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# Thailand

# Sugar

# Annual

# 2005

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**Report Highlights:**
MY 2006 sugarcane production is forecast to continue to decline in response to expected continuation of drought-like conditions, leading to a slide sugar production for the third consecutive year. Sugar exports will likely shrink. Exportable supplies could be further restricted if sugar-based ethanol production is achieved.

Includes PSD Changes: Yes
Includes Trade Matrix: Yes
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## Executive Summary

MY 2006 sugarcane production is forecast to decline for the third consecutive in response to continued drier weather conditions. Despite the establishment of sugarcane-based ethanol production facilities in MY 2006, all sugarcane will likely be used for sugar production due to limited sugarcane supplies. Sugar production slide is expected to continue, leading to tighter exportable supplies, fueled by continued growing domestic consumption. However, export prices will likely remain at high levels due to tight global supplies. Refined sugar exports are more profitable than those of raw sugar. Nevertheless, raw sugar exports to the U.S. under the tariff-rate-quota are still so attractive that Thai exporters would always welcome more market access to the U.S.

Despite increased upward pressure on sugarcane prices, the Government is still encouraging the use of sugarcane for ethanol production. Currently, the Government has approved 24 ethanol plants with total production capacity of around 4.2 million liters/day. The sugarcane/molasses -based ethanol will be produced in 15 plants, and the other nine plants will produce cassava-based ethanol. However, the sharp increase in the current prices of sugarcane, molasses, and even cassava, makes ethanol production unprofitable. Also, government policy on sugarcane production and ethanol production has not yet been finalized.

## 1. Sugarcane

# PSD Table

### Country Thailand

### Commodity Sugar Cane for Centrifugal (1000 HA)(1000 MT)

| | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|
| | Revised | | Estimate | | Forecast | |
| | USDA Official [Old] | Post Estimate [New] | USDA Official [Old] | Post Estimate [New] | USDA Official [Old] | Post Estimate [New] |
| **Market Year Begin** | 12/2003 | | 12/2004 | | 12/2005 | |
| Area Planted | 995 | 1200 | 0 | 1050 | 0 | 1000 |
| Area Harvested | 970 | 1050 | 0 | 990 | 0 | 950 |
| Production | 69000 | 64500 | 0 | 48000 | 0 | 42000 |
| TOTAL SUPPLY | 69000 | 64500 | 0 | 48000 | 0 | 42000 |
| Utilization for Sugar | 69000 | 64500 | 0 | 48000 | 0 | 42000 |
| Utilizatn for Alcohol | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL UTILIZATION | 69000 | 64500 | 0 | 48000 | 0 | 42000 |

### 1.1 Production

Despite the current attractive farmgate prices at around 1,000 Baht/ton (roughly U.S.$ 26/MT), far above MY 2005 support prices of 620 Baht/ton, MY 2006 sugarcane production is forecast to decline, for the third consecutive year, to 42 million tons in response to continued drier weather conditions. The harvested areas of the northeastern region, accounting for about 40 percent of total planted area, is expected to drop by 30 percent due to drought. Also, the acreage expansion will likely be limited by a seed shortfall, as seed cane was reportedly also harvested for sugar in the severe drought-damaged areas in the previous year. In the worst case scenario (low precipitation rate continuing through May 2005), production is expected to shrink to 30-35 million tons. However, production is forecast to recover to 55-60 million tons in MY 2007, given normal weather conditions.

In MY 2005, sugarcane production is estimated at 48 million tons, down significantly from the previous year, due to the drought-impacted reduction in yield. The average yield is expected to decline sharply to 46 tons/hectare. The current ex-factory prices of sugarcane are up to around 1,000 baht/ton (roughly U.S.$ 26/MT), up significantly from the previous year, and far above the support prices of 620 baht/ton (roughly U.S.$ 16/MT), as sugar millers are aggressively securing sugar supplies for their pending shipments.

### 1.2 Consumption

All sugarcane is used for sugar production. Thai sugar mills are running at approximately 60 percent of capacity due to drought-reduced sugarcane production. The drought also dampened the average extraction rate of cane for sugar to 108.2 kgs/ton of cane, as compared to 108.7 kgs/ton of cane in the previous year. However, the dry conditions during the harvest are good for sucrose content, up slightly to 12.17 percent, as compared to last year's 12.09 percent. In anticipation of smaller cane crops in MY 2006, sugar mills will likely be able to run at only around 52 percent of their capacity. As a result, the use of sugarcane in ethanol production is expected to be limited. Also, at the moment, the use of molasses, which is by-products of sugar production, is reportedly not cost effective, as the prices of molasses increased significantly to 3,000 baht/ton (roughly U.S.$ 78/MT) due to the limited sugarcane supplies. Meanwhile the prices of ethanol are set at 12.75 baht/liter (roughly U.S. 33 cents/liter). The surge in prices of sugarcane and molasses reportedly would motivate half of the ethanol plants to shift to cassava-based ethanol production.

**1.3 Policy**

The government set MY 2005 minimum prices of sugarcane at a record 620 baht/ton (roughly U.S.$ 16/MT, ex-factory prices), far above the production cost of around 580 baht/ton (roughly US$ 15/MT), mainly due to the surge in world sugar prices. It is expected that this year's market prices will be higher than the minimum prices by around 400 baht/ton. The sharp increase in cane grower income will ease the current financial problem of the state-run Cane and Sugar Fund, as part of this increase from the price difference is subject to be collected for the Fund. In general, the Fund's revenue comes mainly from the Value-Added Tax (VAT) collected on domestic sales of refined sugar, amounting to around 1,300 million bath annually. At the moment, the Fund has a total debt burden to the Bank for Agriculture and Agricultural Cooperatives of around 19 billion baht (roughly U.S.$ 494 million), accrued by the price support program during the past six years when market prices were lower than the minimum prices. As a result, the Fund faces an annual debt service of between 2,000 – 3,000 million baht between CY 2005-2012.

