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Thailand

Sugar

Sugar Annual - Revised

2000

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Report Highlights:

The MY 1999/00 sugar cane production is estimated to be 53.5 mmt and sugar output (raw value) is 5.67 mmt. Given the current low price of sugar and high input costs, crop recovery next season may be limited. Sugar export in 2000 is expected to be up slightly to 3.4 mmt.

Includes PSD changes: Yes Includes Trade Matrix: Yes Annual Report Bangkok [TH1], TH

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Executive Summary

Post revised the MY 1999/00 sugarcane production to 53.5 million metric ton and sugar output (raw value) at 5.67 million metric tons. Given the current low price of sugar and high input costs, crop recovery next season may be rather limited.

Early monsoon rains, along with good distribution of rainfall in most major cane areas, provided the optimum moisture level for cane growing conditions. Very minor outbreaks of pests and diseases were found in the fields. As a result, the MY 1999/00 cane production could increase 7 percent from last year with no change in area harvested. Cane yield is forecast to be 58.15 tons/ha (9.30 tons/rai), compared with 54.41 tons/ha (8.71 tons/rai) in MY 1998/99. MY 1999/2000 sugar production is estimated to be up slightly in response to larger sugar cane supplies.

The financial crisis of 1997, starting with the devaluation of the Thai baht, has had a continuous impact on the sugar industry operations. Milling groups have had to reschedule extensive debts running forward for many years. Although liquidity has been assured for this season and the next, it will impose an added cost burden on the industry for the future. Lower world prices as well as the costs of the new financing packages may force the government with a difficult choice of whether to raise domestic sugar prices or to approve another loan to the debt-ridden industry.

Domestic consumption of sugar is estimated to be up slightly in MY 1999/00 and will increase again slightly next year. The production of high fructose syrup (HFS) will gradually increase, as it is utilized as a substitute for sugar in the soft drink and food industries.

Thai sugar exports increased sharply to 3.3 mmt in MY 1998/99 and are expected to be up slightly to 3.4 mmt in MY 1999/00. The financial crisis forced millers to use packing credits provided by the Royal Thai Government (RTG) through the EXIM bank at a high level of 6,199.4 million baht. It is reported that some 5,786.6 million baht of packing credit was utilized during Jan-Feb'00.

| PSD Table | | | | | | |
|-----------------------------------|-----|---------|-----|---------|-----|---------|
| Country: Thailand | | | | | | |
| Commodity: Sugar Cane Centrifugal | | | | | | |
| | | 1998 | | 1999 | | 2000 |
| | Old | New | Old | New | Old | New |
| Market Year Begin | | 12/1997 | | 12/1998 | | 12/1999 |
| Area Planted | 0 | 1010 | 0 | 1010 | 0 | 1000 |
| Area Harvested | 0 | 930 | 0 | 920 | 0 | 920 |
| Production | 0 | 42201 | 0 | 50059 | 0 | 53000 |
| TOTAL SUPPLY | 0 | 42201 | 0 | 50059 | 0 | 53000 |
| Utilization for Sugar | 0 | 42201 | 0 | 50059 | 0 | 53000 |
| Utilizatn for Alcohol | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL UTILIZATION | 0 | 42201 | 0 | 50059 | 0 | 53000 |

Sugar Cane

Production

The 1999/2000 sugar cane production is estimated at 53.5 mmt, an increase of 7 percent from the previous season due mainly to several reasons: early arrival of monsoon rain; optimum moisture level along with good distribution of rainfall throughout the season; and very minor outbreaks of pests and diseases. A long, cool period during maturity stage provided high sucrose content to sugar cane. As a result, sugar yield appear to be close to the level of 1998/99.

The average MY 1999/00 cane yield is now estimated at 9.22 tons/rai (58.15 tons/ha), compared with 8.71 tons/rai (54.41 tons/ha) in 1998/99. Additional moisture at the end of the monsoon is the key factor that has impacted increasing cane yields. A higher percentage of cane was burned before cutting this year as labor can harvest faster than fresh cut. The 20 baht per ton fine rule against burned cane could not stop producers to turn to the fresh cut.

Crop alternatives to sugar cane remain cassava, upland rice and eucalyptus. However, some cash crops, such as sweet corn and vegetables have currently become more attractive to farmers. The supply of cane is concentrating in the upper northeast where growing conditions seem to be good with an ideal climate for cane.

Consumption

The 46 sugar mills now in Thailand could actually crush more than a total official registered milling capacity of nearly 700,000 tons per day. Average extraction rate is estimated at 107.0 in 1999/00, slightly lower from 107.59 kgs/ton last year. Several days of prolonged heavy rain at the end of the rainy season seemed to reduce some sucrose content in cane.

