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Sugar and Sweeteners Outlook

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U.S. Sugar March 2011

The World *Agricultural Supply and Demand Estimates* (WASDE) was released on March 10, 2011.

The Mexico 2010/11 sugar production estimate is decreased 100,000 metric tons, raw value (MTRV), based on indications that recent freeze damage reduced production potential. As a consequence, exports are decreased 100,000 MTRV to 1.232 million MTRV. All other supply and use items are unchanged. Consumption of high fructose corn syrup (HFCS) is still expected to constitute 30 percent of combined sugar and HFCS consumption. Ending stocks are projected at 22 percent of projected sugar consumption, or 952,000 MTRV.

Projected U.S. sugar supply for fiscal year (FY) 2011 is decreased 163,000 short tons, raw value (STRV) from last month. Cane sugar production in Florida is reduced 60,000 STRV from last month, based on processor forecasts. In all, Florida processors have reduced their production forecast from 1.7 million STRV in December before the freezing weather mid-month to 1.440 million STRV in March. Imports from Mexico are projected to decrease 110,000 STRV to 1.349 million STRV. Partially offsetting these decreases is a small increase in beginning stocks of 7,253 STRV, due to a revision of FY 2010 estimated cane sugar production in Florida.

Projected U.S. sugar use is unchanged from last month. Deliveries for human consumption/miscellaneous are projected at 11.0 million STRV.

Ending-year sugar stocks are projected at 1.186 million STRV. This projection is the difference between projected total supply (12.596 million STRV) and projected total use (11.410 million STRV). The implied ending year stocks-to-use ratio is 10.4 percent, down from last month's projection of 11.8 percent.

Since the first of the year, refined beet sugar prices, Midwest, from the *Milling and Baking News* have averaged 54.6 cents per pound. The corresponding average for the raw sugar nearby No. 16 Intercontinental Exchange (ICE) is 39.1 cents per pound. The margin between refined and raw prices, or the white sugar premium, is calculated at 15.5 cents per pound. This premium has averaged 15.2 cents per pound since mid-2008, more than twice the average for the period 2003 through the first two quarters of 2008**.**

Sugar in the North American Free Trade Area

In the March 2011 *World Agricultural Supply and Demand Estimates* (WASDE), the U.S. Department of Agriculture (USDA) published its latest sugar supply and use projections for fiscal year (FY) 2011 for Mexico and the United States.

Mexico Sugar and HFCS

Mexico sugar production for 2010/11 is forecast at 5.550 million metric tons, raw value (MTRV), a reduction of 100,000 MTRV from last month. There was freezing weather in the first week of February, affecting about 25,000 hectares in the sugarcane growing areas in Sinaloa and western Jalisco. These freezing conditions, along with lingering concerns about dryness in other regions during the growing season, have resulted in concerns about this season's harvest potential. Although the *Comite Nacional Para El Desarrollo Sustentable de la Cana de Azucar* (CNDSCA) has not made a new projection based on these events, others have projected losses between 100,000 and 250,000 metric tons, tel quel. Based on confirming reports from Mexico City's Foreign Agricultural Service (FAS) office, 2010/11 production was lowered by 100,000 MTRV. Even with the reduction, however, 2010/11 production is projected 435,000 MTRV above last year's level of 5.115 million MTRV.

The harvest season through March 5, 2011 has been better than the previous two seasons. Sugar production to this date has totaled 3.296 million MTRV, 27 percent more than corresponding production in 2009/10 and 10 percent more than in 2008/09. Sucrose recovery, raw sugar basis, is calculated at 12.13 percent, higher than all preceding harvests through the same time period.

The CNDSCA estimates October-January 2010/11 HFCS consumption at 489,000 metric tons, dry basis, or about 26.2 percent of total sweetener consumption of 1.866 million metric tons. This represents a 32.0 percent increase from the same period last year. For the same period, sugar consumption has decreased 6.7 percent.

For the entire 2010/11 year, the USDA expects HFCS to constitute 30 percent of combined sugar and HFCS consumption. This amount equals 1.750 million metric tons of HFCS. Sugar consumption is projected at 4.086 million metric tons, tel quel, or 4.329 million MTRV. These amounts are the same as projected last month.

The USDA assumes that ending sugar stocks will equal 22 percent of projected sugar consumption, or 952,000 MTRV. Exports are projected at a level that achieves a supply-use balance. With the decrease in expected production of 100,000 MTRV, exports are projected lower by 100,000 MTRV as well. The new export projection is 1.232 million MTRV.

A preliminary estimate of U.S. imports of Mexican sugar through February is 488,000 MTRV. This amount would constitute about 40 percent of total U.S. expected sugar imports from Mexico (1.224 million MTRV). This percentage is higher than corresponding percentages for FY 2008 (23.2 percent), FY 2009 (35.9 percent), and FY 2010 (23.3 percent).

Mexican refined sugar prices remain lower than U.S. prices for comparable sugar products. The wholesale price of refinado sugar in Mexico City averaged 42.6 cents per pound in February, while the low range of U.S. refined beet sugar price quoted in *Milling and Baking News* averaged 54.0 cents per pound in February. This price differential serves to attract refinado sugar shipments to the United States. In contrast, the U.S. raw sugar nearby No. 16 price averaged 39.7 cents per pound in February and the Mexico City estandar price averaged 37.4 cents per pound, only about 2 cents less. The U.S. unit import values of Mexican sugar in January averaged 34.3 cents per pound for raw and 37.4 cents per pound for refined.

U.S. exports of HFCS to Mexico have amounted to 307,534 metric tons, dry weight for the period October 2010 – January 2011. This is about 18 percent higher than the same period last year. The export unit value of HFCS 55 exports was 20 cents per pound, dry weight for January, far below sugar prices in Mexico.