The Government still encourages the additional use of sugarcane for ethanol production in order to keep the price of sugarcane at the current high levels and to reduce imported oil consumption. The Government's Cane and Sugar Board recently proposed an additional allocation of sugarcane for ethanol use in the amount of around 10 million tons, out of the regular allocation for sugar production, including Quota A for domestic consumption, Quota B for long term export contracts, and Quota C for exports to international markets. Sugarcane growers will be guaranteed around 600 baht/ton for production allocated to ethanol. This could reduce the supplies of Thai sugar on the world market by about 1 million tons, which will put upward pressure on world sugar prices. The extraction rate of cane for ethanol is around 70 liters/ton of cane.

At the moment, the Government has approved 24 ethanol plants with a total production capacity of around 4.2 million liters/day. Three of them are now supplying molasses-based ethanol at the capacity of around 400,000 liters/day to domestic oil refineries for gasohol production, a mixture of 10 percent ethanol and 90 percent regular petrol. Ethanol is used to replace imported Methyl Tertiary Butyl Ether (MTBE) in gasoline. The sugarcane/molasses-based ethanol will be produced in 15 plants, starting in CY 2006. Meanwhile, the other nine plants will produce cassava-based ethanol. However, the surge in the current prices of sugar, molasses, and cassava is a major concern among ethanol producers, given the current sugar prices at 1,000 baht/ton against the ethanol optimum prices of 600 baht/ton; molasses prices at 3,200 baht/ton against 1,800 baht/ton; and cassava prices at 1.5 baht/kg against 1.2 baht/kg. Ethanol prices are set by the Government at 12.75 baht/liter. However, according to the government target, demand for ethanol will reach 3 million liters/day when gasohol replaces all regular gasoline. At the moment, ethanol consumption is around 50,000 liters/day. By the end of CY 2006 when all premium gasoline will be replaced by gasohol, the ethanol demand will reach 1 million liters/day.

## 2. Sugar

# PSD Table

### Country Thailand

### Commodity Sugar, Centrifugal (1000 MT)

| | 2004 | | 2005 | | 2006 | |
|---|---|---|---|---|---|---|
| | Revised | | Estimate | | Forecast | |
| | USDA Official [Old] | Post Estimate [New] | USDA Official [Old] | Post Estimate [New] | USDA Official [Old] | Post Estimate [New] |
| **Market Year Begin** | 12/2003 | | 12/2004 | | 12/2005 | |
| Beginning Stocks | 1045 | 1045 | 915 | 1194 | 585 | 724 |
| Beet Sugar Production | 0 | 0 | 0 | 0 | 0 | 0 |
| Cane Sugar Production | 7010 | 6989 | 6520 | 5200 | 0 | 4500 |
| TOTAL Sugar Production | 7010 | 6989 | 6520 | 5200 | 0 | 4500 |
| Raw Imports | 0 | 0 | 0 | 0 | 0 | 0 |
| Refined Imp.(Raw Val) | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL Imports | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL SUPPLY | 8055 | 8034 | 7435 | 6394 | 585 | 5224 |
| Raw Exports | 2630 | 2281 | 2450 | 1630 | 0 | 1300 |
| Refined Exp.(Raw Val) | 2530 | 2579 | 2350 | 1990 | 0 | 1600 |
| TOTAL EXPORTS | 5160 | 4860 | 4800 | 3620 | 0 | 2900 |
| Human Dom. Consumption | 1980 | 1980 | 2050 | 2050 | 0 | 2100 |
| Other Disappearance | 0 | 0 | 0 | 0 | 0 | 0 |
| Total Disappearance | 1980 | 1980 | 2050 | 2050 | 0 | 2100 |
| Ending Stocks | 915 | 1194 | 585 | 724 | 0 | 224 |
| TOTAL DISTRIBUTION | 8055 | 8034 | 7435 | 6394 | 0 | 5224 |

## 2.1 Production

In anticipation of a continued drop in sugarcane production resulting from unfavorable weather conditions, sugar production is forecast to decline to 4.5 million tons in MY 2006, down for the third consecutive year. MY 2005 sugar production is also estimated to shrink to 5.2 million tons. Most sugar mills will likely finish their crushing a month early in March due to the shortfall of sugarcane. The allocation of sugar production remains unchanged in MY 2005, including Quota A in the amount of 2.0 million tons of plantation white sugar for domestic consumption (compared to 1.92 million tons in the previous year); Quota B in the amount of 800,000 tons of raw sugar to cover long term export contracts; and Quota C (the balance) for export to the international market. The Government requires that mills give priority to the production of plantation white sugar for the local market, and raw sugar for Quota B, over sugar for exports under Quota C (both white and raw sugars). The increase in Quota A this year reflects the shift of export-oriented food manufacturers who were allowed to buy relatively cheaper sugar from Quota C in the previous year, as current export prices are close to domestic prices. In MY 2003, they bought 240,000 tons out of the approved amount of 320,000 tons.

### 2.2 Consumption

MY 2005 and MY 2006 sugar consumption are forecast to continue the upward trend, following the country's economic expansion. Direct household consumption still dominates the market, accounting for about 68 percent of total domestic consumption. The balance goes for industrial consumption. Beverage industry demand for sugar remains strong, accounting for about half of total industrial uses, as the use of high fructose syrup (HFS) is reportedly limited by high operating costs. The HFS production in Thailand is mainly made of cassava starch, of which the prices are also under upward pressure due to drought-damaged cassava crops.

Domestic prices of sugar remain unchanged at 11.77 baht/kg (roughly U.S. 13.9 cents/lb) for wholesale, and 13.25 baht/kg (roughly U.S. 15.7 cents/lb) for retail. However, the wholesale price of molasses is currently at around 3,200 baht/ton (roughly U.S.$ 83/MT), up significantly from around 1,800 baht/ton (roughly U.S.$ 45/MT), in response to the contraction in the sugarcane crop.

