	6.84	6.82	6.79	6.79	6.80	6.80
Stocks/Consumption	16.04	12.80	14.64	14.98	15.52	15.87	15.82	15.89	15.77	15.38	15.17

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	1065	1442	1456	1457	1457	1456	1455	1455	1455	1454	1453
Yield	29	28	27	27	27	27	28	28	28	28	28
Production	31012	40202	39851	39645	39673	39824	40030	40275	40536	40803	41063

Cuba - Sugar Extraction Rate (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	108	208	372	418	420	421	422	413	410	399	384
Production	3200	4157	4121	4099	4102	4118	4139	4164	4191	4219	4246
Net Exports	2450	3224	3294	3307	3302	3311	3334	3344	3370	3395	3416
Consumption	750	768	781	790	799	805	814	824	833	838	846
Carry-out Stocks	208	372	418	420	421	422	413	410	399	384	368

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	65.80	67.07	67.84	68.35	68.75	68.97	69.44	69.93	70.38	70.52	70.88
Stocks/Consumption	27.73	48.49	53.56	53.07	52.66	52.40	50.72	49.72	47.86	45.86	43.55

Egypt - Area Harvested (1000 hectares)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	42	37	39	39	39	39	39	40	40	40	41

Sugarcane	133	133	133	133	133	133	133	133	133	133	133
Total Area	175	170	171	172	172	172	172	173	173	174	174

Egypt - Yields (metric tons/hectare)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	47.00	42.92	44.50	44.44	44.86	45.14	45.46	45.86	46.15	46.46	46.77
Sugarcane	104.00	103.82	103.79	103.90	104.13	104.44	104.85	105.32	105.85	106.43	107.05

Egypt - Production (1000 metric tons)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	1974	1603	1716	1727	1755	1773	1792	1824	1851	1879	1896
Sugarcane	13832	13800	13791	13799	13824	13862	13912	13994	14082	14175	14275

Egypt - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20	8.20

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	247	277	254	237	224	215	208	204	201	199	199
Production	1470	1336	1350	1352	1357	1363	1369	1380	1391	1402	1412
Beet Sugar	252	204	219	220	224	226	229	233	236	240	242
Cane Sugar	1190	1132	1131	1132	1134	1137	1141	1147	1155	1162	1171
Net Imports	600	656	702	751	798	828	871	912	951	989	1035
Exports	100	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	700	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	2040	2015	2069	2116	2165	2197	2245	2295	2343	2391	2447
Carry-out Stocks	277	254	237	224	215	208	204	201	199	199	200

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	30.00	29.07	29.30	29.42	29.58	29.51	29.64	29.80	29.95	30.07	30.30
Stocks/Consumption	13.58	12.61	11.44	10.59	9.92	9.47	9.07	8.75	8.51	8.33	8.17

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	2116	2356	2388	2392	2393	2393	2395	2397	2399	2399	2401

Yield	56.00	57.49	57.83	58.02	58.18	58.34	58.50	58.66	58.83	58.99	59.15
Production	118468	135459	138116	138778	139233	139640	140141	140628	141110	141537	142001

European Union - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	3278	3065	3312	3444	3514	3552	3571	3581	3588	3592	3592
Production	17826	20373	20773	20872	20941	21002	21077	21151	21223	21287	21357
Net Exports	3769	4245	4722	4848	4918	4969	5025	5078	5130	5178	5230
Exports	5791	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	2022	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	14270	15881	15919	15954	15986	16014	16042	16066	16089	16109	16127
Carry-out Stocks	3065	3312	3444	3514	3552	3571	3581	3588	3592	3592	3592

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	40.10	44.55	44.57	44.58	44.59	44.61	44.62	44.63	44.65	44.66	44.68
Stocks/Consumption	21.48	20.86	21.63	22.03	22.22	22.30	22.33	22.33	22.32	22.30	22.27

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	13000	11900	12474	12641	12694	12713	12715	12728	12747	12765	12767
Production	18850	18967	19094	19237	19390	19554	20016	20336	20581	20894	21137
Net Exports	950	368	593	542	420	294	437	444	384	407	334
Exports	1000	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	50	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	19000	18025	18334	18643	18951	19258	19566	19873	20179	20486	20792
Carry-out Stocks	11900	12474	12641	12694	12713	12715	12728	12747	12765	12767	12777

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	16.00	16.02	16.06	16.10	16.14	16.18	16.22	16.26	16.30	16.34	16.38
Stocks/Consumption	62.63	69.20	68.95	68.09	67.09	66.03	65.05	64.14	63.26	62.32	61.45

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	347	349	353	356	360	364	368	371	375	379	383
Yield	65.00	66.32	66.97	67.62	68.27	68.92	69.57	70.22	70.87	71.52	72.17
Production	22523	23168	23621	24107	24599	25094	25587	26087	26595	27108	27621

Indonesia - Sugar Extraction Rate

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	1215	1115	1346	1352	1350	1348	1345	1343	1340	1338	1335
Production	1800	1853	1890	1929	1968	2007	2047	2087	2128	2169	2210
Net Imports	1600	1784	1599	1622	1653	1682	1710	1745	1782	1818	1857
Exports	0	#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	3500	3407	3482	3552	3623	3692	3759	3834	3912	3990	4069
Carry-out Stocks	1115	1346	1352	1350	1348	1345	1343	1340	1338	1335	1332

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	16.20	15.50	15.60	15.68	15.77	15.85	15.92	16.03	16.15	16.27	16.40
Stocks/Consumption	31.86	39.50	38.83	38.01	37.20	36.42	35.72	34.95	34.20	33.45	32.74