U.S. Sugar

Based on processors' reports, USDA projects FY 2011 cane sugar production in Florida at 1.44 million STRV -- 60,000 STRV less than last month and 260,000 STRV less than in December. This represents a 15.3 percent reduction from December levels. The reduction stems from severe freezing conditions in the Florida cane growing area in mid-December. The National Agricultural Statistics Service (NASS) reduced its estimated Florida sugarcane for sugar yield from 35.9 tons to 32.7 tons per acre. Projected sugar per acre is 3.84 STRV. This year's sugar yield joins the FY 2006 level (3.64 STRV) as one of the the two lowest levels since FY 1990 (3.45 STRV).

Expected FY 2011 production in other cane sugar and beet sugar areas was not changed this month. Total cane sugar production is projected at 3.150 million STRV, and beet sugar production is projected at 4.800 million STRV. Table 1 provides a concise summary of the 2010/11 sugarbeet season. Although production of sugar from this sugarbeet crop has been good, a higher percentage of this year's harvest season than average took place before the beginning of the fiscal year on October 1.

Sugar imports are projected at 3.135 million STRV, a decrease of 110,000 STRV from last month. This decrease stems from lower sugar production in Mexico, as discussed above.

Projected U.S. sugar use is unchanged from last month. Deliveries for human consumption/miscellaneous are projected at 11.0 million STRV.

Beginning stocks for FY 2011 were increased by 7,253 STRV, due to a revision of FY 2010 estimated cane sugar production in Florida. Ending-year sugar stocks are projected at 1.186 million STRV. This projection is the difference between projected total supply (12.596 million STRV) and projected total use (11.410 million STRV). The implied ending-year stocks-to-use ratio is 10.4 percent, down from last month's projection of 11.8 percent.

U.S. White Sugar Premium

Since the first of the year, refined beet sugar prices, Midwest, from the *Milling and Baking News* have averaged 54.6 cents per pound. The corresponding average for the raw sugar nearby No. 16 Intercontinental Exchange (ICE) is 39.1 cents per pound. The margin between refined and raw prices, or the white sugar premium, is calculated at 15.5 cents per pound. This premium has averaged 15.2 cents per pound since mid-2008, more than twice the average for the period 2003 through the first two quarters of 2008.

There have been changes in the U.S. white sugar premium over the longer term. Figure 1 shows quarterly premiums since FY 1982. The average premium from FY 1982 through FY 2002 averaged 4.18 cents per pound. Much of this period was characterized by excess refining capacity. Since FY 2002, the white premium has averaged 8.98 cents per pound, more than twice the earlier period average. The first premium spike resulted after Hurricane Katrina and the second after the Imperial Sugar refinery in Georgia was put out of commission due to a plant explosion. In both instances, reduced overall refining capacity strongly influenced the refined price response.

Figure 2 shows another distinguishing aspect of the FY 1982-2002 and FY 2003-2010 periods. Beginning in FY 2003, an inverse relationship between the white premium and the share of beet sugar of domestic consumption became statistically significant. Prior to FY 2003, the relationship was weakly negative. This is illustrated by the relative flatness of the regression line for this period and low amount of variance (R-squared = 0.187) explained by relationship. This changes dramatically after FY 2002. The regression line is much steeper, showing more of a tradeoff between the premium and the beet sugar consumption share. The amount of "explained" variance is much higher – R-squared = 0.779.

This latter period covers the period in which the 2002 and 2008 Farm Acts imposed marketing allotments on the U.S. sugar sector. An interesting question is whether increased restrictions on sugar marketing have helped to amplify differences between refined and raw sugar prices in the United States.

Table 1--Sugarbeet crop review for 2010/11

Region	States	Planting	Growing Season	Harvest
Northwest	Idaho, Oregon, Washington	Planting completed by mid- April; spring noted by cold and windy weather - consequently, higher-than average replants.	Cool spring and summer inhibited growth.	Began mid- September, with good soil moisture and temperatures. Below-average beet yields.
Michigan	Michigan	Early March start. Favorable weather allowed entire crop to be planted by mid-April.	Good growing season - some dryness in August.	Early start to harvest in August. Good beet yield - second highest on record.
Red River Valley	Minnesota, eastern North Dakota	Early start - more than 95% of crop planted before the end of April. Above-average early spring temperatures helped good emergence.	Good conditions May through August. Cold in September: slowed growth and lowered sugar content.	Early start to harvest in mid-August. Dry conditions helped harvest, although there were some heat shutdowns. Yields were high.
Great Plains	Colorado, Montana, Nebraska, western North Dakota, Wyoming	Cool weather during planting; Hard freeze in early May caused replanting: Nebraska (35%), Colorado (16%), Montana (13%).	Few disease issues; good water supply for irrigation.	Warm and dry harvest conditions in all areas - some heat shutdowns.
Southwest	California	Planting for 2009/10 crop began first week of September 2009. Followed by good emergence and strong stands.	Generally good conditions. Timely rain in January helped the crop -- also helped by warmer-than-usual February.	Harvest started beginning of April. Crop was clean and well-topped. Good growth continued through long harvest, which ended August 10.

Source: The *Sugarbeet Grower*, January 2011.