### 2.3 Trade

# Export Trade Matrix

**Country** Thailand

**Commodity** Sugar, Centrifugal

| | | | |
|---|---|---|---|
| Time Period | Jan. - Dec. | Units: | MTRV |
| Exports for: | 2003 | | **2004** |
| U.S. | 14615 | U.S. | 14615 |
| Others | | Others | |
| Indonesia | 1276410 | Indonesia | 1327521 |
| Japan | 565822 | Japan | 754013 |
| China | 208207 | China | 286468 |
| Malaysia | 448296 | Malaysia | 577117 |
| Korea, Rep. | 249473 | Korea, Rep. | 228157 |
| Cambodia | 112394 | Cambodia | 195914 |
| Taiwan | 260317 | Taiwan | 418774 |
| Russia | 713886 | Russia | 76942 |
| Singapore | 78142 | Singapore | 117294 |
| Bangladesh | 206036 | Bangladesh | 304502 |
| Total for Others | 4118983 | | 4286702 |
| Others not Listed | 1245867 | | 533481 |
| Grand Total | 5379465 | | 4834798 |

In anticipation of the smaller sugarcane crop resulting from the dry weather conditions, sugar exports are forecast to decline to 3.6 million tons in MY 2005, and to 2.9 million tons in MY 2006. The tight supply situation will likely increase upward pressures on export prices. Currently, raw sugar export prices reportedly continue to increase to around U.S. 10 cents/lb (roughly U.S.$ 220/MT), as compared to U.S. 8-9 cents/lb (roughly U.S.$ 176-198/MT) in the previous year. Also, the prices of refined sugar are reportedly higher than those of raw sugar by about U.S.$ 60/MT, as compared to only about U.S.$ 30/MT in the past. This resulted in the shift of raw sugar exports to refined sugar. The share of raw sugar exports declined to around 45 percent of total sugar exports, as compared to no less than 50 percent in the past. However, raw sugar exports to the U.S. under the tariff-rate-quota (TRQ) are still attractive, as export prices will remain well above the world market prices. Thai sugar exporters continue to seek more market access in the U.S., as they expect the U.S.'s TRQ allocation of raw sugar for Thailand at approximately 185,000 metric tons (based on growing export potential during the past seven years), against the current allocation of 14,743 metric ton. Meanwhile, the Philippines are allocated up to 142,160 metric tons, despite its less export potentials.

Asian countries, in particular Indonesia, Malaysia, Japan and Taiwan, will likely continue to be major markets for Thai sugar in MY 2005 due to the freight cost advantage over Brazilian sugar by around U.S. 1-2 cents/pound (roughly U.S.$ 25-40/MT). Indonesia's import demand (Thailand's largest sugar importer) for raw sugar and refined sugar is expected to remain strong due to the limited exportable supply from other suppliers, like India, where the crops were reportedly damaged by drought. India is also facing a sugar supply deficit, leading to greater import demand from major suppliers, especially Brazil. India reportedly needs to buy an additional 1 million tons in order to meet domestic demand. Like India, China's sugar import demand is strong due to a tight supply situation. Meanwhile, exports of Thai sugar to Russia are estimated to continue the downward trend, as Brazil will likely be the major supplier, with its bumper crop. At the moment, exporters are facing difficulties in securing sugar supplies for their pending shipments. Most exporters are limiting their short positions with foreign buyers due to the current tight supplies.

In CY 2004, despite the continued increase in Thai sugar exports to traditional markets in Asia, total sugar exports declined significantly, following a sharp contraction of raw sugar exports to Russia. The reduction in raw sugar exports to Russia reflected the production recovery in Cuba, which is the traditional supplier of raw sugar to Russia. Meanwhile, Taiwan was the emerging market for Thai raw sugar in response to the tariff reduction following the WTO agreement.

### 2.4 Stocks

MY 2005 and MY 2006 stocks will likely shrink to new record lows for the past five years, due mainly to continued contraction in the sugarcane crop.

### 2.5 Policy

Thailand has had an import quota for sugar since 1995, following the WTO agreement. However, import demand remains insignificant due to sufficient domestic supplies.

| Year | Import Quota (Metric Ton) | Tariff Rate (Percent) | |
|---|---|---|---|
| | | In-Quota | Out of-Quota |
| 1995 | 13,105.00 | 65 | 103 |
| 1996 | 13,177.78 | 65 | 102 |
| 1997 | 13,250.56 | 65 | 101 |
| 1998 | 13,323.33 | 65 | 100 |
| 1999 | 13,396.11 | 65 | 99 |
| 2000 | 13,468.89 | 65 | 98 |
| 2001 | 13,541.67 | 65 | 97 |
| 2002 | 13,614.44 | 65 | 96 |
| 2003 | 13,687.22 | 65 | 95 |
| 2004 | 13,760.00 | 65 | 94 |
| 2005 | 13,760.00 | 65 | 94 |
| 2006 | 13,760.00 | 65 | 94 |

*Source: Ministry of Commerce*

After the petition of Australia, Brazil and Thailand to the WTO on the EU's sugar subsidy, the EU has appealed the WTO's panel report on the petition, which found that the EU subsidized sugar exports beyond the level it formally notified to the WTO. The consideration will be finalized April 28, 2005. If the protesting countries win the WTO case, the EU has to limit its sugar export subsidy. This will result in more export opportunities for these countries and an increase in world sugar prices. Thai sugarcane growers will eventually be better off from the resulting surge in farmgate prices. Also, the Government would be better able to reduce its huge debt burden from the price support program of the state-run Cane and Sugar Fund. However, sugar export volume will stay limited during MY 2005 – MY 2006 due to the tight domestic supplies.