Japan - Area Harvested (1000 hectares)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	64	65	66	66	66	66	66	66	65	64	63
Sugarcane	22	23	24	24	24	25	25	25	25	24	24
Total Area	86	88	89	90	91	91	91	90	90	89	88

Japan - Yields (metric tons/hectare)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	53.30	53.41	53.66	53.97	54.32	54.68	55.05	55.42	55.80	56.17	56.54
Sugarcane	57.40	60.45	60.25	60.31	60.35	60.40	60.44	60.48	60.53	60.57	60.61

Japan - Production (1000 metric tons)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugar Beets	3411	3460	3515	3565	3604	3630	3644	3646	3637	3618	3588
Sugarcane	1263	1382	1419	1450	1471	1483	1488	1488	1483	1474	1462

Japan - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	283	283	263	251	245	241	239	237	235	233	232
Production	800	823	838	851	861	867	871	871	869	864	857
Beet Sugar	646	655	666	675	683	687	690	691	689	685	680
Cane Sugar	153	168	172	176	178	180	180	180	180	179	177
Net Imports	1443	1406	1428	1455	1476	1496	1516	1537	1562	1590	1621
Exports	10	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1453	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	2243	2250	2277	2313	2341	2366	2388	2410	2432	2455	2479
Carry-out Stocks	283	263	251	245	241	239	237	235	233	232	231

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	17.70	17.72	17.92	18.19	18.41	18.60	18.78	18.96	19.16	19.37	19.60
Stocks/Consumption	12.62	11.67	11.04	10.58	10.29	10.08	9.91	9.75	9.60	9.46	9.32

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	91	100	106	114	119	121	121	120	120	114	107
Net Imports	1175	1202	1223	1242	1261	1280	1303	1325	1334	1348	1363
Exports	325	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	1500	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1185	1195	1216	1237	1259	1280	1303	1326	1340	1355	1369
Carry-out Stocks	100	106	114	119	121	121	120	120	114	107	102

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	24.70	24.69	24.92	25.16	25.43	25.68	25.98	26.26	26.40	26.54	26.66
Stocks/Consumption	8.40	8.91	9.35	9.61	9.64	9.46	9.25	9.06	8.49	7.91	7.44

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	338	337	338	340	344	348	353	358	363	368	373
Yield	74.30	73.66	73.86	74.06	74.26	74.46	74.66	74.86	75.06	75.26	75.46
Production	25136	24789	24930	25194	25537	25931	26359	26804	27258	27716	28182

South Africa - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	450	560	563	561	556	549	545	537	537	537	533
Production	2785	2744	2760	2789	2827	2871	2918	2967	3017	3068	3120
Net Exports	1085	1190	1220	1260	1314	1358	1425	1461	1505	1565	1590
Exports	1350	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	265	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	1590	1550	1542	1534	1520	1517	1500	1506	1512	1507	1526
Carry-out Stocks	560	563	561	556	549	545	537	537	537	533	537

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	35.87	34.94	34.79	34.73	34.63	34.83	34.77	35.30	35.89	36.26	37.19
Stocks/Consumption	35.22	36.33	36.35	36.26	36.15	35.91	35.80	35.63	35.51	35.36	35.19

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	2207	2214	2226	2238	2253	2270	2290	2310	2330	2351	2374
Yield	15.10	15.18	15.26	15.36	15.46	15.55	15.65	15.75	15.85	15.95	16.06
Production	33326	33597	33970	34371	34816	35304	35843	36392	36948	37514	38121

Former Soviet Union - Sugar Extraction Rates (percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
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)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	3744	3750	3991	4127	4203	4245	4267	4281	4293	4303	4308
Production	3852	3884	3927	3973	4025	4081	4143	4207	4271	4337	4407
Net Imports	7455	7680	7562	7500	7469	7457	7449	7446	7447	7459	7464
Exports	546	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Imports	7900	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Consumption	11301	11322	11353	11398	11452	11517	11577	11641	11708	11790	11865
Carry-out Stocks	3750	3991	4127	4203	4245	4267	4281	4293	4303	4308	4314

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	38.30	38.38	38.49	38.62	38.77	38.95	39.09	39.23	39.37	39.56	39.72
Stocks/Consumption	33.18	35.25	36.36	36.88	37.07	37.05	36.98	36.88	36.75	36.54	36.36

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Area Harvested	960	971	979	985	991	996	1001	1005	1008	1011	1014
Yield	57.00	58.41	59.09	59.55	59.94	60.31	60.67	61.03	61.39	61.75	62.11
Production	54720	56694	57832	58680	59413	60084	60712	61306	61874	62436	62974

Thailand - Sugar Extraction Rates
(percent)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Sugarcane	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Carry-in Stocks	333	375	397	413	427	440	452	464	477	490	504
Production	5472	5669	5783	5868	5941	6008	6071	6131	6187	6244	6297
Net Exports	3700	3884	3978	4037	4083	4121	4152	4178	4199	4216	4229
Exports	3700	#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	1761	1763	1790	1817	1846	1875	1907	1940	1975	2013	2054
Carry-out Stocks	375	397	413	427	440	452	464	477	490	504	519

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Per Capita Consumption	27.19	26.96	27.12	27.29	27.48	27.70	27.95	28.22	28.53	28.88	29.27
Stocks/Consumption	21.30	22.54	23.11	23.50	23.83	24.10	24.35	24.58	24.81	25.04	25.25

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Net Exports	-12500	-8297	-8476	-8629	-8758	-8790	-8966	-9095	-9053	-9071	-8949

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

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
0	7.88	8.35	8.38	8.70	9.15	9.80	10.17	10.52	10.91	11.65	12.15
$/ton	173.72	184.08	184.75	191.80	201.72	216.05	224.21	231.92	240.52	256.84	267.86