Figure 1

U.S. white sugar premium (raw-refined sugar price margin)
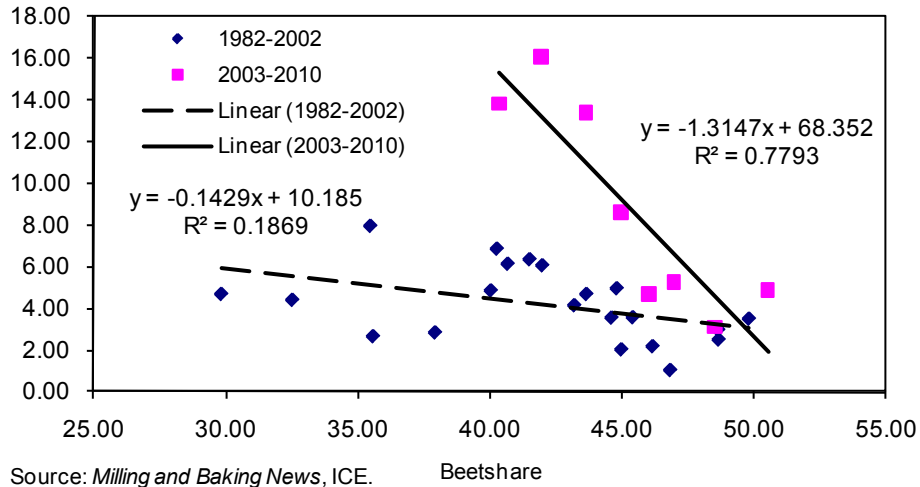
Cents per pound
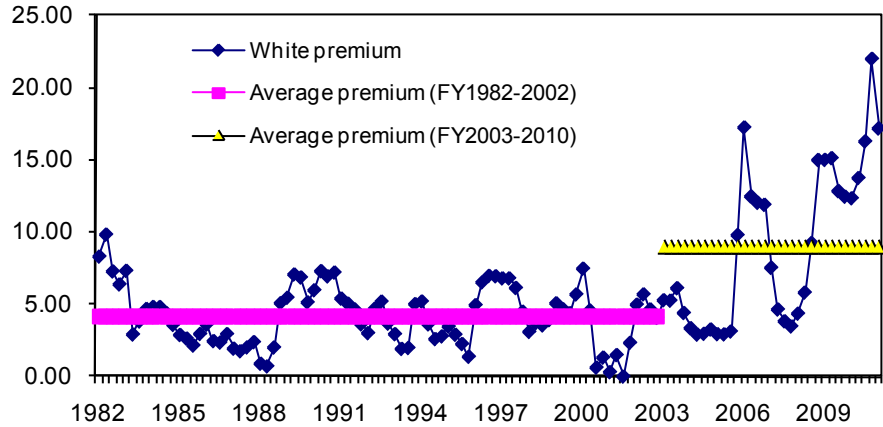
Source: *Milling and Baking News*, ICE.

Figure 2

Relationship between U.S. white premium margin and the beet sugar share of U.S. consumption

White premium margin

Source: *Milling and Baking News*, ICE.   Beetshare

Honey

The combined 12-percent increase in honey yield per bee colony and 7.4-percent expansion of the number of bee colonies produced 20 percent more honey for U.S. beekeepers in 2010. On top of this sharp gain in production, honey prices jumped 9 percent to a record $1.60 per pound from $1.47 in 2009. The result of this fortuitous price movement from the perspective of the beekeepers was a 31-percent boost in total value of honey production. The 13-cent gain per pound of honey is attributed to the overall rise in caloric sweetener prices, as well as to domestic economic recovery. The price of imported honey also climbed 11 percent to a record $1.16 per pound, in part due to the depreciation of the dollar in 2010.

California benefited the most from this upward price development, given the State's 55,000 additional bee colonies and the more-than-doubled average honey yield (from 33 to 67 pounds per colony), which together generated a 163-percent gain in production value. North Dakota, the historic production leader, did not lag far behind, achieving a 47-percent boost in honey value to $70.1 million in 2010, which was 64 percent larger than California's. North Dakota's record $137.41 farm value per bee colony remains unchallenged among State rankings. After California and North Dakota, only Texas posted double-digit expansion in yield per colony in 2010 among major States. The 65.5-pound average yield per bee colony in the United States in 2010 still remains below the past 25-year average yield of 70.5 pounds, which was last surpassed in 2005.

Despite the largest domestic honey production since 2004, the share of imports in U.S. honey consumption reached a record 61.3 percent in 2010, more than twice as high as in 1995. The 251.2 million pounds of imported honey in 2010 ranks second only to 2006's 277.6 million pounds, when domestic production fell by 20 million pounds from the preceding year. The unprecedented $1.16 average price per pound of imported honey occurred in spite of a 19-percent jump in import volume. The top three foreign suppliers were Vietnam, India, and Argentina, which together supplied half of U.S. honey imports in 2010. The fastest rising major supplier is Malaysia, which ranked fourth after Argentina. Indonesia and Mexico are other upcoming significant suppliers. Although China is by far the world's largest honey producer, it is not currently a major supplier to the United States because of high tariffs imposed as a result of previous anti-dumping charges filed by the American Honey Producers Association.

U.S. consumption of honey was 14 percent higher in 2010 than in 2009, as domestic use climbed to 410 million pounds, the second highest level after 2006, despite record prices. Per capita use is 1.3 pounds, up from 1.2 pounds in 2009, but remaining close to the average level of consumption over the past decade. The beginning stock level of 45.3 million pounds in 2011 is low relative to the 55.6 million pound average stock level during the past decade. Thus, if domestic demand for honey remains as strong as expected in 2011, prices are likely to stay relatively high, especially in view of elevated sugar prices and expected further depreciation of the dollar. As a premium sweetener, honey, along with maple syrup, commands premium prices relative to sugar. And relative to sugar, import prices for honey are more responsive to international price changes, since imported honey represents a larger share of domestic consumption than sugar imports.

