Western Hemisphere

Argentina

Because Argentina has been in a severe, comprehensive macroeconomic crisis, there is no financial system to support producers. Nonetheless, producers have benefitted from the collapse of the Argentine peso because of the increase in the perceived cost of imported sugar, especially from Brazil.

Argentina imposes a 20-percent tariff on sugar imports. In addition, Argentina places a variable duty on imports from Brazil that amount to about $60 a ton. An export tax of 5 percent impedes sugar exports. Intermediate prospects restrict Argentine sugar production to satisfying domestic consumption needs (1.44 million), and preferential exports of about 110,000 tons to Chile and the United States.

Brazil

Brazil is the world's largest producer of sugarcane, sugar, and fuel alcohol (ethanol). Brazil's sugar and ethanol industries operate in an economy that has experienced large declines in government intervention, increased privatization, and reduced inflation. However, the economy has been burdened by high international debt, high internal interest rates, and a depreciating currency.

Although for many years the Brazilian Government taxed its sugar exports in order to keep domestic sugar prices low, the Government no longer influences sugar production and exports. The sugar situation is more affected by the Government's policy toward alcohol. Brazil's interest in ethanol production began in the early 1970s when the high cost of petroleum imports spurred Brazil to develop alternative energy sources. The ethanol industry developed rapidly, mostly through the support and control of the Brazilian Government. The demand for ethanol has been divided between hydrous and anhydrous ethanol uses. In the early 1970s, Brazil favored the manufacture of automobiles that used 100 percent pure hydrous alcohol. The demand for hydrous ethanol peaked in 1989, and has been declining as the vehicles designed to use hydrous ethanol have worn out. Anhydrous ethanol is blended with gasoline for use in automobiles that normally use pure gasoline but can also use a blend (like most U.S. car engines).

From the 1980s through the late 1990s, Brazil used about 65 percent of its annual sugarcane crop for alcohol and the remaining 35 percent for sugar. Huge alcohol stocks became a problem in 1998 and 1999, causing low ethanol prices. Untenable stock levels induced government and industry reforms. The Brazilian Government gave up most of its direct control over ethanol, including its monopoly over distribution. Brazilian ethanol producers founded "Brasil Alcool S.A.," an enterprise that manages large ethanol supplies through stocking of surpluses. The ethanol producers also founded the Brazilian Alcohol Exchange whose function was to centralize the domestic alcohol market and give the market more overall stability. These actions implied increases in sugar production and exports. The ratio of sugarcane used to produce sugar has therefore increased to about 49 percent due to the reforms. The Brazilian Government now chiefly influences ethanol sales and prices through regulation of the ethanol content in gasoline.

It is likely that the main determinant of growth in sugar output and exports will continue to be government policies affecting the production and use of ethanol. These policies will be affected by trends in world prices of crude oil. Also important will be Brazil's policy toward environmental issues such as air quality that affect the demand for ethanol as a cleaner source of energy than gasoline.

Chile

Chile is a relatively low-cost producer of sugarbeets. Refined beet sugar production has averaged about 481,000 MTRV over the last 10 years. This production has provided about 66 percent of domestic consumption needs. According to the International Sugar Organization (ISO) for the period 1994-2000, Chile imported most of its sugar from Argentina (31.4 percent), Guatemala (29.4 percent), and Brazil (17.4 percent). USDA data show no Chilean sugar exports

since 1984, and ISO data show exports less than 250 MTRV in 1999 and 2000.
Chile provides support to its sugar sector through price bands. Price band levels are announced prior to the planting season in order to provide producers with information on the level of support they can anticipate. The goal is to promote domestic sugarbeet production and processing by discouraging sugar imports. The minimum import price is typically set above both world and Chilean prices. When world prices are below the floor of the price band, a surtax is applied on all sugar imports, based on the lowest quoted FOB price necessary to bring CIF/Santiago prices up to the price band floor. Reductions from the normal 7-percent import duty apply when world prices exceed the ceiling of the band. Price bands effective for the period April 1, 2003, through March 31, 2004, were set as follows: an import floor price of $375 per metric ton and an import ceiling price of $406 per metric ton.

On December 11, 2002, the United States and Chile reached an agreement on free trade. The accord, which is subject to the approval of the U.S. Congress and legislative authorities in Chile, would eliminate tariffs in the first year on more than 85 percent of trade in consumer and industrial goods. After 12 years, there would be no duties on any traded product between the two countries. The USDA has stated that 75 percent of all U.S. farm goods will enter duty-free within 4 years, and all other duties will be gone after 12 years. The agreement also promises to reduce barriers for services, protect intellectual property rights, ensure regulatory transparency, and provide effective labor and environmental law enforcement, according to the Office of the U.S. Trade Representative. If enacted, the free-trade pact would be the first that the United States has had with a South American country.

Colombia

The Colombian Government established a Price Stabilization Fund in January 2001. Although the fund guarantees a producer price and has a mechanism for absorbing world price fluctuations, the price itself is close to world levels. In addition to the guaranteed price, the Colombian Government provides assistance to poor farmers who produce sugarcane for panela, a non-centrifugal sugar. These efforts concentrate on expanding the availability of credit, developing more productive and disease-resistant varieties of sugarcane for panela, and by providing extension services aimed at improving cultivation practices. Although sugarcane for panela yields have not improved much due to the program, there has been some improvement in farm income for panela producers.