Policy

There is no change in five-year plan (1998-2003) production policy as reported in TH7036, dated 04/03/97. Adequate moisture seems to be one of the key factors that lead Thailand to achieve its production goal. The financial crisis has disrupted the ability of mills and the banks to provide key pre-finance to growers and, as a result, inputs have been affected. Financial assistance was changed from commercial banks to the Bank for Agriculture and Agricultural Cooperatives when some 15 billion baht of fresh funds was made available through BAAC to finance operation for the 1998/99 season. A great deal of work has been accomplished to restructure and restore financing to the industry. Credit lines of 10 billion baht were set up to finance the 1999/2000 and carry on to be the same in 2000/01 season. Unfortunately, the BAAC could only provide 5 billion baht for next crushing season due to the shrinking of the sugar fund whose deposits with BAAC have been used to support the 1998/99 cane price. As a result, insufficient pre-finance could discourage growers from making investments to raise productivity on their farms.

Price

The final cane price has been split into different assessments for different regions since 1996/97 (See table 6). The 1999/00 initial cane price is agreed at 450 baht per ton by roughly calculating from the 6.8 cent per pound of sugar export price in 2000. As world sugar price actually dropped to an average 5.4 cent per pound in Feb'00, the sugar mortgage value that millers receive from the commercial banks was reduced from 600 to 500 baht per bag (100 kilos). As a result, millers could only pay the initial cane price at 350 baht per ton. In order to settle this problem, 1,200 million baht from "Farmers Aids Fund" plus 800 million baht from "Farmers Assistance Fund" were pulled from the Ministry of Agriculture and Ministry of Commerce, respectively to secure the current initial sugar cane price of 450 baht per ton. Producers are responsible for paying back the difference of over payment of cane price within 30 days when the official final cane price is announced. However, under the law, money owed by growers to the mills as a result of shortfall in final cane prices will be covered by the Cane and Sugar Fund.

| PSD Table | | | | | | | | |
|------------------------|------|---------|------|---------|------|---------|--|--|
| Country: | | | | | Т | hailand | | |
| Commodity: Sugar | | | | | | | | |
| | | 1998 | | 1999 | | 2000 | | |
| | Old | New | Old | New | Old | New | | |
| Market Year Begin | | 12/1997 | | 12/1998 | | 12/1999 | | |
| Beginning Stocks | 851 | 800 | 959 | 450 | 1236 | 659 | | |
| Beet Sugar Production | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Cane Sugar Production | 4245 | 4245 | 5227 | 5386 | 5000 | 5670 | | |
| TOTAL Sugar Production | 4245 | 4245 | 5227 | 5386 | 5000 | 5670 | | |
| 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 | 5096 | 5045 | 6186 | 5836 | 6236 | 6329 | | |
| Raw Exports | 1439 | 1539 | 2000 | 1999 | 2000 | 2000 | | |
| Refined Exp.(Raw Val) | 1000 | 1300 | 1200 | 1353 | 1200 | 1400 | | |
| TOTAL EXPORTS | 2439 | 2839 | 3200 | 3352 | 3200 | 3400 | | |
| Human Dom. Consumption | 1698 | 1756 | 1750 | 1825 | 1800 | 1850 | | |
| Feed Dom. Consumption | 0 | 0 | 0 | 0 | 0 | 0 | | |
| TOTAL Dom. Consumption | 1698 | 1756 | 1750 | 1825 | 1800 | 1850 | | |
| Ending Stocks | 959 | 450 | 1236 | 659 | 1236 | 1079 | | |
| TOTAL DISTRIBUTION | 5096 | 5045 | 6186 | 5836 | 6236 | 6329 | | |

Centrifugal Sugar

Production

Sugar output for MY 1999/2000 is forecast at 5.67 mmt (raw value), up 6 percent from last year's level due to expected larger cane production. The 1998/99 estimate has been revised to 5.386 mmt, up slightly from the previous estimate as a result of higher cane production along with a better sugar conversion rate. The sucrose content in the current year appears to be higher than the previous season's level. Sugar output is divided into three quotas: Current Quota A–1.62 mmt (1.75 mmt in 1998/99) of plantation white sugar for domestic consumption; Quota B--800,000 tons of raw sugar to cover long term export contracts; and Quota C (the balance)--for export to the international market. Mills must give priority to the production of plantation white sugar for the local market, and raw sugar for Quota B, over sugar for export under Quota C.

Consumption

While raw sugar is produced only for the export market, both plantation white and refined sugar are produced primarily for domestic use. Domestic consumption continued to increase slightly in 1998/99. Industrial consumption is currently about 40 percent of total utilization. Per capita consumption gradually increased slightly from 26.30 kgs in 1996 to about 30 kgs in 1999.

Domestic consumption of sugar increased marginally with the small expansion in food industry. Some 60 percent of local consumption is in the form of household consumption, 13 percent is utilized by food and fruit industries, 10 percent goes to beverage industry, 8 percent goes to dairy products, 5 percent goes to pharmaceutical products, and the remainder is used by other food industries (see table 4). It should be noted that some portion of sales to households are resold to small and medium industrial users.