Figure 3

U.S. honey production and imports are up sharply in 2010

Million pounds
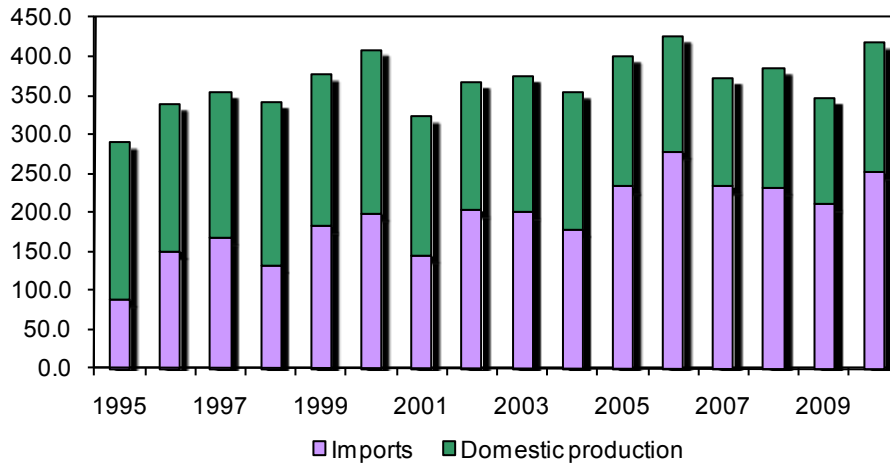
Sources: USDA, NASS, *Honey;* U.S. Census Bureau.

Sugar Market Competitiveness in Brazil: Costs of Production and World Sugar Prices

Analysis of competitiveness in global sugar/sweetener markets is complicated by the fact that markets are generally characterized by domestic and trade-related policy distortions that make it difficult to discern the underlying competitive position of individual market participants. Sugar producers in many countries argue that they are cost-efficient even though their production costs usually exceed the world price of sugar. They claim that the world price is a biased measure against which to compare domestic costs, due to the policies of other producing and consuming countries. Another point of view is that world sugar prices over time mirror changes in costs of production of the largest producers and traders. This short article reviews some of the evidence supporting this thesis. An important consideration is that changes in exchange rates, especially between the Brazil *real* and U.S. dollar, can strongly influence the effect of changing costs on world prices.

LMC International is the primary source for estimates of world sugar and high fructose syrup (HFS) costs of production.[1] The data go back to 1979/80 and extend through 2009/10. Field, factory, and administrative costs are detailed for 35 beet sugar producing countries and 61 cane sugar producing countries. HFS production costs are detailed for 18 countries. LMC International bases its production cost estimates on an engineering cost approach. Its computations account for the physical input factors of labor, machinery, fuel, chemicals, and fertilizers used in alternative technologies employed in field, factory, and administrative operations. LMC International estimates are of actual factor use and do not necessarily imply optimal or desirable use of factors.

Cane Sugar in World Sweetener Markets and Brazil

Since 2000, world cane sugar production has increased over 30 percent. Cane sugar's share of the combined sweetener production grew from 70 to 79 percent over the decade. Cane sugar production growth has been predominantly centered in the low-cost producing area of Center/South Brazil. In contrast, HFS grew about 4 percent over the decade, while beet sugar production decreased more than 5 percent.

Brazil is the world's largest sugar exporter. Figure A-1 shows Brazilian raw and refined sugar exports from 2000 through 2009 and figure A-2 shows Brazil's share of world raw sugar and refined sugar exports for the same period. Brazil's share of raw exports for the entire period was 63 percent. The corresponding share for refined exports was 34 percent.[2] Because of Brazil's dominant share of the world sugar market, sugar events occurring in Brazil have a likelihood of affecting world sugar markets.

Brazil Center/South Production Costs and World Raw Sugar Price

LMC International reports most of its cost data in terms of dollars per metric ton (mt).
Figure A-3 shows dollar and Brazilian *real* indexes of Center/South cane sugar production. The dollar index is on the left and *real* index is on the right. Both indexes are defined so that averaged costs 2000/01 through 2009/10 are equal to 100. The dollar index shows considerably more upward growth than the *real* index. The coefficient of variation, defined as the standard of deviation of a series divided by its mean, is about half as much as for the *real* index (0.131) as for the dollar index (0.260). In other words, costs in Center/South Brazil have grown more and exhibited more variation in terms of dollars than in terms of *reals*.

The relationship between the Center/South cost of production measured in dollars and the dollar/*real* exchange rate is shown in figure A-4. The correlation between the two series equals 0.84. Between 2002/03 and 2009/10, the dollar/*real* exchange rate grew 71 percent and Center/South costs measured in dollars increased 96 percent. In

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[1] www.lmc.co.uk.

[2] These exports and share levels are calculated from sugar trade data compiled by Global Trade Information Services, Inc (GTIS). GTIS sugar data come from official Government foreign trade statistics of most, but not all, countries in the world.

contrast, Center/South costs measured in *reals* increased only 14 percent. The fact that world sugar prices are quoted in U.S. currency makes Brazil's dollar costs of production more important than localized domestic factors affecting costs during the past decade.

Changes in Center/South production costs measured in U.S. currency are likely to be transmitted to the larger market because Brazil constitutes such a large share of the raw sugar market. This relationship is illustrated in figure A-5. The world price index is the April/March average of the daily nearby No.11 futures prices divided by the 14-year average cost over the period 1995/96-2009/2010. The Center/South cost of production index is defined similarly. The two series track closely (correlation = 0.82), with the cost of production series below world price series 10 out of 16 times.

Using more formal econometric modeling, it can be shown that world raw sugar prices and Center/South costs of production measured in U.S. dollars are cointegrated (table A-1). This means that, statistically, there is a long-run or equilibrium relationship between Center/South dollar costs of production and world raw sugar prices. Although there may be divergence in the short-run between the world price and South/Center production costs, in the longer-term they converge to their equilibrium relationship to each other. Evidence of this type of relationship does not hold for world prices and costs of production in other sugar country groupings.