Colombian exporters of centrifugal sugar and panela receive export subsidies in the form of income tax rebate certificates (CERTS). These CERTS have a value equal to a percentage of the FOB export value. Since 1992, the CERTS have been set at 2.5 percent of the FOB value for centrifugal sugar and starting in January 2001, at 2.5 percent for panela, down from 4 percent. These export subsidies are not applied on sales to the United States because of the higher prices obtained under the U.S. sugar tariff-rate quota system.

Under the terms of the Andean Community (Venezuela, Ecuador, Peru, and Bolivia), sugar imports from other Community countries are allowed duty-free entry into the Colombian market. Sugar imports from countries outside the Andean Community are discouraged through the application of the Andean Community's price band. The basic duty rate on imports of raw and refined sugar from non-Andean Community countries is 20 percent. The variable surcharge calculation for sugar is based upon adjusted floor, ceiling, and reference price levels determined by the Andean Board of Directors. Under this system, import duties are levied on calculated reference prices. If the applicable reference price falls within the floor and ceiling price band, the import duty is calculated using the basic tariff rate applied to the reference price. When the reference price falls below the floor price, a surcharge based upon the difference between the floor price and the reference price is assessed. When the reference price exceeds the ceiling price, a reduction is made to the applied duty based upon the difference between the reference and the ceiling price.

In September 2001, the Colombian Government mandated the use of alcohol in gasoline sold in cities with populations of more than 500,000 inhabitants. The time-frame for implementation of the law was 5 years. A serious problem for refiners is the high cost of producing alcohol -- it is estimated that the production cost for alcohol is three times that of sugar. Future investment in expensive refining equipment will depend on price commitments by the

Government that would guarantee an adequate return on investments.

Dominican Republic

During the 1970s, there were 16 mills operating in the Dominican Republic, producing over 1.0 million STRV of raw sugar. The sugar sector has since deteriorated, with production in the last few years averaging below 500,000 MTRV. There are now only seven functioning mills, and one of those is not in operation.

Access to the U.S. market through the U.S. tariff-rate quota is an important economic concern for the industry. Although the Dominican Republic has the highest share of the U.S. raw sugar TRQ, allocations of the TRQ have fallen in recent years to only 185,300 MTRV, down 48 percent from just 6 years ago. The current allocation amount, however, constitutes a high percentage of production and its importance is evidenced by the fact that the Dominican Republic chooses to import sugar from the world market in order to have enough sugar to meet domestic requirements and still meet the TRQ.

Historically, the Dominican Republic Government has been a dominant force in the sugar industry. It owned the largest company, Consejo Estatal del Azucar (CEA), which in the 1970s operated 12 of the 16 mills and manufactured over 65 percent of the total production. Over time, the financial situation of these mills deteriorated. Some of the mills were closed, and in 1999, the remaining mills were privatized.

Several laws regulate the sugar sector in the Dominican Republic. Law 491 controls the relationship between private cane producers and processors and sets the price for cane based on sugar content. Law 619 assigns regulatory functions to a government office called INAZUCAR. This agency sets local sugar prices along with the Secretary of Industry, regulates domestic and export marketing, and is responsible for distributing the U.S. tariff-rate quota among the local producers.

For over 30 years, the U.S. sugar quota has been divided among the three producers according to a formula, which was established when the Government-owned mills were the dominant producers. According to the formula, the CEA was allocated 59.78 percent of the quota; Central Romana, 32.33 percent; and the Vicini Group, 7.9 percent. These percentages were changed infrequently (e.g. 1977, 1998) until the remaining CEA mills were privatized. Beginning in market year (MY) 2000, a new distribution pattern was announced: Central Romana, 43.5 percent; Consorcio Azucarero del Caribe, 26.6 percent; Vicini Group, 9.5 percent; Central Pringamosa, 7.6 percent; Consorcio Pringamosa, 6.1 percent; Consorcio Caña Brava, 3.7 percent; and Consorcio Azucarero Central, 3.0 percent. In the future, the allocations will be revised based on performance and should eventually be determined by a formula, which averages each producer's production over the most current 3-year period. The Government hopes that this will provide an incentive for producers to reduce costs as access to the U.S. sugar TRQ represents potential earning power.

As part of its WTO ratification agreement the Dominican Republic established an in-quota tariff level for sugar of 20 percent for 23,000 metric ton imports, gradually increasing to 30,000 metric tons by the year 2004. Maximum out-of-quota tariffs were established at 100 percent, decreasing to 85 percent in 2004. As a result of import protection, retail prices for refined sugar range between 26 and 30 cents a pound, and wholesale prices for raw sugar range between 15 and 18 cents a pound.

Guatemala

Sugar policy in Guatemala is set and coordinated by the Sugar Board. The Sugar Board includes representatives from the Ministry of Economy, sugarcane producers, and sugar mills. The Board establishes production goals, sets sugarcane prices through a formula based on market sugar prices, and also allocates Guatemala's production of the U.S. sugar quota to the different sugar mills. The allocation to each mill is based on past production performance, previous quotas, and milling capacity. Because Guatemala exports about 75 percent of its production, producer prices are aligned with world prices.

In 2001, the Guatemalan Government opened the market to sugar imports and established an import quota of 5,000 MT per year at 0 percent tariff. Import tariffs on sugar outside the quota are 20 percent.

Jamaica

Jamaica is a high-cost sugar producer whose industry is characterized by low productivity in both field and factory operations. Current production costs are estimated at $650 per metric ton, well above the $500 per ton realized in revenue. Problems are manifest in low crop yields, poor cane quality, labor-overstaffing at inflated costs, and lack of credit.