## 3. Supplementary Tables

### Table 1: Thailand's Planted Area of Sugarcane by Region

Unit: Hectare

| Region | 1996/97 | 1997/98 | 1998/99 | 1999/2000 | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|---|---|---|---|
| Northeast | 326,203 | 328,832 | 330,930 | 351,641 | 319,119 | 400,217 | 468,707 | 424,004 |
| North | 239,239 | 222,212 | 211,523 | 206,863 | 189,010 | 219,415 | 235,030 | 261,099 |
| Central | 444,743 | 392,536 | 375,078 | 379,347 | 368,894 | 391,537 | 435,596 | 436,310 |
| South | - | - | - | - | - | - | - | - |
| Country Total | 1,010,184 | 943,580 | 917,532 | 937,852 | 877,023 | 1,011,169 | 1,139,289 | 1,121,413 |

Source: Office of Agricultural Economics, Ministry of Agriculture and Cooperatives

### Table 2: Thailand's Sugarcane Production by Region

Unit: Metric Ton

| Region | 1996/97 | 1997/98 | 1998/99 | 1999/2000 | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|---|---|---|---|
| Northeast | 17,782,489 | 15,353,041 | 18,859,249 | 19,439,101 | 18,153,103 | 24,020,428 | 30,997,608 | 24,253,844 |
| North | 13,372,021 | 10,258,143 | 11,391,153 | 11,946,037 | 10,391,682 | 12,863,333 | 14,992,069 | 15,162,980 |
| Central | 25,239,428 | 17,854,351 | 20,081,165 | 21,427,704 | 21,018,101 | 23,129,216 | 28,268,844 | 25,556,981 |
| South | - | - | - | - | - | - | - | - |
| Country Total | 56,393,938 | 43,465,535 | 50,331,567 | 52,812,842 | 49,562,886 | 60,012,977 | 74,258,521 | 64,973,805 |

Source: Office of Agricultural Economics, Ministry of Agriculture and Cooperatives

### Table 3: Thailand's Sugarcane Yield by Region

Unit: Kilogram/Hectare

| Region/Province | 1996/97 | 1997/98 | 1998/99 | 1999/2000 | 2000/01 | 2001/02 | 2002/03 | 2003/04 |
|---|---|---|---|---|---|---|---|---|
| Northeast | 54,514 | 46,690 | 56,989 | 61,583 | 56,885 | 60,018 | 66,134 | 57,202 |
| North | 55,894 | 46,164 | 53,853 | 58,706 | 54,980 | 58,625 | 63,788 | 58,074 |
| Central | 56,751 | 45,485 | 53,539 | 57,411 | 57,133 | 59,073 | 64,897 | 58,575 |
| South | - | - | - | - | - | - | - | - |
| Country Total | 55,825 | 46,065 | 54,855 | 59,232 | 56,572 | 59,350 | 65,180 | 57,939 |

Source: Office of Agricultural Economics, Ministry of Agriculture and Cooperatives

## Table 4: Thailand's Sugar Utilization by Domestic Industry

Unit: Metric Ton

| Type of Industry | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|---|---|---|---|---|
| BEVERAGES | | | | | | | | | | |
| Refined Sugar | 90306 | 88708 | 98765 | 114100 | 113545 | 134105 | 145616 | 130704 | 107447 | 161009 |
| White Sugar | 47547 | 46774 | 69982 | 79558 | 74962 | 118520 | 79513 | 89223 | 151661 | 103376 |
| Sub - Total | 137853 | 135482 | 168747 | 193658 | 188507 | 252625 | 225129 | 219927 | 259108 | 264385 |
| CAKE & BREAD | | | | | | | | | | |
| Refined Sugar | 44290 | 46066 | 57669 | 13600 | 11090 | 5582 | 4131 | 5273 | 6994 | 5729 |
| White Sugar | 1413 | 1006 | 15641 | 8054 | 9365 | 7599 | 2517 | 3890 | 5655 | 8489 |
| Sub - Total | 45703 | 47072 | 73310 | 21654 | 20455 | 13181 | 6648 | 9163 | 12649 | 14218 |
| ALCOHOL BASE DRINK | | | | | | | | | | |
| Refined Sugar | 1917 | 2975 | nil | nil | nil | nil | nil | nil | nil | nil |
| White Sugar | 13 | 1467 | nil | nil | nil | nil | nil | nil | nil | nil |
| Sub - Total | 1930 | 4442 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FRUIT & FOOD PRODUCTS | | | | | | | | | | |
| Refined Sugar | 23999 | 26634 | 36110 | 66547 | 82092 | 57831 | 56646 | 54368 | 63910 | 41759 |
| White Sugar | 15937 | 20336 | 32040 | 145579 | 164462 | 135553 | 84914 | 103057 | 106210 | 87453 |
| Sub - Total | 39936 | 46970 | 68150 | 212126 | 246554 | 193384 | 141560 | 157425 | 170120 | 129302 |
| DAIRY PRODUCTS | | | | | | | | | | |
| Refined Sugar | 31462 | 32239 | 35069 | 34310 | 31330 | 15874 | 16218 | 16790 | 11094 | 10638 |
| White Sugar | 42419 | 47686 | 63134 | 115761 | 109301 | 149528 | 112715 | 115520 | 115917 | 120015 |
| Sub - Total | 73881 | 79925 | 98203 | 150071 | 140631 | 165402 | 128933 | 132310 | 127011 | 130653 |
| CONFECTIONARY PRODUCTS | | | | | | | | | | |
| Refined Sugar | 1001 | 1829 | 3882 | 4047 | 5593 | 3982 | 3395 | 4604 | 4889 | 3973 |
| White Sugar | 2818 | 5501 | 4731 | 18567 | 16071 | 16526 | 15294 | 17255 | 14694 | 20751 |
| Sub - Total | 3819 | 7330 | 8613 | 22614 | 21664 | 20508 | 18689 | 21859 | 19583 | 24724 |
| PHARMACEUTICAL PRODUCTS & MISCELLANEOUS | | | | | | | | | | |
| Refined Sugar | 35542 | 53295 | 77580 | 102944 | 84907 | 38452 | 30097 | 22254 | 21975 | 16954 |
| White Sugar | 1417 | 1044 | 2016 | 3962 | 3624 | 11933 | 7201 | 2914 | 5290 | 5889 |
| Sub - Total | 36959 | 54339 | 79596 | 106906 | 88531 | 50385 | 37298 | 25168 | 27265 | 22843 |