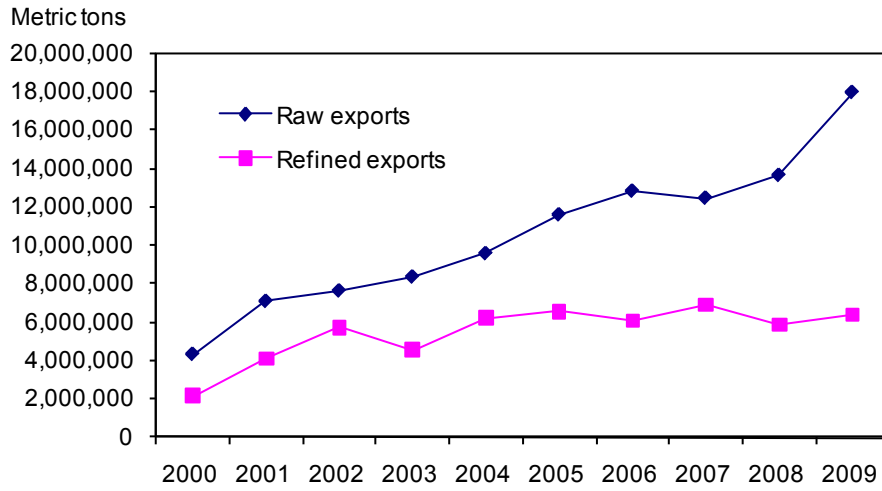### Changes in Competitiveness 2000/01 to 2009/10

As seen in figure A-3, Brazil Center/South sugar production costs were decreasing from 2000/01 to 2002/03 but have been increasing steadily through 2008/09. The average production cost for the period 2005/06 – 2009/10 was over 54 percent higher than the average for 2000/01 – 2004/05. In comparison, the same averaged production costs of major export competitors (Australia, Colombia, Guatemala, South Africa, and Thailand) increased only 25.6 percent between periods. In the NAFTA cane producing area (United States and Mexico), comparable period costs increased only 16.8 percent.[3]

Figure A-6 shows annual production costs of the major export competitors (excluding Brazil) and the NAFTA cane producers. Brazil was most competitive with major exporters in 2004/05, when the exporters' costs were 45 percent higher than Center/South costs. Since that time, relative costs of the exporters have steadily decreased relative to the Center/South. By 2009/10, exporters' costs were only about 12 percent higher than the Center/South. A similar trend is seen with respect to costs in the NAFTA region. In 2002/03, NAFTA costs were 89 percent higher, and by 2009/10, the costs were only 31 percent higher.
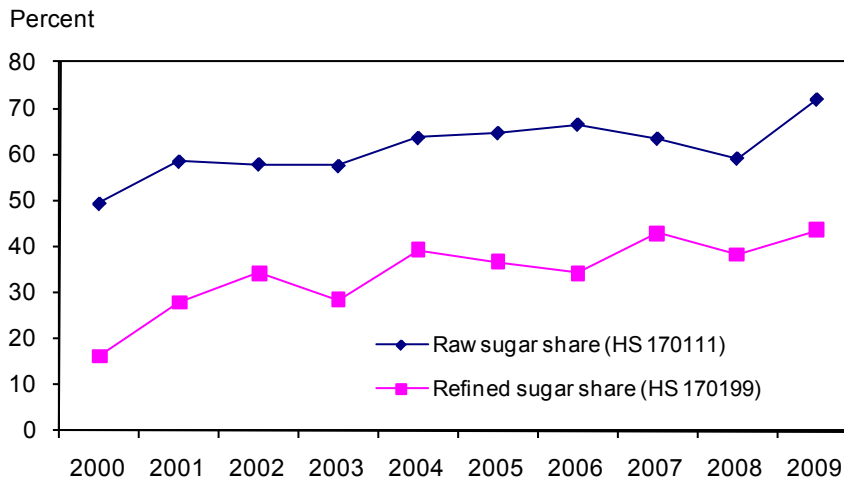
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[3] NAFTA = North American Free Trade Agreement.

Figure A-1
Brazil raw and refined sugar exports, 2000-09

Metric tons

Source: GTIS.

Figure A-2

Brazil's share of world raw and refined sugar exports

Percent

Source: GTIS.

Sugar and Sweeteners Outlook/SSS-M-271
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Figure A-3

Brazil's Center/South cost of production (COP) in dollar and reals

Average dollar COP=100   Average real COP=100
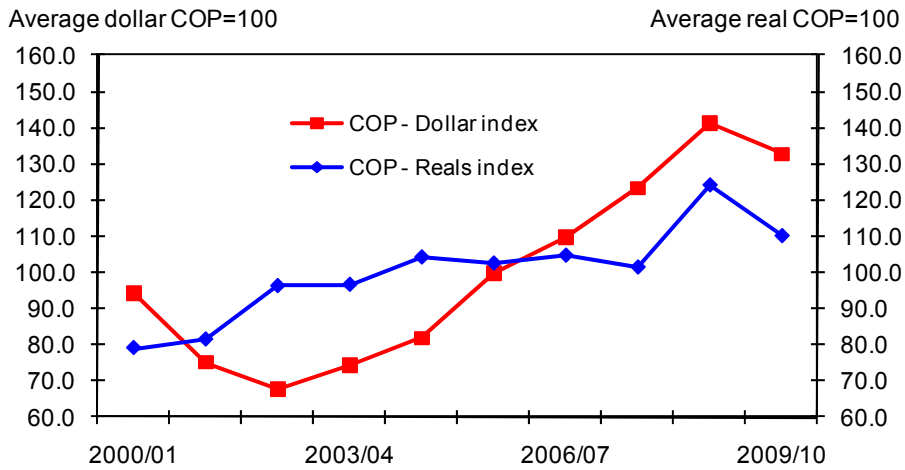
Source: LMC International.