The use of high fructose syrup (HFS) continues to expand. The current sole factory producing HFS in Thailand has a production capacity of 200 tons/day since MY 1998. Output of HFS dropped somewhat from 43,585 tons in 1998 to 39,200 tons in 1999 but is expected to be up 20 percent in 2000. The raw material being used in producing HFS is mainly cassava (tapioca) starch. More than 70 percent of domestically produced HFS is currently consumed by the beverage industry--58% in soft drinks, 22% brewery industries, mainly for beer; 14% in heavy syrup; 2% in bakery industry; and the balance goes to various sauces and other food products.

Note: Revised export data in 1997/98 and 1998/99 changed the ending stocks to 450 and 659 tmt, respectively.

Stocks

Post revised export data in 1997/98 and 1998/99 upwards 450 and 150 tmt, respectively to include the smuggled volume which was unrecorded in the past several years. As a result, stocks are adjusted to nearly 1.1 mmt in 1999/00, which is considered a big surplus of sugar in Thailand as exports are expected to be up slightly with a slight increase in domestic consumption, while production continues to be a sizeable volume.

Trade

Sugar is one of Thailand's major export products, with earning of \$560.69 million in 1999, compared with \$628.39 million in 1998 (down 11 percent from 1998 in term of local currency as well as a lower sugar price in the world market). As usual, Quota C (export) sales are concluded 6 months prior to the start of the crushing season in November by seven exporting companies: The Thai Sugar Trading Corp., Ltd. (TSTC), Thailand Sugar Corp., Ltd. (TSC), Siam Sugar Export Corp., Ltd. (SSEC), The Sugar Industry Trading Co., Ltd. (SITCO), K.S.L. Export Trading (KSL), Pacific Sugar Corp., Ltd. (PSC) and TISS Co., Ltd. that belongs to the Thai Identity Sugar Group of Companies which started its sugar exports in 1995.

The Thai Cane and Sugar Corporation (TCSC), an organization comprised of millers, producers and the government, designed to handle long-term contracts, is responsible for pricing and selling the 800,000 metric tons of raw sugar under Quota B. One-half of this amount is allocated to three international sugar brokers. The other half is sold to local millers who export the sugar through the six exporting companies listed above.

In recent years, Thai sugar producers have had the flexibility of supplying sugar to the market either as raw or plantation

white and refined, depending on the relative strength of demand for the different qualities reflected in the premium structure. Indonesia was the top buyer of plantation white and refined sugar while Japan remained the major outlet for raw sugar in 1999. Some 30-40 tmt were reportedly smuggled to the neighboring countries through the border. Post forecasts that Thailand's 2000 sugar exports could be up to 3.4 million tons.

Half of the 1999/00 sugar under Quota B has been sold in advance with an average price of 5.2 cents/lb (\$114.40/ton) including 0.15 cents/lb premium, a big drop from 7.41 cents/lb (\$163/ton) in 1998/99 and a sharp decrease from 12.48 cents/lb. (\$ 275/ton) including 0.92 cents/lb. premium in 1997/98. Sugar trading has recently become more active as sugar prices in the world market have started an upward trend.

| Export Trade Matrix | | | | |
|----------------------------|-----------|----------------|-----------|--|
| Country: Thailand | | Units: MTRV | | |
| Commodity: Centrifugal Sug | gar | | | |
| Time period: JAN-DEC | | | | |
| Exports for | 1998 | | 1999 | |
| U.S. | 21,082 | U.S. | 15,111 | |
| Others | | Others | | |
| Indonesia | 778,611 | Indonesia | 834,978 | |
| Japan | 697,216 | Japan | 529,302 | |
| Korea, Rep. of | 163,560 | Russia | 469,087 | |
| Philippines | 156,158 | India | 281,555 | |
| China | 89,389 | Korea, Rep. of | 205,366 | |
| Malaysia | 87,356 | Cambodia | 157,702 | |
| Russia | 77,976 | Malaysia | 139,450 | |
| Cambodia | 62,873 | Philippines | 123,390 | |
| Saudi Arabia | 41,040 | Sri Lanka | 102,744 | |
| Tanzania | 26,703 | Iran | 74,921 | |
| Total for Others | 2,180,882 | | 2,918,495 | |
| Others not listed | 184,286 | | 400,066 | |
| Grand Total | 2,386,250 | | 3,333,672 | |

| Import Trade Matrix | | | |
|-----------------------------|------|-------------|------|
| Country: Thailand | | Units: MTRV | |
| Commodity: Centrifugal Suga | r | | |
| Time period: (Jan-Dec) | | | |
| Imports for | 1998 | | 1999 |
| U.S. | | U.S. | |
| Others | | Others | |
| Belgium | 5 | Australia | 20 |
| | | Belgium | 1 |
| | | | |
| | | | |
| Total for Others | 5 | | 21 |
| Others not listed | 2 | | 0 |
| Grand Total | 7 | | 21 |

Policy

| Year | Import Quota | Tariff | -rate |
|------|--------------|--------------|---------------|
| | (M.T.) | Within Quota | Outside 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% |

Due to the GATT, Thailand has set an import quota for sugar since 1995 as follows:

The RTG continues to provide packing credits to the sugar industry as follows:

| Packing Credit | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | |
|-----------------------|--------------|-------|-------|-------|-------|---------|--|
| | Million Baht | | | | | | |
| Actual Utilization | 145.9 | 134.5 | 375.7 | 134.7 | 552.1 | 6,199.4 | |
| Source: E | XIM Bank. | | | | | | |

These credits provide discount-rate financing by the EXIM bank to interested millers and exporters, allowing them to offer credit term to buyers. The actual credit utilized was small in the past several years as the commercial banks could offer exporters at 90 percent of the product value which was higher than the packing credit given by EXIM bank. However the financial crisis had forced sugar exporters to use 6,199.4 million baht of packing credit in 1999, a significant increase from 552.1 million baht in 1998.