Source: Production and Distribution Administration Center, Office of Cane and Sugar Board

**Table 5: Thailand's Average Prices of Domestic Plantation White Sugar and Sugarcane**

| Calendar Year | Plantation White Sugar | | Sugarcane | |
|---|---|---|---|---|
| | Wholesale (Baht/100 kg.) | Retail (Baht/kg.) | Initial (Baht/metric ton) | Actual |
| 1980 | 1,011 | 11.65 | Nil | 650 |
| 1981 | 1,019 | 11.51 | Nil | 510 |
| 1982 | 1,075 | 11.94 | 350 | 381 |
| 1983 | 1,091 | 12.00 | 421 | 421 |
| 1984 | 1,162 | 12.00 | 395 | 380 |
| 1985 | 1,097 | 12.00 | 330 | 388 |
| 1986 | 1,099 | 12.00 | 375 | 408 |
| 1987 | 1,097 | 12.00 | 405 | 462 |
| 1988 | 1,098 | 12.00 | 450 | 527 |
| 1989 | 1,098 | 12.00 | 460 | 596 |
| 1990 | 1,099 | 12.00 | 460 | 442 |
| 1991 | 1,099 | 12.00 | 399 | 480 |
| 1992 | 1,099 | 12.00 | 420 | 516 |
| 1993 | 1,099 | 12.00 | 490 | 533 |
| 1994 | 1,099 | 12.00 | 520 | 569 |
| 1995 | 1,099 | 12.00 | 500 | 538 |
| 1996 | 1,099 | 12.00 | 500 | 561 |
| 1997 | 1,099 | 12.00 | 600 | 703 |
| 1998 | 1,100 | 12.50 | 500 | 485 |
| 1999 | 1,100 | 12.50 | 450 | 478 |
| 2000 | 1,177 | 12.50 | 600 | 689 |
| 2001 | 1,177 | 13.25 | 530 | NA |
| 2002 | 1,177 | 13.25 | 500 | NA |
| 2003 | 1,177 | 13.25 | 465 | NA |
| 2004 | 1,177 | 13.25 | 620 | NA |

Note:

* The revenue sharing system of 70:30 to cane planters and millers started in 1982/83 when the initial cane price began to be quoted.
* The purchasing cane based on C.C.S. system starts in 1993/94 crushing season with the standard quality of cane at 10 C.C.S.
* Average final cane price has been split into different assessments for different regions since 1996/97.
* The retail price of plantation white sugar has been raised to 13.25 baht/kg since Jun 2, 2000.

### Table 6: Thailand's Average Final Price of Sugarcane by Zone

| Zone | Number of Sugar Mills | Sugarcane Prices (Baht/Ton) at 10 C.C. | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 1996/97 | 1997/98 | 1998/99 | 1999/00 | 2000/01 | 2001/02 | 2002/03 |
| North 1 | 4 | 572.12 | 728.98 | 495.15 | 464.63 | 678.10 | 531.19 | n.a. |
| North 2 | 3 | 535.57 | 693.97 | 449.2 | 464.63 | 678.10 | 501.89 | n.a. |
| North 3 | 1 | 526.47 | 654.96 | 459.43 | 464.63 | 678.10 | 501.89 | n.a. |
| North 4 | 1 | 541.77 | 698.18 | 483.43 | 464.63 | 678.10 | 529.99 | n.a. |
| North 5 | 1 | 526.25 | 692.21 | 454.78 | 464.63 | 678.10 | 529.99 | n.a. |
| Central 1 | 1 | 514.65 | 650.69 | 478.49 | 464.63 | 678.10 | 529.99 | n.a. |
| Central 2 | 1 | 551.82 | 700.16 | 499.91 | 464.63 | 678.10 | 529.99 | n.a. |
| Central 3 | 2 | 564.93 | 675.04 | 464.7 | 464.63 | 706.85 | 514.64 | n.a. |
| Central 4 | 14 | 567.05 | 701.69 | 493.44 | 483.86 | 633.00 | 530.46 | n.a. |
| Central 5 | 1 | 538.81 | 640.02 | 478.44 | 486.23 | 680.00 | 548.43 | n.a. |
| East | 5 | 556.66 | 683.82 | 488.28 | 490.80 | 697.38 | 541.30 | n.a. |
| Northeast | 12 | 575.29 | 715.26 | 488.37 | 482.28 | 685.04 | 537.71 | n.a. |

Note: Average Final Prices of Sugarcane by Zone was firstly applied in 1996/97.
Cane price is divided into five zones in 1999/00 crushing season.
Cane price is divided into five zones in 1999/00 crushing season. North 1-5 share the same price in zone 1 of 10 mills plus 4 mills in Central 1-3; Central 4 cover 14 mills in zone 2; Central 5 cover only one mill in zone 3 while there has been no changes in the East (zone 4) and Northeast (zone 5).
Average prices of cane are re-arranged again in 2000/01 for 6 zones:
Zone 1 covers 14 mills;
Zone 2 covers 13 mills;
Zone 3 covers 1 mill which is Suphanburi sugar mill in central plain;
Zone 4 covers 1 mills in central plain;
Zone 5 covers 5 mills in the East;
Zone 6 covers 12 mills in the Northeast.

SOURCE: Office of The Cane and Sugar Board, Ministry of Industry.