After privatizing the industry in 1994, the Jamaican Government was forced to re-acquire the industry in 1998 after private firms were unable to manage and reform the industry. The Jamaican Government developed a 5-year plan for the sugar industry in 1999. The ultimate goals of the plan were to produce 220,000 metric tons of raw sugar at a cost of $420 a metric ton and to re-privatize the industry at positive, sustainable profit levels. In spite of good intentions, enumerated goals for the first 2 years of the plan were not met.

One of the recognized goals was to systematically replant fields with higher yielding cane varieties. Jamaica's Sugar Industry Research Institute provides the necessary plant research and commercializes various high yield cane varieties. The problem is that replanting costs are estimated to vary between $1,313 and $2,013 per hectare. Small planters especially find it difficult to bear these high costs. As a result, re-planting, targeted at 16.67 percent a year, was achieved on only 8 percent of the total area under cultivation for the 2000/01 sugar crop.

High production costs are partially compensated for by high sales returns from preferential trade agreements. Jamaica receives an African, Caribbean, and Pacific (ACP) quota from the European Union (EU) equal to 129,000 MTRV or about 78 percent of average yearly sugar exports. Unit ACP sales into the EU are valued at 631.9 euros per metric ton. Jamaica has also been able to depend on selling sugar into the EU market under the Special Preferential Sugar (SPS) arrangement, although future sales are threatened by competition from low-income sugar exporters shipping to the EU under the Everything But Arms (EBA) arrangement. In 2001, SPS sales to Portugal amounted to 36,000 MTRV. Jamaica also receives an allocation under the U.S. raw sugar tariff-rate quota program. Since FY 2001, TRQ allocations assigned to Jamaica have been set at 11,584 MTRV.

Because most of Jamaica's sugar production is exported due to high unit returns, about 60 percent of domestic consumption needs are met by imports of mostly refined sugar. Since 1999, sugar has been imported under a two-tiered tariff system. Refined sugar for manufacturing purposes has entered duty-free, while refined sugar for the direct-consumption retail market has been subject to a 40-percent common external tariff (CET) plus a 63-percent stamp duty. Problems have arisen because sugar imported for manufacturing has been diverted into the higher-priced retail market. The Jamaican Government has proposed to replace the import regime with a licensing arrangement. The government would grant import licenses to large manufacturers and the Jamaica Cane Product Sales (JCPS), a central marketing agency for the sugar industry. Small- and medium-sized manufacturers would source refined sugar from the JCPS at a duty-free rate plus a marginal mark-up. The distribution of refined sugar for retail would also be the responsibility of the JCPS.

Africa/Middle East

Egypt

Egypt produces both cane and beet sugar. Cane sugar is produced under monopolistic conditions by the publically-owned Sugar and Integrated Industries Company (SIIC). The SIIC is not an efficient enterprise--it can currently process only 70-80 percent of the total available sugarcane crop and is forced to contract out some of its excess refining capacity to private importers of raw sugar to help stem financial losses. The Egyptian Government promotes sugarcane production because it provides needed rural employment opportunities for both farmers and processing workers in the area of upper Egypt. Because sugarcane competes for scarce water resources with other crops and uses, the government actively supports the development of high-yielding sugarcane varieties with the objective of decreasing the area planted to sugarcane. Nonetheless, the government establishes high prices for sugarcane that encourage area expansion. The established price for 2002 was 95 Egyptian pounds (LE) per ton, or about $20.56. This price is expected to increase over 15 percent for the next crop year.

Beet sugar is a less important source of domestically-produced sugar but it has been growing in importance. In 2000, it comprised 22 percent of total sugar production and it grew to 28 percent in 2001. The Egyptian Government promotes sugarbeet production in reclaimed lands. The price of sugarbeets is set by the government at a base rate of LE 77, or $16.67, a ton in 2002 for a sugar content of 16 percent. The price rises for increased sugar content, and a premium is paid for timely delivery to the processing facility.

The Egyptian Government subsidizes sugar consumption under the national ration system. The government determines the selling price of 1 million tons of white sugar produced by public sector companies. Government mills sell the sugar to the Ministry of Supply at below cost, but does not pay interest on loans from the government they take out to pay the farmers. The 2002 selling price was LE 140 a ton, plus a 5-percent profit margin. One-half of the sugar is sold to the Ministry of Supply for distribution to ration cardholders. The Ministry of Supply sells sugar at LE 600 per ton or 60 piasters (1 LE = 100 piasters) per kg to ration card holders. The other half of the subsidized sugar is sold by two distribution companies belonging to the Ministry of Supply. They sell sugar to private sector companies which bag and re-sell the sugar at 130 piasters/kg. (Bulk sugar sells for about 115 piasters per kg.) Non-rationed sugar is available to consumers through government outlets at LE 1.30 (28 cents) per kg. The current retail price of sugar in private sector shops runs between LE 1.60 (34 cents) and LE 2 (43 cents) per kg.

Egypt relies on imports to meet about one-third of its total sugar requirement. Since November 2000, sugar tariff rates have been 5 percent for raw sugar and 10 percent for refined sugar. Tariffs on other sugar in non-solid form such as syrups and molasses are 30 percent and the tariff rate for confectionary sugar is 40 percent.

Egypt normally maintains strategic sugar stocks equal to about 60 days of direct consumption, or at about 335,000 mt. Stocks are held mainly by the SIIC, or at storage facilities belonging to the Ministry of Supply.