SUPPLEMENTAL TABLES

| Region/Province | 1993/94 | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 |
|---------------------|---------|---------|-----------|-----------|---------|---------|
| | | | Heo | ctares | | |
| Northeast: | 224,992 | 286,390 | 310,520 | 326,203 | 328,832 | 330,930 |
| Udon Thani | 69,289 | 72,857 | 76,175 | 77,757 | 78,100 | 76,241 |
| Khon Kaen | 32,376 | 42,089 | 43,038 | 51,631 | 52,596 | 54,519 |
| Chaiyaphum | 33,060 | 56,374 | 62,334 | 67,714 | 68,529 | 72,001 |
| Nakhon Ratchasima | 45,010 | 58,503 | 62,616 | 66,156 | 66,731 | 65,448 |
| Buriram | 14,215 | 14,632 | 15,746 | 13,563 | 12,600 | 11,669 |
| Loei | 11,329 | 12,408 | 14,284 | 15,372 | 15,709 | 14,685 |
| Kalasin | 5,292 | 7,451 | 9,271 | 9,668 | 10,215 | 11,506 |
| Mukdahan | 8,142 | 12,175 | 12,782 | 11,432 | 11,296 | 11,728 |
| Nakhon Phanom | 1,422 | 1,399 | 2,712 | 1,668 | 1,546 | 1,544 |
| | | | | | | |
| North: | 187,169 | 211,777 | 235,189 | 239,239 | 222,212 | 211,523 |
| Nakhon Sawan | 42,523 | 54,071 | 63,382 | 63,913 | 59,188 | 54,186 |
| Kampheang Phet | 67,804 | 70,376 | 74,276 | 76,404 | 70,208 | 63,912 |
| Uttaradit | 14,313 | 14,548 | 15,384 | 13,259 | 12,758 | 12,182 |
| Lampang | 9,565 | 6,787 | 5,974 | 7,409 | 7,217 | 7,252 |
| Uthai Thani | 13,870 | 17,867 | 21,062 | 23,958 | 18,348 | 17,556 |
| Sukhothai | 21,590 | 25,668 | 28,205 | 26,541 | 25,819 | 26,484 |
| Central: | 444,664 | 443,798 | 458,918 | 444,743 | 392,536 | 375,078 |
| Kanchanaburi | 122,435 | 126,145 | 129,381 | 130,842 | 118,393 | 112,966 |
| Ratchaburi | 50,720 | 53,401 | 54,129 | 53,117 | 50,788 | 52,412 |
| Chon Buri | 46,520 | 39,734 | 39,059 | 32,708 | 25,968 | 24,666 |
| Suphan Buri | 88,271 | 93,502 | 98,136 | 95,818 | 82,595 | 77,207 |
| Nakhon Pathom | 18,007 | 18,327 | 18,494 | 16,797 | 15,345 | 14,453 |
| Prachuab Khiri Khan | 12,110 | 12,175 | 12,107 | 11,251 | 11,829 | 11,333 |
| Rayong | 12,605 | 9,090 | 9,052 | 8,552 | 7,281 | 6,466 |
| Chachoeng Sao | 15,646 | 11,476 | 14,072 | 13,530 | 12,418 | 11,535 |
| | | | | | | |
| South: | | | | | | |
| Country Total 1/ | 856,824 | 941,965 | 1,004,627 | 1,010,184 | 943,580 | 917,532 |

TABLE 1THAILAND: Planted Area of Sugarcane by Region and Province.