## Table 7: Thailand's Monthly Export Price (FOB) for Raw Sugar (Baht/Ton)

| Month | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 7059 | 6652 | 6700 | 13936 | 6931 | 4917 | 9934 | 6820 | 6340 | 5588 | 6763 |
| February | 7363 | 6796 | 6679 | 11263 | 6923 | 4973 | 9713 | 6910 | 7014 | 5342 | 7984 |
| March | 7127 | 6595 | 6580 | 10826 | 6828 | 4569 | 9102 | 6269 | 7101 | 5598 | n.a |
| April | 7235 | 6487 | 6634 | 10372 | 6128 | 4763 | 9321 | 6408 | 7045 | 5590 | n.a |
| May | 7289 | 6510 | 6598 | 10306 | 5506 | 5293 | 9546 | 6194 | 6948 | 6092 | n.a |
| June | 7746 | 7019 | 6711 | 10459 | 5173 | 5912 | 9428 | 6323 | 7350 | 6665 | n.a |
| July | 7697 | 7055 | 8081 | 11400 | 5288 | 5061 | 9542 | 6442 | 6464 | 6426 | n.a |
| August | 7661 | 7574 | 8388 | 10514 | 6146 | 7458 | 10044 | 6504 | 6653 | 6667 | n.a |
| September | 7839 | 7537 | 9254 | 9013 | 5242 | 7535 | 9617 | 6782 | 6789 | 7151 | n.a |
| October | 7738 | 7954 | 9780 | 7728 | 5636 | 8391 | 9228 | 6702 | 6427 | 6633 | n.a |
| November | 7431 | 7384 | 9676 | 7839 | 5558 | 9602 | 7514 | 6330 | 6444 | 7127 | n.a |
| December | 7221 | 6347 | 12197 | 10109 | 4873 | 8041 | 7518 | 5808 | 6292 | 6302 | n.a |
| Average | 7439 | 6686 | 7195 | 10361 | 5842 | 5863 | 9368 | 6415 | 6891 | 6249 | n.a |
| Avg. Exchange rates ( Baht/U.S.$) | 24.89 | 25.32 | 31.32 | 41.31 | 37.79 | 40.11 | 44.43 | 42.96 | 41.48 | 40.22 | 38.70 |

SOURCE: Thailand Sugar Corp., Ltd. (TSC),
The Sugar Trading Corp., Ltd. (TSTC),
Siam Sugar Export Corporation (SSEC),
The Sugar Industry Trading Co., Ltd. (SITCO),
K. S. L. Export Trading Co., Ltd. (KSL),
Pacific Sugar Corp., Ltd. (PSC).

## Table 8: Thailand's Monthly Export Price (FOB) for Plantation White Sugar (Baht/Ton)

| Month | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| January | 7528 | 7842 | 7599 | 15342 | 8698 | 6453 | 10245 | 8851 | 8582 | 7189 | 9549 |
| February | 7674 | 7730 | 7916 | 13781 | 7038 | 6161 | 10227 | 8578 | 8129 | 6965 | 9923 |
| March | 8100 | 7576 | 8017 | 12618 | 8731 | 6056 | 9927 | 8142 | 8362 | 7488 | n.a |
| April | 8443 | 7902 | 7986 | 11700 | 8084 | 6321 | 9791 | 8324 | 8530 | 7506 | n.a |
| May | 8065 | 7835 | 8333 | 11660 | 7701 | 6868 | 9972 | 7971 | 8554 | 7566 | n.a |
| June | 8583 | 8270 | 7997 | 11731 | 7135 | 6698 | 10309 | 7714 | 8318 | 8108 | n.a |
| July | 8619 | 7994 | 8703 | 11153 | 6894 | 7220 | 10794 | 8182 | 7977 | 7716 | n.a |
| August | 8673 | 7959 | 10303 | 11482 | 7497 | 7421 | 11033 | 7742 | 7914 | 8341 | n.a |
| September | 8490 | 8385 | 10431 | 11217 | 6928 | 7904 | 10897 | 8393 | 7778 | 8762 | n.a |
| October | 8304 | 8980 | 11193 | 10498 | 7673 | 8943 | 10091 | 8751 | 7068 | 9996 | n.a |
| November | 8301 | 8799 | 12248 | 7358 | 7300 | 9617 | 10359 | 9046 | 7592 | 9319 | n.a |
| December | 9308 | 8601 | 14905 | 9071 | 7497 | 9706 | 10658 | 8830 | 7696 | 9569 | n.a |
| Average | 8335 | 7882 | 8777 | 12527 | 7632 | 7283 | 10260 | 8262 | 8115 | 7983 | n.a |
| Avg. Exchange rates ( Baht/U.S.$) | 24.89 | 25.32 | 31.32 | 41.31 | 37.79 | 40.11 | 44.43 | 42.96 | 41.48 | 40.22 | 38.70 |

SOURCE: Thailand Sugar Corp., Ltd. (TSC),
The Sugar Trading Corp., Ltd. (TSTC),
Siam Sugar Export Corporation (SSEC),
The Sugar Industry Trading Co., Ltd. (SITCO),
K. S. L. Export Trading Co., Ltd. (KSL),
Pacific Sugar Corp., Ltd. (PSC).