Turkey

Turkish production policy is based on legislation (the Sugar Act) made effective in April 2001. The Sugar Act assumes that domestic sweetener demand will be met by domestic production. The Act established a Sugar Board that, for the next 5 years, is charged with analyzing the outlook for sweetener supply and demand. Resulting projections are the basis for production quotas for both refined beet sugar and corn sweeteners. Individual processing plants are assigned quotas based on production levels for the three previous years. The "A" quota is set for domestic consumption. The "B" quota is set at 2 percent of the "A" quota and is intended as a reserve to meet emergency needs. The corn sweetener quota is limited to 10 percent of the "A" quota for refined beet sugar, although legislation allows this percentage to be increased to 15 percent under certain circumstances. Any sugar produced in excess of the "A" and "B" quotas constitute "C" sugar that cannot be sold domestically. "C" sugar must be sold in the world market at prevailing prices that are far below domestic prices. If a producer fails to fulfill an assigned quota by a significant amount, the quota will be reduced the following year.

Beginning in MY 2003, the Turkish Government will no longer announce procurement prices for sugarbeets or ex-factory sugar prices. Plant owners are to negotiate sugarbeet prices with producers. Ex-factory prices for sugar are expected to be set in accordance with plant production costs. Retail prices are determined in the market.

The Turkish Government imposes a duty of 110.4 percent on the CIF value of sugar imports from countries in the European Union, and a duty of 138 percent on sugar from all other origins. Sugar can only be imported if the Turkish Foreign Trade Under Secretariat issues a license based on its evaluation of the supply and demand outlook.

South Africa

The South African Sugar Association (SASA) and the Department of Trade and Industry (DTI) executed a Sugar Agreement in 2000. An important element of the Agreement was a new cane payment system based on the "recoverable value" (RV) in sugarcane delivered to mills. The goal was to increase the incentive for growers to produce a better quality product, chiefly reducing the non-sucrose content of the juice extracted from sugarcane. Part of the objective was to reduce delays from the moment of harvesting to that of crushing. This implies incentives to improve the handling, transportation, and receipt of the cane. The estimated 2002 cane price was 129.5 rand per ton, or about $11.26 per ton.

The Sugar Agreement deregulated the pricing of sugar. Previously, the DTI was directly involved in setting the domestic sugar price, based on ex Durban with SASA responsible for transport cost to Durban. Under the new agreement, the domestic selling price is freed and is based on ex point of manufacture. Mills are responsible for the transport costs of export sugar to port areas.

Under the terms of the Sugar Agreement, the SASA is no longer the single desk exporter of refined sugar. These exports, along with domestic sales and all other bagged sugar exports, are handled by the private sector. SASA retains single desk exporter status for bulk raw sugar exports.

A new sugar duty formula was instituted in 2000 with the intention of making the sugar industry more responsive to the world sugar price and the rand/dollar exchange rate. Under the old system duties were based on changes in the domestic price; however, now duties are based on the difference between the world price and a set reference price. The base is calculated using a 10-year average of the world price plus a 20-percent premium to compensate for protectionist policies in most sugar-producing nations. It is adjusted when there is a $20 deviation in the 20-day moving average of the world price. The duty was increased by 67 percent at the end of July 2002 to 1,312 rand per ton ($125 per ton) when the price fell to $214 a ton from the $ 238 a ton base in April.

South Africa is a member of the Southern African Customs Union (SACU) that includes Botswana, Lesotho, Namibia, and Swaziland. The SACU provides for import access of sugar, most of which is allocated to Swaziland under an agreement reached in 1998 between the South African and Swazi sugar industries. The agreement limits Swazi sugar sales to an undisclosed amount, estimated to be 260,000 mt. In February 2000, the SACU countries reached a sugar agreement with the Southern African Development Council (SADC), whose members include Mozambique, Zambia, and Zimbabwe (the chief sugar producer). The agreement gives the SADC countries non-reciprocal sugar market access into the SACU for a 5-year period.

Africa/Middle East

Russia

Most sugar processing plants in Russia have been privatized. The plants tend to be owned by various financial firms and sugar trading companies that have formed several powerful holding groups within the industry. These holding companies develop raw material resources by investing in sugarbeet production, renting land, purchasing equipment, and implementing more effective management practices.

In an unusual twist, beet processors and sugarbeet producers interact through barter arrangements. The sugarbeet producers pay sugar processing fees through an exchange of a proportion of their crop. Arrangements are common where processors supply producers with agricultural machinery to facilitate timely planting, tillage, and harvesting of the sugarbeets. Because there is no legal basis for owning land in Russia, the companies investing in sugar production are taking high risks. There are few foreign investors in the domestic sugarbeet industry.

Because the Russian Government cannot offer significant support to the industry, it assists the industry primarily through border measures. It has maintained a sugar import tariff-rate quota and a seasonal duty system since July 2000. For the 2002 quota year, the sugar TRQ was established at 3.65 million tons. The TRQ was seasonal, with entries for the first 6 months set at 3.35 million tons, and entries for the remaining months set at 0.3 million tons. The in-quota tariff rate was 5 percent but no less than 0.015 euros per kilogram. The base over-quota tariff was set at 40 percent for both raw and white sugar but not less than 0.12 euros per kilogram for raw sugar and 0.14 euros per kilogram for white sugar. The over-quota seasonal tariff was 50 percent but not less than 0.15 euros per kilogram for raw sugar and 0.18 euros per kilogram for white sugar.

On July 15, 2002, the Russian Government announced the sugar TRQ for 2003. For the first 6 months of the year, the import tariff on raw sugar is 0.2 euros per kilogram, and for the remaining months, it is 0.23 euros per kilogram. For white sugar, the corresponding tariffs are 0.24 euros per kilo for the first 6 months, and 0.27 euros per kilogram for the rest of the year. The 2003 TRQ was increased to 3.95 million tons of raw sugar. Imports from developing countries under the Russian system of preferences are subject to tariffs of 0.095 euros per kilogram for the entire year.