Figure A-4

Brazil Center-South cost of sugar production and dollar/real exchange rate, 2000/01-2009/10

Dollars/real   Cost of production ratio
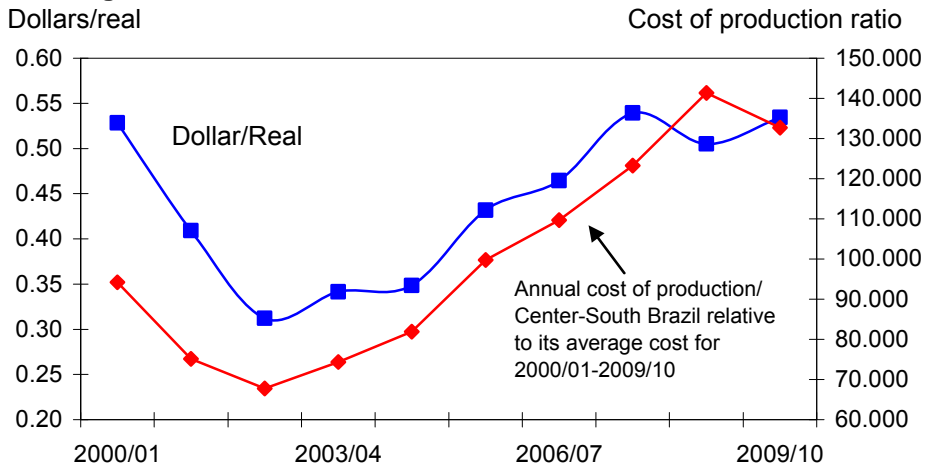
Source: LMC International.

Figure A-5

Brazil Center/South (C/S) cost of production (COP) and world raw sugar price indexes, 1989/90-2009/10

Brazil c/s COP average=100
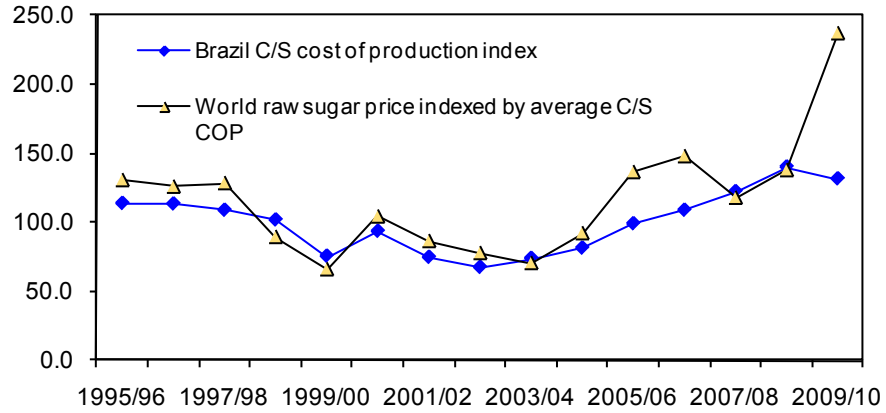
Source: ICE, nearby futures No.11 contract, April-March year; LMC International.

Figure A-6

Average costs of sugar production of major sugar exporters and NAFTA cane region relative to corresponding Brazil Center/South average cost, by year, 2000/01-2009/10

Center/South Brazil=100

Source: LMC International.

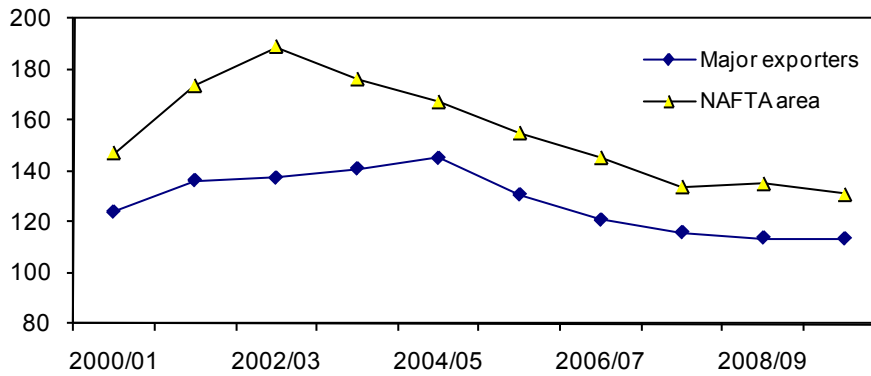Table A-1--Time series properties of Brazil Center/South costs of sugar production and world raw sugar price, 1995/96-2009/10

Augmented Dickey-Fuller (ADF) test for stationarity

	Statistic	Critical value	
		5%	1%
Levels			
Cost of production	- 0.8799	-3.0818	-3.9635
World raw sugar price 1/	- 0.6906	-3.0818	-3.9635
Johansen's cointegration rank test, λ max test statistic			
H0: r = 0, H1: r = 1	18. 0610 **	12. 53	16. 31
H0: r = 1, H1: r = 2	0. 2514	3. 84	6. 51

Note: * = .05 level (5%) ** = .01 level (1%).
1/ April/March marketing year average of nearby No. 11 ICE raw sugar contract.

Both models for the ADF test include a constant term, but not a trend. Schwarz Information Criterion (SIC) is used to determine lag lengths. the null hypothesis of the ADF test is that the variable is not stationary.