## Table 9: Thailand's Annual Raw Sugar Exports (MTRV)

| Destination | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 (Jan. - Feb.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| China | 1236453 | 500526 | 233932 | 85609 | 33858 | 90801 | 346979 | 168982 | 180567 | 252455 | - |
| Congo | - | - | - | - | - | 10260 | - | - | - | - | - |
| Indonesia | - | 54378 | 160005 | 25804 | 341700 | 447543 | 402189 | 387971 | 373106 | 463426 | 48735 |
| Iran | - | 28728 | - | - | - | - | - | 30780 | - | - | - |
| Japan | 530636 | 737457 | 703729 | 697216 | 529302 | 746735 | 690220 | 383685 | 565822 | 751129 | 35128 |
| Korea, DPR | - | - | - | - | 3386 | 14056 | - | 6378 | 62877 | 41 | - |
| Korea, Rep. of | 378943 | 623209 | 710402 | 163560 | 205301 | 318056 | 235919 | 110044 | 175976 | 144877 | - |
| Malaysia | 291891 | 367924 | 382698 | 84251 | 127470 | 233107 | 247957 | 240636 | 242141 | 245564 | - |
| Mozambique | 13338 | 2052 | 23598 | 15185 | - | - | - | - | - | - | - |
| Philippines | 113917 | 223843 | 11286 | 134714 | 117547 | 21546 | - | 3078 | - | 286 | - |
| Romania | - | 25650 | - | - | 12312 | - | - | - | 41040 | - | - |
| Russia | 42169 | 44118 | 85158 | 77976 | 469087 | 291589 | 73955 | 484253 | 696757 | 66279 | 14364 |
| Singapore | 8208 | 83106 | 43092 | 7182 | 17750 | 8161 | 26081 | 52644 | 2786 | 429 | - |
| Sri Lanka | 73564 | 57559 | 47093 | 12312 | 78007 | 73462 | 52839 | 64384 | 52711 | 55149 | - |
| Tanzania | 20520 | 35223 | 2052 | 18981 | - | 29959 | 47145 | 33006 | 10012 | 10841 | - |
| Taiwan | - | - | - | - | - | 49248 | 71795 | 102794 | 201234 | 313528 | 13578 |
| Ukraine | 39769 | 14364 | 28728 | - | - | - | - | - | - | - | - |
| United States | 16539 | 32740 | 28284 | 21082 | 15111 | 14615 | 11597 | 14614 | 14615 | 14615 | - |
| UAE | - | 72254 | 34474 | 6156 | - | - | - | 45785 | - | - | - |
| Vietnam | 44118 | 15390 | 31550 | - | 14334 | - | 16416 | - | - | - | - |
| Others | 43495 | 41389 | 38569 | 73027 | 9537 | 5870 | 15942 | 20075 | 72779 | 23333 | 667 |
| Total | 2853560 | 2959910 | 2564650 | 1423055 | 1974702 | 2355008 | 2239034 | 2149108 | 2692423 | 2341952 | 112472 |

SOURCE: TSC, TSTC, SSEC, SITCO, K.S.L., PSC and TISS.

## Table 10: Thailand's Annual White and Refined Sugar Exports (MTRV)

| Destination | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 (Jan. - Feb.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bangladesh | - | - | 25358 | - | 41555 | 115759 | 36484 | 31717 | 200676 | 304502 | - |
| Brunei | - | 3210 | - | 3210 | 4280 | 2140 | 5374 | 7490 | 1831 | 6233 | 1719 |
| Burma | 1035 | 5175 | - | - | 3601 | 47326 | 362 | 80 | 1031 | 7023 | 99 |
| Cambodia | 22276 | 38411 | 55430 | 62873 | 157702 | 77029 | 178405 | 244344 | 112394 | 195545 | 29593 |
| China | 225499 | - | 2070 | 3780 | - | 4850 | 64751 | 13954 | 27640 | 34013 | 675 |
| India | - | - | 25470 | 13973 | 281555 | 8280 | - | - | 348 | 803 | - |
| Indonesia | 332064 | 632468 | 1133846 | 752807 | 493278 | 834949 | 399476 | 616165 | 903304 | 864095 | 276653 |
| Iran | 112350 | 329560 | 118580 | - | 74921 | 6624 | - | 63368 | 14445 | - | - |
| Jordan | - | 44380 | - | - | 23214 | - | 4280 | 55961 | 46042 | 65698 | - |
| Korea, DPR | 8073 | 20364 | - | 28134 | 52892 | 65114 | 35713 | 46073 | 81045 | 84073 | 8680 |
| Korea, Rep o | 2277 | - | - | - | 65 | 3815 | 20234 | 26300 | 73497 | 83280 | 10723 |
| Kenya | - | 22819 | 15525 | 2381 | - | 2795 | - | 1074 | 4693 | 598 | - |
| Laos | 12295 | 11412 | 16849 | 14973 | 20445 | 17334 | 39310 | 27899 | 23947 | 27887 | 5030 |
| Malaysia | - | - | - | 3105 | 11980 | 48738 | 87055 | 129248 | 206155 | 331552 | 3868 |
| Maldives | - | 3105 | - | - | - | 2070 | - | - | - | - | - |
| Pakistan | - | 29725 | 92616 | - | - | 148355 | - | - | - | - | - |
| Philippines | 77401 | 126151 | - | 21444 | 5843 | 42350 | 6596 | 31168 | 45878 | 51193 | 5117 |
| Russia | 2675 | 2140 | - | - | - | - | - | 6793 | 17129 | 10664 | - |
| Saudi Arabia | 42881 | 34890 | - | - | - | - | - | 4280 | 5350 | - | - |
| Singapore | 4863 | 8455 | 15502 | 6111 | 33768 | 16945 | 37492 | 105910 | 75356 | 116864 | 10738 |
| Somalia | 3726 | 4280 | - | - | 2070 | 59597 | 69138 | 75555 | 61692 | 21568 | - |
| Sri Lanka | 20314 | 34007 | 32245 | 6210 | 24737 | 115304 | 5175 | 40081 | 22455 | 24430 | - |
| Syria | - | 27820 | - | - | - | - | - | 119379 | 234129 | - | - |
| Tanzania | - | 10455 | 29187 | 26703 | 6210 | 6893 | 5175 | 23039 | 25351 | 10352 | - |
| UAE | 22656 | 59449 | 25680 | - | 4165 | - | - | 3210 | 5280 | 15095 | - |
| Vietnam | 68116 | 2087 | 19053 | 8280 | - | 471 | 49740 | - | - | 4347 | - |
| Yemen | 8570 | 89658 | - | - | 60379 | 217073 | 16560 | 52890 | 167254 | 26910 | - |
| Others | 6229 | 28005 | 34985 | 9212 | 56309 | 8585 | 10405 | 283349 | 330120 | 206120 | 6947 |
| Total | 973300 | 1568026 | 1642396 | 963196 | 1358969 | 1852396 | 1071725 | 2009327 | 2687042 | 2492845 | 359842 |

SOURCE: TSC, TSTC, SSEC, SITCO, K.S.L., PSC and TISS.