Quota rights were specified to be sold to Russian importers at public auctions, and distributed in 158 allotments of 25,000 tons each. The minimum price for any lot was set at 700,000 euros. There is a prohibition on the free resale of lots. Lots can go back on the block at a repeat auction later in the year. A pre-condition of participation in the auction is a 100-percent deposit of the sum expected to be spent on lots.

The first auction was held on September 25, 2002. Although 51 companies took part, only 10 companies bought more than 8 lots. The average price per lot was $100.60 a ton. The difference between the TRQ lot price and the out-of-quota tariff rate was estimated at less than $10 per ton.

Ukraine

The Ukrainian Government sets a minimum purchase price for sugarbeets and for refined sugar at the wholesale level. The sugarbeet purchase price for MY 2003 is UAH 165 ($31) per ton. The minimum wholesale refined sugar price is UAH 2,370 ($447) per ton. Sugar prices are often lower than the mandated minimum levels, however. Part of the problem is that refineries often reimburse producers and other raw product sellers with refined sugar as a barter payment. The producers sell the sugar outside established controls, presenting competition to the refiners and wholesalers that helps drive the refined sugar price below the minimum level. Another part of the problem is that a severely constrained budget does not allow for sufficient government intervention buying at the minimum price level.

The Ukrainian Government, through its Ministry of Agricultural Policy, attempts to control sugar production through the assignment of quotas. The 2002 "A" quota, intended for domestic uses, was set at 1.8 million tons and was allocated to Ukraine's functioning 138 factories. The "B" quota, intended for export, was set at 98,000 tons and allocated to 21 of the factories. In spite of the intent, it is likely that the "B" sugar does not leave the Ukraine, further increasing domestic sugar supplies and depressing prices.

In the past, the Ukrainian Government has attempted to control sugar imports through a tariff-rate quota. In market year (MY) 2001, the raw sugar TRQ was set at 260,000 tons. The in-quota tariff was 5 euros per ton. No TRQ was announced for either MY 2002 or MY 2003; however, the over-quota tariff has been set at 50 percent but not less than 300 euros per ton. Traders evade the high import duties by importing through Ukraine's Free Economic Zones (FEZ). This type of importing involves its own set of expenses that far exceed the in-quota tariffs that would be paid under a sugar TRQ system. Sugar smuggling from Russia, Moldova, and Belarus remains a problem--sources indicate that up to 200,000 tons entered illegally in MY 2002. Smuggled sugar puts further downward pressure on prices, forcing sales below the minimum fixed prices.

Central Asia

India

Each year the Indian Government establishes a minimum support price for sugarcane. For MY 2001/02, the support price was set at 620 Rs ($12.78) per ton and the 2002/03 support price has been set at 645 Rs ($13.24) per ton. The national price assumes a base recovery rate of 8.5 percent. Price premiums are applied for recovery rates in excess of the base. For MY 2002/03, Rs 7.60 a ton is added to the base support for every 0.1 percent increase in the recovery rate.

State governments augment the national support price by an additional 20-50 percent. In MY 2001/02, the effective support price per ton was 975 Rs ($20.10) in Uttar Pradesh, 1,075 Rs ($22.16) in Haryana/Punjab, and 765 Rs ($15.77) in the southern states. The high cane prices are estimated to account for nearly 65 percent of the cost of production, driving total Indian sugar productions to an estimated $270-280 a ton.

All sugar mills are required to supply a portion of their production as "levy sugar" at below market prices. The levy sugar is sold by the Indian Government through its public distribution system (PDS) to consumers below the poverty line. The mills are further required to sell the balance of their sugar ("free sugar") at market prices subject to periodic quotas in order to maintain price stability in the market.

The Indian Government has instituted reforms of the levy sugar distribution system since 2000. The required levy sugar proportions have been progressively reduced: to 30 percent from 40 percent as of January 1, 2000, to 15 percent as of February 1, 2001, and to 10 percent as of April 1, 2002. In order to provide more marketing flexibility to the mills, the government has changed the free sale sugar quota release mechanism from a monthly to a quarterly basis starting in January 2002, with a requirement that 50 percent of the quota must be utilized in each half of the year. The government has agreed to the creation of a sugar futures exchange that will give the three major sugar trading companies the right to begin trading in MY 2002/03. The Indian Government is reportedly planning the complete removal of the levy requirement and sugar release mechanism once futures trading commences. Thereafter, the government would presumably procure sugar from the market for subsidized sale through the PDS, and would allow futures trading to stabilize market prices.

India uses trade policy to support domestic production. It applies an import tariff of 60 percent, plus a countervailing duty of Rs 850 a ton. The government further restricts imports by imposing the levy requirements and market release quotas on imported sugar. In order to reduce large price-depressing stocks of sugar, the government in 2001 removed quota restrictions on sugar exports. The government provides various incentives for sugar exports. These include exemptions from levy requirements and periodic sales quota restrictions and from domestic excise taxes (Rs 850 a ton). The government provides internal transport subsidies from mills to export ports of about $12-$13 per ton.

Pakistan

There exist many doubts for long-term prospects for sugarcane production in Pakistan. The primary problem is a shortage of irrigation due to poor resource management and planning. Since the irrigation system was completed, demand has increased more than 50 percent while storage capacity has decreased by one-third due to silting. Even with the adaption of new irrigation techniques, Pakistan would need to alter cropping patterns significantly to conserve scarce water resources by shifting out of water-intensive crops like sugarcane.