| Region/Province | 1993/94 | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 | | |
|---------------------|------------|-------------|------------|------------|------------|----------------|--|--|
| | | Metric Tons | | | | | | |
| Northeast: | 9 381 852 | 15,469,060 | 19 064 379 | 17 782 489 | 15,353,041 | 18,859,249 | | |
| Udon Thani | 2,731,829 | 4,011,713 | | | 3,555,993 | | | |
| Khon Kaen | 1,290,094 | 2,370,416 | | | 2,393,946 | | | |
| Chaiyaphum | 1,293,355 | 2,883,174 | | | 3,155,356 | | | |
| Nakhon Ratchasima | 2,143,878 | 3,208,883 | | , , | 3,043,213 | | | |
| Buriram | 538,019 | 787,045 | | | 636,805 | | | |
| Loei | 522,155 | 730,183 | , | , | 785,889 | | | |
| Kalasin | 354,292 | 408,867 | | | 531,595 | | | |
| Mukdahan | 384,462 | 574,807 | | | 592,987 | 694,191 | | |
| Nakhon Phanom | 48,710 | 77,463 | | | 80,946 | | | |
| | | | , | | | | | |
| North: | 8,348,818 | 11,724,992 | 13,737,074 | 13,372,021 | 10,258,143 | 11,391,153 | | |
| Nakhon Sawan | 1,855,960 | | | | 2,703,247 | 2,739,939 | | |
| Kampheang Phet | 3,172,190 | | | | 3,252,559 | | | |
| Uttaradit | 661,472 | 669,656 | | | 553,698 | | | |
| Lampang | 348,311 | 290,436 | 277,212 | 275,120 | 261,471 | 311,289 | | |
| Uthai Thani | 620,850 | 952,777 | | 1,183,944 | 892,968 | 943,525 | | |
| Sukhothai | 988,844 | 1,439,645 | 1,701,074 | 1,360,970 | 1,142,643 | 1,419,120 | | |
| | | | | | | | | |
| Central: | 20,092,205 | 23,403,287 | 25,172,307 | 25,239,428 | 17,854,351 | 20,081,165 | | |
| Kanchanaburi | 5,776,575 | 6,682,538 | 6,484,032 | 7,113,885 | 5,335,241 | 5,940,721 | | |
| Ratchaburi | 2,232,467 | 2,428,068 | 2,561,802 | 2,716,465 | 2,265,186 | 2,685,970 | | |
| Chon Buri | 1,874,058 | 1,950,928 | 2,268,616 | 1,632,467 | 1,113,262 | 1,270,167 | | |
| Suphan Buri | 4,166,460 | 5,383,354 | 6,185,052 | 6,414,039 | 3,671,385 | 4,303,322 | | |
| Nakhon Pathom | 925,961 | 1,115,659 | 1,097,845 | 1,051,185 | 702,991 | 821,705 | | |
| Prachuab Khiri Khan | 441,358 | 617,875 | 581,259 | 557,388 | 526,979 | 566,330 | | |
| Rayong | 530,142 | 465,136 | 482,989 | 401,365 | 336,527 | 341,905 | | |
| Chachoeng Sao | 643,386 | 546,122 | 710,220 | 658,189 | 554,664 | 594,259 | | |
| | | | | | | | | |
| South: | | | | | | | | |
| | | | | | | | | |
| Country Total 1/ | 37,822,875 | 50,597,339 | 57,973,760 | 56,393,938 | 43,465,535 | 50,331,567 | | |

TABLE 2THAILAND:Sugarcane Production by Region and Province.

| Region/Province | 1993/94 | 1994/95 | 1995/96 | 1996/97 | 1997/98 | 1998/99 |
|---------------------|---------|---------|------------|---------|---------|---------|
| | | | Kilograms/ | На | | |
| Northeast: | 41,699 | 54,014 | 61,395 | 54,514 | 46,690 | 56,989 |
| Udon Thani | 39,427 | 55,063 | 62,832 | 53,235 | 45,531 | 62,168 |
| Khon Kaen | 39,847 | 56,319 | 64,197 | 54,239 | 45,515 | 52,923 |
| Chaiyaphum | 39,121 | 51,144 | 61,456 | 59,521 | 46,044 | 55,432 |
| Nakhon Ratchasima | 47,631 | 54,850 | 62,518 | 54,656 | 45,604 | 55,074 |
| Buriram | 37,849 | 53,788 | 52,350 | 53,354 | 50,539 | 57,127 |
| Loei | 46,088 | 58,850 | 66,919 | 52,992 | 50,029 | 57,586 |
| Kalasin | 66,945 | 54,875 | 56,900 | 51,875 | 52,040 | 58,573 |
| Mukdahan | 47,222 | 47,213 | 52,181 | 45,389 | 52,496 | 59,192 |
| Nakhon Phanom | 34,256 | 55,381 | 52,519 | 49,700 | 52,372 | 58,883 |
| | | | | | | |
| North: | 44,606 | 55,365 | 58,409 | 55,894 | 46,164 | 53,853 |
| Nakhon Sawan | 43,646 | 57,313 | 57,202 | 55,614 | 45,672 | 50,566 |
| Kampheang Phet | 46,785 | 57,931 | 65,011 | 65,125 | 46,328 | 57,716 |
| Uttaradit | 46,214 | 46,031 | 46,731 | 42,924 | 43,399 | 49,972 |
| Lampang | 36,417 | 42,794 | 46,406 | 37,134 | 36,232 | 42,924 |
| Uthai Thani | 44,763 | 53,325 | 55,044 | 49,417 | 48,669 | 53,744 |
| Sukhothai | 45,801 | 56,088 | 60,311 | 51,277 | 44,256 | 53,583 |
| | | | | | | |
| Central: | 45,185 | 52,734 | 54,851 | 56,751 | 45,485 | 53,539 |
| Kanchanaburi | 47,181 | 52,975 | 50,116 | 54,370 | 45,064 | 52,588 |
| Ratchaburi | 44,015 | 45,469 | 47,328 | 51,141 | 44,601 | 51,247 |
| Chon Buri | 40,285 | 49,100 | 58,081 | 49,911 | 42,870 | 51,494 |
| Suphan Buri | 47,201 | 57,575 | 63,025 | 66,940 | 44,451 | 55,738 |
| Nakhon Pathom | 51,423 | 60,875 | 59,362 | 62,581 | 45,813 | 56,852 |
| Prachuab Khiri Khan | 36,445 | 50,750 | 48,011 | 49,542 | 44,549 | 49,971 |
| Rayong | 42,058 | 51,169 | 53,356 | 46,934 | 46,222 | 52,877 |
| Chachoeng Sao | 41,121 | 47,588 | 50,469 | 48,648 | 44,666 | 51,518 |
| South: | | | | | | |
| Country Total 1/ | 44,143 | 53,715 | 57,707 | 55,825 | 46,065 | 54,855 |