**Table 11: Thailand's Average Quality of Cane Measured by C.C.S**

| Year | North | Central | East | Northeast | Average |
|---|---|---|---|---|---|
| 1977/78 | 9.99 | 9.65 | 10.09 | 11.6 | 9.85 |
| 1978/79 | 10.2 | 10.47 | 10.23 | 11.22 | 10.38 |
| 1979/80 | 10.3 | 9.43 | 10.82 | 10.63 | 9.74 |
| 1980/81 | 9.58 | 9.49 | 9.72 | 10.91 | 9.63 |
| 1981/82 | 9.85 | 9.94 | 9.97 | 10.58 | 9.97 |
| 1982/83 | 10.01 | 10.31 | 10.01 | 11.33 | 10.32 |
| 1983/84 | 9.95 | 10.45 | 10.12 | 11.88 | 10.47 |
| 1984/85 | 10.57 | 10.26 | 10.77 | 11.87 | 10.59 |
| 1985/86 | 10.27 | 10.8 | 10.59 | 11.79 | 10.82 |
| 1986/87 | 10.65 | 10.53 | 10.49 | 11.6 | 10.66 |
| 1987/88 | 9.97 | 9.67 | 9.58 | 11.43 | 9.98 |
| 1988/89 | 10.66 | 10.63 | 10.67 | 11.67 | 10.8 |
| 1989/90 | 10.46 | 10.18 | 10.44 | 11.23 | 10.46 |
| 1990/91 | 10.8 | 9.79 | 9.92 | 10.95 | 10.18 |
| 1991/92 | 11.22 | 10.54 | 10.65 | 11.63 | 10.91 |
| 1992/93 1/ | 11.66 | 11.05 | 11.9 | 12.58 | 11.6 |
| 1992/93 | 11.74 | 11.1 | 11.79 | 12.4 | 11.58 |
| 1993/94 | 11.35 | 10.98 | 11.09 | 11.95 | 11.3 |
| 1994/95 | 11.87 | 11.45 | 11.45 | 12.15 | 11.76 |
| 1995/96 | 11.37 | 11.61 | 11.69 | 12.47 | 11.84 |
| 1996/97 | 11.36 | 11.54 | 11.39 | 12.52 | 11.79 |
| 1997/98 | 10.98 | 10.2 | 10.73 | 11.89 | 11.11 |
| 1998/99 | 11.32 | 10.97 | 11.15 | 12.56 | 11.66 |
| 1999/00 | 11.41 | 11.07 | 11.29 | 12.16 | 11.7 |
| 2000/01 | 11.61 | 11.26 | 11.25 | 12.01 | 11.62 |
| 2001/02 | 11.61 | 11.33 | 11.32 | 11.15 | 11.78 |
| 2002/03 | 11.09 | 10.53 | 10.56 | 11.79 | 11.17 |
| 2003/04 | 12.21 | 11.64 | 11.31 | 12.59 | 12.11 |

1/ The first year that the Office of the Cane & Sugar Board did the research and reported C.C.S. of cane (previously done by the sugar mills).

Source: Office of The Cane and Sugar Board, Ministry of Industry.

**Table 12: Thailand's Business Tax Rates for Cane and Sugar**

Unit: Percent

| Year | Sugarcane | Business tax applied for Exp & Local Trd | Export of Raw and White Sugar | Local Trade of White Sugar |
|---|---|---|---|---|
| | | | (Actual Collected Taxes) | |
| 1976/77 | --- | 7.7 | 1.65 | 7.7 |
| 1977/78 | --- | 7.7 | 1.65 | 7.7 |
| 1978/79 | --- | 7.7 | --- | 7.7 |
| 1979/80 | 0.75 | 7.7 | --- | 7.7 |
| 1980/81 | 0.75 | 7.7 | 3.3 | 7.7 |
| 1981/82 | 0.75 | 7.7 | 1.65 | 7.7 |
| 1982/83 | 0.75 | 7.7 | 1.65 | 7.7 |
| 1983/84 | 0.75 | 9.9 | 1.65 | 3.3 |
| 1984/85 | 0.75 | 9.9 | 1.65 | 3.3 |
| 1985/86 | --- | 9.9 | --- | --- |
| 1986/87 | --- | 9.9 | --- | --- |
| 1987/88 | 0.75 | 9.9 | --- | 1.65 |
| 1988/89 | 0.75 | 9.9 | --- | 1.65 |
| 1989/90 | 0.75 | 9.9 | --- | 1.65 |
| 1990/91 | 0.75 | 9.9 | 4.4 | 9.9 |
| 1991/92 | 0.75 | 7.0 1/ | --- | 7.0 1/ |
| 1992/93 | 0.75 | 0.0 1/ | --- | 7.0 1/ |
| 1993/94 | 0.75 | 0.0 1/ | --- | 7.0 1/ |
| 1994/95 | 0.75 | 0.0 1/ | --- | 7.0 1/ |
| 1995/96 | 0.75 | 0.0 1/ | --- | 7.0 1/ |
| 1996/97 | 0.75 | 0.0 1/ | --- | 7.0 1/ |
| 1997/98 | 0.75 | 0.0 1/ | --- | 10.0 2/ |
| 1998/99 | 0.75 | 0.0 1/ | --- | 7.0 3/ |
| 1999/00 | 0.75 | 0.0 1/ | --- | 7.0 3/ |
| 2000/01 | 0.75 | 0.0 1/ | --- | 7.0 3/ |
| 2001/02 | 0.75 | 0.0 1/ | --- | 7.0 3/ |
| 2002/03 | 0.75 | 0.0 1/ | --- | 7.0 3/ |
| 2003/04 | 0.75 | 0.0 1/ | --- | 7.0 3/ |

1/ The value added tax of 7 percent became effective on January 1, 1992 and applied only to domestic sales, it does not apply to exports.
2/ The government revised the value added tax from 7 to 10 percent on August 10, 1997.
3/ The value added tax has brought back to 7 percent since Apr 1, 1999.

Source: Office of Cane & Sugar Board, Ministry of Industry.

End of Report.