In spite of dim prospects, the Pakistan Government continues to encourage sugarcane production. It regularly announces a support price prior to planting. The support price acts as a minimum guaranteed price, it being set higher than the world price but below market-determined domestic prices. Over the last couple of years, the support price has been set at about 50 percent of the market price (about PRs 23, or 20.8 cents, per kilogram in September 2002). Even with the adaption of new irrigation techniques, Pakistan would need to alter cropping patterns significantly to conserve scarce water resources by shifting out of water-intensive crops like sugarcane.

The Pakistan Government imposes an import tariff on raw and refined sugar to protect domestic mills and growers. In its budget passed in June 2002, the tariff rate was at 25 percent. Domestic millers indicate that their cost of producing refined sugar is about $320 a ton, whereas the landed price of raw sugar in Karachi is about $220 a ton.

East Asia

China

Production Policy. China's agricultural policy is guided by the twin objectives of restructuring the nation's agriculture to meet the challenges by World Trade Organization (WTO) membership and of improving farm incomes. Generally, the government has been encouraging farmers to switch from land-intensive crops (grains) into high-valued cash crops. For sugarcane, government policy promotes production where it is already a major crop and discourages it where it is less important and where there are alternative crops. In particular, it is expected that Chinese sugarcane production will become more concentrated in the provinces of Guangxi and Yunnan. Because of wide-spread poverty in these provinces, government officials consult with refineries in setting minimum procurement prices of sugarcane. The minimum prices are based on costs of producing sugarcane plus a profit margin determined by consideration of other cropping alternatives. Increases in unit sugarcane payments are linked to increases in sugar prices. In 2002, cane prices were required to increase $0.60 a ton for every $12 a ton increase in the market price for sugar, above a base price of $325 a ton.

The refining industry has been restructured in anticipation of increased competition from imports. Ownership of most state-owned refineries has been converted into either a foreign joint venture, a joint-stock corporation (with the government retaining significant shares), or a private company. New ownership patterns have resulted in work force rationalization. The government has also promoted mergers among refiners and more vertical integration.

The same policy aspects affect Chinese beet sugar production. Sugarbeet area planted increased in MY 2002 due to expansion in provinces where sugarbeets are already a dominant crop (Xinjiang, Heilongjiang, and Jilin), more than offsetting declines where sugarbeets are less important (Shanxi and Hebei). Beet area expansion has resulted from lower projected prices for alternative crops because of increased competition resulting from WTO entry. This has been especially true in Xinjiang due to lower projected cotton prices and in Heilongjiang due to projected lower and more volatile grain prices. Also important has been the government's policy of closing small, unprofitable sugarbeet processing factories where economies of scale cannot lower average costs when production increases.

Chinese production policy is likely to face challenges. It is estimated that about 70 percent of processors' costs are from raw material prices (that is, sugarcane and sugarbeets). Although the government now allows sugar prices to be market-based, mandating minimum producer prices transfers the cost of supporting producers to processors and refiners. The restructuring of the processing and refining industries has removed the government from the direct costs of support.

Consumption Policy. The Chinese Government has tried to increase demand for sugar by controlling the supply of artificial sweeteners. Due to high sugar prices, nearly all of the increase in sweetener demand, especially by the soft drink industry, is being filled by artificial sweeteners. Artificial sweeteners are routinely used in standard consumer products rather than being limited to diet foods. The artificial sweeteners include saccharine, cyclamates, aspartame, steviosides, liquiritoside, and sorbitol. All together, consumption of these artificial sweeteners is displacing sugar consumption by over 4 million tons a year.

The Chinese Government ordered the closing of nine out of 14 saccharine factories in 1999 and has tried to limit yearly domestic saccharine sales to 3,000 tons and aspartame and stevioside sales to 200 tons each. Although production in excess of domestic quotas is supposed to be exported, domestic saccharine sales are estimated in excess of the domestic quota for the five factories. Additionally, there are many other illegal factories producing artificial sweeteners that have contributed to the consumption of artificial sweeteners instead of sugar. The small-scale and widely dispersed nature of the food manufacturing industry makes it difficult to monitor domestic sales.

Trade Policy. Under the terms of its entry into the WTO, China agreed to establish a tariff-rate quota system for sugar imports. The initial TRQ was set at 1.64 million tons of sugar, with an in-quota *ad valorem* rate of 20 percent. The access quantity rises to 1.852 million tons in 2003 and 1.945 million tons in 2004. Eligible importers include: (1) state-owned enterprises; (2) central enterprises with state reserve functions; (3) enterprises with good import records for general trade in 2002; and (4) sugar enterprises with the capacity to process 600 tons of raw sugar daily.

Although the Chinese Government made this minimum access commitment, it has decided to re-export the equivalent of over 600,000 tons of the quota after it has been refined domestically. This policy helps the domestic refining industry while protecting the domestic market, seemingly counter to the intent of the WTO access requirement. The Chinese Government also counts against the TRQ commitment sugar imports of 450,000 tons from Cuba.

Indonesia

The Government of Indonesia established a new sugar trade policy in September 2002. It restricted imports of sugar to three state-owned plantations, but only when ex factory sugar prices are above Rp 3,100 per kg (or about 16 cents a pound). This pricing level is considered to be the breakeven point for domestic producers. The imported sugar is intended for further processing by the state-owned plantations and cannot be sold to the public or to other processors. Also, the government imposed new standards for raw sugar with the stated intention of protecting consumers from consuming raw sugar. This requirement will benefit the local refining industry and may increase the demand for refined sugar.