 TABLE 3
 THAILAND: Sugarcane Yield by Region and Province.

TABLE 4. Sugar Utilization by Domestic Industry, 1995-1999.

| Type of Industry | 1995 | 1996 | 1997 | 1998 | 1999 |
|-------------------------|---------------|---------|---------|---------|---------|
| BEVERAGES | • | | | | |
| Refined Sugar | 90,306 | 88,708 | 98,765 | 114,100 | 113,545 |
| White Sugar | 47,547 | 46,774 | 69,982 | 79,558 | 76,258 |
| Sub - Total | 137,853 | 135,482 | 168,747 | 193,658 | 189,803 |
| CAKE & BREAD | | | | | |
| Refined Sugar | 44,290 | 46,066 | 57,669 | 13,600 | 5,934 |
| White Sugar | 1,413 | 1,006 | 15,641 | 8,054 | 7,976 |
| Sub - Total | 45,703 | 47,072 | 73,310 | 21,654 | 13,910 |
| ALCOHOL BASE DRINK | | | | | |
| Refined Sugar | 1,917 | 2,975 | nil | nil | 5,156 |
| White Sugar | 13 | 1,467 | nil | nil | 1,389 |
| Sub - Total | 1,930 | 4,442 | 0 | 0 | 6,545 |
| FRUIT & FOOD PRODUCTS | | | | | |
| Refined Sugar | 23,999 | 26,634 | 36,110 | 66,547 | 82,092 |
| White Sugar | 15,937 | 20,336 | 32,040 | 145,579 | 164,462 |
| Sub - Total | 39,936 | 46,970 | 68,150 | 212,126 | 246,554 |
| DAIRY PRODUCTS | | | | | |
| Refined Sugar | 31,462 | 32,239 | 35,069 | 34,310 | 31,330 |
| White Sugar | 42,419 | 47,686 | 63,134 | 115,761 | 109,301 |
| Sub - Total | 73,881 | 79,925 | 98,203 | 150,071 | 140,631 |
| CONFECTIONARY PRODUCTS | | | | | |
| Refined Sugar | 1,001 | 1,829 | 3,882 | 4,047 | 5,593 |
| White Sugar | 2,818 | 5,501 | 4,731 | 18,567 | 16,071 |
| Sub - Total | 3,819 | 7,330 | 8,613 | 22,614 | 21,664 |
| PHARMACEUTICAL PRODUCTS | S & MISCELLAN | IEOUS | | | |
| Refined Sugar | 35,542 | 53,295 | 77,580 | 102,944 | 84,907 |
| White Sugar | 1,417 | 1,044 | 2,016 | 3,962 | 3,624 |
| Sub - Total | 36,959 | 54,339 | 79,596 | 106,906 | 88,531 |
| Total Industrial Use | 340,081 | 375,560 | 496,619 | 707,029 | 707,638 |

SOURCE: Thai Cane and Sugar Corporation Limited.

| Calendar Year | Plantation Wh | Plantation White Sugar | | | | | |
|---------------|------------------------|------------------------|-----------|--|--|--|--|
| | Wholesale (Bht/100 kg) | Retail (Bht/Kg) | Sugarcane | | | | |
| 1980 | 1,011 | 11.65 | 650 | | | | |
| 1981 | 1,019 | 11.51 | 510 | | | | |
| 1982 | 1,075 | 11.94 | 381 | | | | |
| 1983 | 1,091 | 12.00 | 421 | | | | |
| 1984 | 1,162 | 12.00 | 380 | | | | |
| 1985 | 1,097 | 12.00 | 388 | | | | |
| 1986 | 1,099 | 12.00 | 408 | | | | |
| 1987 | 1,097 | 12.00 | 462 | | | | |
| 1988 | 1,098 | 12.00 | 527 | | | | |
| 1989 | 1,098 | 12.00 | 596 | | | | |
| 1990 | 1,099 | 12.00 | 442 | | | | |
| 1991 | 1,099 | 12.00 | 480 | | | | |
| 1992 | 1,099 | 12.00 | 516 | | | | |
| 1993 1/ | 1,099 | 12.00 | 533 | | | | |
| 1994 | 1,099 | 12.00 | 569 | | | | |
| 1995 | 1,099 | 12.00 | 538 | | | | |
| 1996 | 1,099 | 12.00 | 2/ | | | | |
| 1997 | 1,099 | 12.00 | 600 3/ | | | | |
| 1998 | 1,100 | 12.50 | 500 3/ | | | | |
| 1999 | 1,100 | 12.50 | 450 3/ | | | | |

1/ 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.