The cointegrating vector in Johansen's test includes neither a constant nor trend term. The SIC was used to determine lag lengths. The λ max statistic tests the null hypothesis that the number of cointegrating vectors is zero (r = 0) against the alternative of one cointegrating vector (r = 1). If this null hypothesis is rejected, the presence of one cointegrating vector (r = 1) is tested against the alternative of two (r = 2). The λ max test supports the presence of one cointegrating vector between the Center/South costs of production and the world price.

Table 2--U.S. sugar: supply and use, by fiscal year 1/, 3/15/11

Items	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
					1,000 short tons, raw value						
Beginning stocks 2/	2,216	2,180	1,528	1,670	1,897	1,332	1,698	1,799	1,664	1,534	1,510
Total production 3/ 4/	8,769	7,900	8,426	8,649	7,876	7,399	8,445	8,152	7,531	7,975	7,950
Beet sugar	4,680	3,915	4,462	4,692	4,611	4,444	5,008	4,721	4,214	4,575	4,800
Cane sugar	4,089	3,985	3,964	3,957	3,265	2,955	3,438	3,431	3,317	3,400	3,150
Florida	2,057	1,980	2,129	2,154	1,693	1,367	1,719	1,645	1,577	1,646	1,440
Louisiana	1,585	1,580	1,367	1,377	1,157	1,190	1,320	1,446	1,397	1,481	1,400
Texas	206	174	191	175	158	175	177	158	152	112	140
Hawaii	241	251	276	251	258	223	222	182	192	161	170
Puerto Rico	0	0	0	0	0	0	0	0	0	0	
Total imports	1,590	1,535	1,730	1,750	2,100	3,443	2,080	2,620	3,082	3,319	3,135
Tariff-rate quota imports 5/	1,277	1,158	1,210	1,226	1,408	2,588	1,624	1,354	1,370	1,854	1,371
Other program Imports	238	296	488	464	500	349	390	565	308	450	375
Non-program imports	76	81	32	60	192	506	66	701	1,404	1,014	1,389
Mexico 6/							60	694	1,402	807	1,349
Total supply	12,575	11,615	11,684	12,070	11,873	12,174	12,223	12,571	12,277	12,828	12,596
Total exports 3/	141	137	142	288	259	203	422	203	136	211	225
Quota-exempt for reexport	141	137	142	288	259	203	422	203	136	211	225
Other exports	0	0	0	0	0	0					
CCC disposal, for export	0	0	0	0	0	0					
Miscellaneous	123	-24	161	23	94	-67	-132	0	0	-45	0
CCC disposal, for domestic non-food use	10	0	0	0	0	0	0	0	0	0	0
Refining loss adjustment	0	0	0	0	0	0	0	0	0	-45	0
Statistical adjustment 7/	113	-24	161	23	94	-67	-132	0	0	0	0
Deliveries for domestic use	10,132	9,974	9,711	9,862	10,188	10,340	10,135	10,704	10,607	11,152	11,185
Transfer to sugar-containing products											
for exports under reexport program	98	156	183	142	121	106	169	141	120	201	145
Transfer to polyhydric alcohol, feed	33	33	24	41	48	51	53	61	46	35	40
Deliveries for domestic food and beverage use 8/	10,000	9,785	9,504	9,678	10,019	10,184	9,913	10,501	10,441	10,917	11,000
Total use	10,396	10,087	10,014	10,172	10,542	10,476	10,424	10,907	10,743	11,318	11,410
Ending stocks 2/	2,180	1,528	1,670	1,897	1,332	1,698	1,799	1,664	1,534	1,510	1,186
Privately owned	1,395	1,316									
CCC	784	212									
						Percent						
Stocks-to-use ratio	20.97	15.15	16.68	18.65	12.63	16.21	17.25	15.26	14.28	13.35	10.39

NOTE: Numbers may not add due to rounding.
1/ Fiscal year beginning October 1. 2/ Stocks in hands of primary distributors and CCC. 3/ Historical data are from FSA (formerly ASCS), *Sweetener Market Data* (SMD), and NASS, Sugar Market Statistics prior to 1992. 4/ Production reflects processors' projections compiled by the Farm Service Agency.
5/ Actual arrivals under the tariff-rate quota (TRQ) with late entries, early entries, and (TRQ) overfills assigned to the fiscal year in which they actually arrived.
The 2010/11 available TRQ assumes shortfall of 150,257 tons. 6/ Starting in 2007/08, total includes imports under Mexico's WTO TRQ allocation for raw and refined sugar. 7/ Calculated as a residual. Largely consists of invisible stocks change.
8/ For FY 2008-09, combines SMD deliveries for domestic human use, SMD miscellaneous uses, and the difference between SMD imports and *World Supply and Demand Estimates* imports.

Table 3–U.S. sugar: supply and use (including Puerto Rico), fiscal years, metric tonnes 1/, 3/15/11