Beyond trade policy measures, Indonesian sugar producers do not benefit very much from government policies. The Indonesian sugar sector is characterized by outdated farm practices, high input prices, lack of fertilizer during the cane growing season, and insufficient access to credit. Smuggling of sugar into the country has been a persistent problem, although the government has required import licenses and monthly reporting prior to the new trade policy described above.

Japan

The Ministry of Agriculture, Forestry, and Fisheries (MAFF) sets guaranteed minimum prices for domestically-produced sugarbeets and sugarcane. For MY 2002, the minimum sugarbeet price was 17,040 yen ($131) per ton, and the minimum sugarcane price was 20,370 yen ($157) per ton. The MAFF also sets a high target price for raw sugar that is paid to sugar processors to compensate them for the high price they must pay for domestically-produced sugarcane. In 2001, the target price was 151,800 yen ($1,168) per ton of raw sugar. The MAFF in turn provides a subsidy to sugar refiners to compensate them for the difference between the domestic price of raw sugar and the target price of domestically-produced raw sugar. The subsidy is paid by the Agriculture and Livestock Industries Corporation (ALIC), a government-owned firm. The subsidy comes primarily from funds collected from a surcharge on imports of sugar and corn intended for fructose production. The remainder of the subsidy comes from Japan’s national budget. Recent year-end data indicate that the refiners ’ subsidy has cost about 90 billion yen, or about $692 million. The surcharge on imports provided about 77 billion yen, or about 85 percent of the total.

The ALIC purchases all raw sugar imports from importing companies at an average import price and then resells it back to them at a predetermined resale price. The prices are revised quarterly. The difference between prices constitutes the import surcharge that is meant to compensate domestic refiners for the purchase of domestically-produced raw sugar. In July-September 2001, the average import price was 32,580 yen ($251) per ton, and the resale price was 59,960 yen ($461) per ton, implying a surcharge of 27,380 yen ($210) per ton.

The Japanese Government controls the volume of raw sugar imports. Each quarter the MAFF calculates a raw sugar import volume target for each import company. The MAFF imposes a secondary surcharge on companies that exceed their target in any particular quarter. Recent reports indicate that the secondary surcharge is equal to 23,309 yen ($179) per ton.

In spite of the surcharge on raw sugar, technically the tariff on raw sugar imports has been zero since April 2000. There is, however, a prohibitive tariff set on imports of refined sugar. The tariff is pegged at 21.5 yen per kilogram, along with an additional surcharge of 53.88 yen per kilogram. For MY 2001, the tariff and surcharge on refined sugar imports sum to $414 per ton.

The Philippines

Under the WTO, the Philippines has a 2003 minimum access commitment level of 59,780 tons. In 2002, the Philippines set sugar import duties at 50 to 65 percent. In 2003, both the in-quota and over-quota rates are set at a uniform rate of 50 percent. Although under the Association of Southeast Asian Nations (ASEAN) Free Trade Area-Common Effective Preferential Tariff (AFTA-CEPT), all ASEAN members are committed to reduce tariffs on imported commodities to 0 to 5 percent, the AFTA council has allowed the Philippines to delay tariff reduction for sensitive agricultural products, including sugar, until 2010.

The future of sugar production in the Philippines depends on the completion of a program to redistribute land to peasant farmers at 0.5 hectares each in the prime sugar area of Negros Oriental. The remaining land to be redistributed is a substantial 1.1 million hectares. Areas already redistributed to small farmers now constitute the least productive sugar lands in the Philippines.

Thailand

Thai sugar production is divided into three quotas. Quota A consists of 1.85 million tons of plantation white sugar meant for domestic consumption. Quota B sugar consists of 800,000 tons of raw sugar and is meant to meet long-term export commitments. Pricing and marketing is the responsibility of the Thai Cane and Sugar Corporation, an organization of millers, producers, and the Thai Government. Quota C is for export sales. Export rights are assigned to seven export companies 6 months prior to the crushing season. Mills are required to fulfill the A and B quotas before exporting C quota sugar.

The transaction value of cane between growers and millers is based on the sucrose content of cane measured by the Thai Commercial Cane Sugar System. The final sugar cane revenue received by the farmer is derived from a revenue sharing system in place since 1982/83. It is based on a base or initial price paid by millers to farmers upon delivery, adjusted annually in line with the world market prices, and a season average price, calculated at the end of the growing season, that determines a final producer price. The Thai Government sets initial and final producer prices for sugarcane. (The initial price for MY 2003 was set at 450 baht (about $11.00) per ton, down from the MY 2002 price of 530 baht per ton.) If the final price is greater than the initial price, the supplement is paid to growers; if the final price is less than the initial price, the Thai Government compensates the mills for the difference through the Cane and Sugar Fund. Also, the Thai Government, through the fund, provides a credit program under which producers can borrow an amount equivalent to their advance payment from the mills at below market interest rates, at 7 percent for MY 2003.

Under WTO commitments, the Thai Government establishes a tariff-rate quota for sugar imports. For MY 2003, the TRQ is set at 13,687.22 tons and will rise to its final bound level of 13,760 tons in 2004. The within-quota tariff is 65 percent, and over-quota rate is 95 percent in MY 2003. The over-quota rate drops to its final bound level in MY 2004 of 94 percent.