2/ The first year that sugar cane price calculation breaks into 12 zones as shown in table 6.

3/ The initial cane price.

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

| Zone | Number of Sugar Mill | Baht/M.T. at 10 C.C.S. | | |
|-----------|----------------------|------------------------|---------|--|
| | | 1996/97 | 1997/98 | |
| North 1 | 4 | 572.12 | 728.98 | |
| North 2 | 3 | 535.57 | 693.97 | |
| North 3 | 1 | 526.47 | 654.96 | |
| North 4 | 1 | 541.77 | 698.18 | |
| North 5 | 1 | 526.25 | 692.21 | |
| Central 1 | 1 | 514.65 | 650.69 | |
| Central 2 | 1 | 551.82 | 700.16 | |
| Central 3 | 2 | 564.93 | 675.04 | |
| Central 4 | 14 | 567.05 | 701.69 | |
| Central 5 | 1 | 538.81 | 640.02 | |
| East | 5 | 556.66 | 683.82 | |
| Northeast | 12 | 575.29 | 715.26 | |

TABLE 6. Average Final Prices of Sugarcane by Zone, First applied in 1996/97.

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

| TABLE 7 | Monthly Exports (F.O.B.) Prices for Raw Sugar (Bht/Ton). |
|---------|--|
| | |

| Month/Year | 1995 | 1996 | 1997 | 1998 | 1999 |
|------------|-----------------------|-------|---------------|---------|--------|
| - | 7 0 7 0 | | < 7 00 | 12.02.6 | < 0.01 |
| January | 7,059 | 6,652 | 6,700 | 13,936 | 6,931 |
| February | 7,363 | 6,796 | 6,679 | 11,263 | 6,923 |
| March | 7,127 | 6,595 | 6,580 | 10,826 | 6,828 |
| April | 7,235 | 6,487 | 6,634 | 10,372 | 6,128 |
| May | 7,289 | 6,510 | 6,598 | 10,306 | 5,506 |
| June | 7,746 | 7,019 | 6,711 | 10,459 | 5,173 |
| July | 7,697 | 7,055 | 8,081 | 11,400 | 5,288 |
| August | 7,661 | 7,574 | 8,388 | 10,514 | 6,146 |
| September | 7,839 | 7,537 | 9,254 | 9,013 | 5,242 |
| October | 7,738 | 7,954 | 9,780 | 7,728 | 5,636 |
| November | 7,431 | 7,384 | 9,676 | 7,839 | 5,558 |
| December | 7,221 | 6,347 | 12,197 | 10,109 | 4,873 |
| Average | 7,439 | 6,686 | 7,195 | 10,361 | 5,842 |

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).

| Month | 1995 | 1996 | 1997 | 1998 | 1999 |
|-----------|-------|-------|--------|--------|-------|
| January | 7,528 | 7,842 | 7,599 | 15,342 | 8,698 |
| February | 7,674 | 7,730 | 7,916 | 13,781 | 7,038 |
| March | 8,100 | 7,576 | 8,017 | 12,618 | 8,732 |
| April | 8,443 | 7,902 | 7,986 | 11,700 | 8,084 |
| May | 8,065 | 7,835 | 8,333 | 11,660 | 7,701 |
| June | 8,583 | 8,270 | 7,997 | 11,731 | 7,173 |
| July | 8,619 | 7,994 | 8,703 | 11,153 | 6,894 |
| August | 8,673 | 7,959 | 10,303 | 11,482 | 7,497 |
| September | 8,490 | 8,385 | 10,431 | 11,217 | 7,888 |
| October | 8,304 | 8,980 | 11,193 | 10,498 | 7,673 |
| November | 8,301 | 8,799 | 12,248 | 7,358 | 7,300 |
| December | 9,308 | 8,601 | 14,905 | 9,071 | 7,497 |
| Average | 8,335 | 7,882 | 8,777 | 12,527 | 7,632 |

TABLE 8Monthly Exports (F.O.B.) Prices for Plantation White Sugar (Bht/Ton).