Items	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11
					1, 000 metric tons, raw value						
Beginning stocks 2/	2,010	1,977	1,386	1,515	1,721	1,208	1,540	1,632	1,510	1,392	1,370
Total production 3/ 4/	7,955	7,167	7,644	7,846	7,145	6,712	7,662	7,396	6,832	7,235	7,212
Beet sugar	4,245	3,552	4,048	4,257	4,183	4,032	4,543	4,283	3,822	4,151	4,354
Cane sugar	3,710	3,615	3,596	3,590	2,962	2,681	3,119	3,113	3,009	3,084	2,858
Florida	1,866	1,796	1,932	1,954	1,536	1,240	1,559	1,492	1,431	1,493	1,306
Louisiana	1,438	1,433	1,240	1,249	1,049	1,079	1,198	1,312	1,267	1,344	1,270
Texas	187	158	173	159	143	159	161	143	138	101	127
Hawaii	219	227	251	228	234	202	201	165	174	146	154
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0
Total imports	1,443	1,393	1,570	1,588	1,905	3,124	1,887	2,377	2,796	3,011	2,844
Tariff-rate quota imports 5/	1,158	1,051	1,098	1,113	1,277	2,348	1,473	1,229	1,243	1,682	1,244
Other program Imports	216	269	443	421	454	317	354	513	279	408	340
Non-program imports	69	73	29	54	174	459	60	636	1,274	920	1,260
Mexico 6/							54	630	1,272	732	930
Total Supply	11,408	10,537	10,599	10,950	10,771	11,044	11,088	11,404	11,138	11,632	11,317
Total exports 3/	128	125	129	261	235	184	383	184	123	191	204
Quota-exempt for reexport	128	125	129	261	235	184	383	184	123	191	204
Other exports	0	0	0	0	0	0	0	0	0	0	0
CCC disposal, for export	0	0	0	0	0	0	0	0	0	0	0
Miscellaneous	112	-22	146	20	85	-61	-120	0	0	-41	0
CCC disposal, for domestic non-food use	9	0	0	0	0	0	0	0	0	0	0
Refining loss adjustment	0	0	0	0	0	0	0	0	0	-41	0
Statistical adjustment 7/	103	-22	146	20	85	-61	-120	0	0	0	0
Deliveries for domestic use	9,191	9,048	8,810	8,946	9,243	9,381	9,194	9,710	9,623	10,117	10,147
Transfer to sugar-containing products for exports under reexport program	89	141	166	129	110	96	153	128	109	183	132
Transfer to polyhydric alcohol, feed	30	30	22	38	44	46	48	56	42	31	36
Deliveries for domestic food and beverage use 8/	9,072	8,877	8,622	8,780	9,089	9,239	8,993	9,527	9,472	9,903	9,979
Total Use	9,431	9,151	9,084	9,228	9,563	9,504	9,457	9,895	9,746	10,267	10,351
Ending stocks 2/	1,977	1,386	1,515	1,721	1,208	1,540	1,632	1,510	1,392	1,370	1,076
Privately owned	1,266	1,194									
CCC	711	192									
						Percent						
Stocks-to-use ratio	20.97	15.15	16.68	18.65	12.63	16.21	17.25	15.26	14.28	13.35	10.39

NOTE: Numbers may not add due to rounding.
1/ Fiscal year beginning October 1. 2/ Stocks in hands of primary distributors and CCC. 3/ Historical data are from FSA (Farm Service Agency), *Sweetener Market Data* (SMD), and NASS, Sugar Market Statistics prior to 1992. 4/ Production reflects processors' projections compiled by the Farm Service Agency.
5/ Actual arrivals under the tariff-rate quota (TRQ) with late entries, early entries, and (TRQ) overfills assigned to the fiscal year in which they actually arrived.
The 2010/11 available TRQ assumes shortfall of 136,311 tonnes. 6/ Starting in 2007/08, total includes imports under Mexico's WTO (World Trade Organization)
TRQ allocation for raw and refined sugar. 7/ Calculated as a residual. Largely consists of invisible stocks change.
8/ For FY 2008-09, combines SMD deliveries for domestic human use, SMD miscellaneous uses, and the difference between SMD imports and
World Agricultural Supply and Demand Estimates imports.

Table 4--Mexico: sugar production and supply, and sugar and High Fructose Corn Syrup (HFCS) utilization 3/15/2011

Fiscal Year (Oct/Sept)	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11 1/
	1,000 metric tons, raw value										
Beginning stocks	1,063	1,548	1,172	1,194	1,237	1,965	1,294	1,718	1,975	624	973
Production	5,220	5,169	5,229	5,330	6,149	5,604	5,633	5,852	5,260	5,115	5,550
Imports	43	52	63	327	268	240	474	226	160	861	290
Supply	6,326	6,769	6,464	6,851	7,654	7,809	7,401	7,796	7,395	6,600	6,813
Disappearance											
Human consumption	4,481	5,004	5,097	5,380	5,279	5,326	5,133	5,090	5,065	4,615	4,329
Other consumption	142	180	135	220	282	323	390	414	475	302	300
Miscellaneous								-360	-136	-27	
Total	4,623	5,184	5,232	5,600	5,561	5,649	5,523	5,144	5,404	4,890	4,629
Exports	155	413	38	14	128	866	160	677	1,367	737	1,232
Total use	4,778	5,597	5,270	5,614	5,689	6,515	5,683	5,821	6,771	5,627	5,861
Ending stocks	1,548	1,172	1,194	1,237	1,965	1,294	1,718	1,975	624	973	952
	Percentage										
Stocks-to-human consumption	34.5	23.4	23.4	23.0	37.2	24.3	33.5	38.8	12.3	21.1	22.0
Stocks-to-use	32.4	20.9	22.7	22.0	34.6	19.9	30.2	33.9	9.2	17.3	16.2
	1,000 metric tons, dry weight										
HFCS cons. (dry weight)	600	263	130	135	355	667	698	782	653	1,418	1,750

1/ Forecast.

Source: USDA, Foreign Agricultural Service, PSD database (historical data); *World Agricultural Supply and Demand Estimates* (forecast data).

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Data

Tables from the *Sugar and Sweeteners Yearbook* are available in the Sugar and Sweeteners Briefing Room at http://www.ers.usda.gov/briefing/sugar/. They contain the latest data and historical information on the production, use, prices, imports, and exports of sugar and sweeteners.

Related Websites

Sugar and Sweeteners Outlook http://www.ers.usda.gov/Publications/SSS/
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