Oceania

Australia

Prior to 1997, area planted to sugarcane in the Australian state of Queensland (the main producing state) was historically determined by a very regulated system. The Queensland Sugar Corporation (QSC) would annually set the maximum amount of sugar that each mill could deliver and receive the No. 1 pool price. Any sugar over this level was sold exclusively onto the export market. Also, from 1992 to 1997, the Australian Government imposed a specific import tariff of A$55 per ton on raw and refined sugar.

In 1996, the Australian Government and the Queensland Government started a review of the Australian sugar industry's marketing structure and the sugar import tariff. The review was conducted within the context of the National Competition Policy whose aim was to make Australian industries more competitive. The Sugar Industry Review Working Party's recommendations included: removal of the tariff on imports of sugar into Australia; elimination of the pool price differential; pricing domestic sugar at export parity; and retention of a single desk selling of raw sugar on the export and domestic markets. All of these recommendations were subsequently adopted.

Area planted to sugarcane in Queensland is now controlled by industry and mill representatives. Under this new system, growers wanting to increase their sugarcane production area must make application to the Cane Production Board, who in conjunction with the millers, assesses the application against environmental criteria as well as mill capacity. In the minor producing States of New South Wales and Western Australia, explicit legislation governing area expansion is less important; their sugar industries are now effectively deregulated.

Sole acquisition rights in Queensland means that the QSC sells raw sugar to domestic refiners. Although these same sole acquisition powers exist in New South Wales, the refineries and mills are owned by the sugarcane growers' co-operative.

Recent Developments. Since 1999, Australia's sugar industry has been severely affected by low prices, disease outbreaks, and extreme weather conditions such as cyclones, floods, and droughts. Low grower returns prompted the Australian Government to commission a report into the Australian sugar industry entitled the "Independent Assessment of the Sugar Industry" in February 2002. The report was published in June 2002 and made a number of recommendations and focused on areas such as access to export markets, diversification, environment, research, and assisting producers to exit the industry.

In response to the report, the Australian Government offered a sugar industry assistance package totaling A$150 million over a 4-year period, with around A$100 million to be raised by a levy on domestic sugar sales and the balance to be provided by the Australian Government and the Queensland state government. The package offers a range of measures including income support, interest rate subsidies on new loans, regional projects, and an exit assistance package for producers wishing to leave the industry (estimated at A$45,000 per farmer). The package relies on the cooperation between the Federal government and the Queensland state government in amending legislation that currently prohibits industry from adopting structural changes.

The relief program was approved by parliament in December 2002. Reportedly it will be funded by A3 cent per pound levy over the next 5 years. As emphasized by the Australian Government, no levies would be applied to export sales; rather, the levy will apply to an estimated 939,000 tons of domestic sugar, including imports but exempting raw sugar used for refined exports.

Table 2--Sugar production, supply, and distribution, for select countries, 2001/02 marketing year 1/

Region/ Country	Beginning stocks	Beet sugar production	Cane sugar production	Total sugar production	Raw imports	Refined imports	Total imports	Supply	Raw exports	Refined exports	Total exports	Human domestic consumption	Other dis-appearance	Total dis-appearance	Ending stocks
	---1,000 metric tons---														
Western Hemisphere															
Argentina	146	0	1,600	1,600	0	1	1	1,747	65	70	135	1,440	10	1,450	162
Brazil	860	0	20,400	20,400	0	0	0	21,260	8,400	3,200	11,600	9,450	0	9,450	210
Chile	21	523	0	523	0	220	220	764	0	0	0	683	0	683	84
Colombia	40	0	2,300	2,300	1	7	7	2,347	695	295	990	1,295	20	1,315	42
Dominican Rep.	27	0	460	460	18	26	44	531	183	2	185	317	0	317	29
Guatemala	70	0	1,910	1,910	0	0	0	1,980	1,100	210	1,310	500	0	500	170
Jamaica	15	0	203	203	20	68	88	306	168	0	168	128	0	128	10
African/Middle East															
Egypt	282	410	1,040	1,450	450	200	650	2,382	0	100	100	2,035	0	2,035	247
Turkey	865	1,796	0	1,796	0	1	1	2,662	0	550	550	1,850	0	1,850	262
South Africa	455	0	2,542	2,542	0	263	263	3,260	935	300	1,235	1,570	5	1,575	450
Eastern Europe															
Russia	3,100	1,630	0	1,630	4,500	300	4,800	9,530	10	450	460	6,940	0	6,940	2,130
Ukraine	256	1,790	0	1,790	200	50	250	2,296	0	90	90	2,020	0	2,020	186
Central Asia															
India	11,985	0	20,340	20,340	30	0	30	32,355	0	900	900	18,455	0	18,455	13,000
Pakistan	425	32	3,421	3,453	0	32	32	3,910	0	0	0	3,450	0	3,450	460
East Asia															
China	1,004	1,274	6,598	7,872	1,258	134	1,392	10,268	9	638	647	8,698	0	8,698	923
Indonesia	1,415	0	1,700	1,700	1,100	400	1,500	4,615	0	0	0	3,400	0	3,400	1,215
Japan	365	659	157	816	1,426	3	1,429	2,610	0	10	10	2,317	0	2,317	283
Philippines	322	0	1,900	1,900	11	98	109	2,331	142	0	142	1,950	0	1,950	239
Thailand	571	0	6,397	6,397	0	0	0	6,968	2,450	1,840	4,290	1,850	0	1,850	828
Oceania															
Australia	634	0	4,610	4,610	3	2	5	5,249	3,352	95	3,447	1,020	0	1,020	782

1/ Marketing year as defined by each country.
Source: USDA.