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).

| Destination | 1995 | 1996 | 1997 | 1998 | 1999 | | | |
|----------------|-----------|-----------|-----------|-----------|-----------|--|--|--|
| | | MTRV | | | | | | |
| China | 1,236,453 | 500,526 | 233,932 | 85,609 | 33,858 | | | |
| Indonesia | | 54,378 | 160,005 | 25,804 | 341,700 | | | |
| Iran | | 28,728 | | | | | | |
| Japan | 530,636 | 737,457 | 703,729 | 697,216 | 529,302 | | | |
| Korea, DPR | | | | | 3,386 | | | |
| Korea, Rep. of | 378,943 | 623,209 | 710,402 | 163,560 | 205,301 | | | |
| Malaysia | 291,891 | 367,924 | 382,698 | 84,251 | 127,470 | | | |
| Mozambique | 13,338 | 2,052 | 23,598 | 15,185 | | | | |
| Philippines | 113,917 | 223,843 | 11,286 | 134,714 | 117,547 | | | |
| Romania | | 25,650 | | | 12,312 | | | |
| Russia | 42,169 | 44,118 | 85,158 | 77,976 | 469,087 | | | |
| Singapore | 8,208 | 83,106 | 43,092 | 7,182 | 17,750 | | | |
| Sri Lanka | 73,564 | 57,559 | 47,093 | 12,312 | 78,007 | | | |
| Tanzania | 20,520 | 35,223 | 2,052 | 18,981 | | | | |
| Ukraine | 39,769 | 14,364 | 28,728 | | | | | |
| United States | 16,539 | 32,740 | 28,284 | 21,082 | 15,111 | | | |
| UAE | | 72,254 | 34,474 | 6,156 | | | | |
| Vietnam | 44,118 | 15,390 | 31,550 | | 14,334 | | | |
| Others | 43,495 | 41,389 | 38,569 | 73,027 | 9,537 | | | |
| | | | | | | | | |
| Total | 2,853,560 | 2,959,910 | 2,564,650 | 1,423,055 | 1,974,702 | | | |

TABLE 9. Exports of Raw Sugar, CY 1995-1999, Metric Ton Raw Value.

SOURCE: Six exporting companies, namely, TSC, TSTC, SSEC, SITCO, K.S.L., PSC and TISS.

TABLE 10. Exports of White & Refined Sugar, CY 1995-1999 (MTRV).

| Destination | 1995 | 1996 | 1997 | 1998 | 1999 | | |
|--------------|---------|-----------|-----------|---------|-----------|--|--|
| | MTRV | | | | | | |
| Bangladesh | | | 25,358 | | 41,555 | | |
| Brunei | | 3,210 | | 3,210 | 4,280 | | |
| Cambodia | 22,276 | 38,411 | 55,430 | 62,873 | 157,702 | | |
| China | 225,499 | | 2,070 | 3,780 | | | |
| India | | | 25,470 | 13,973 | 281,555 | | |
| Indonesia | 332,064 | 632,468 | 1,133,846 | 752,807 | 493,278 | | |
| Iran | 112,350 | 329,560 | 118,580 | | 74,921 | | |
| Jordan | | 44,380 | | | 23,214 | | |
| Korea, DPR | | | | | 52,892 | | |
| Kenya | | 22,819 | 15,525 | 2,381 | | | |
| Laos | 12,295 | 11,412 | 16,849 | 14,973 | 20,445 | | |
| Maldives | | 3,105 | | | | | |
| Pakistan | | 29,725 | 92,616 | | | | |
| Philippines | 77,401 | 126,151 | | 21,444 | 5,843 | | |
| Russia | 2,675 | 2,140 | | | | | |
| Saudi Arabia | 42,881 | 34,890 | | | | | |
| Singapore | 4,863 | 8,455 | 15,502 | 6,111 | 33,768 | | |
| Sri Lanka | 20,314 | 34,007 | 32,245 | 6,210 | 24,737 | | |
| Syria | | 27,820 | | | | | |
| Tanzania | | 10,455 | 29,187 | 26,703 | 6,210 | | |
| UAE | 22,656 | 59,449 | 25,680 | | 4,165 | | |
| Vietnam | 68,116 | 2,087 | 19,053 | 8,280 | | | |
| Yemen | 8,570 | 89,658 | | | 60,379 | | |
| Others | 43,616 | 99,444 | 115,772 | 106,534 | 277,561 | | |
| Total | 973,300 | 1,568,025 | 1,642,395 | 963,196 | 1,358,968 | | |

SOURCE:Six exporting companies, namely, TSC, TSTC, SSEC, SITCO, K.S.L., PSC and TISS.

| Year | North | Central | East | Northeast | Average |
|------------|-------|---------|-------|-----------|---------|
| 1977/78 | 9.99 | 9.65 | 10.09 | 11.60 | 9.85 |
| 1978/79 | 10.20 | 10.47 | 10.23 | 11.22 | 10.38 |
| 1979/80 | 10.30 | 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 | 10.80 | 10.59 | 11.79 | 10.82 |
| 1986/87 | 10.65 | 10.53 | 10.49 | 11.60 | 10.66 |
| 1987/88 | 9.97 | 9.67 | 9.58 | 11.43 | 9.98 |
| 1988/89 | 10.66 | 10.63 | 10.67 | 11.67 | 10.80 |
| 1989/90 | 10.46 | 10.18 | 10.44 | 11.23 | 10.46 |
| 1990/91 | 10.80 | 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 | 11.90 | 12.58 | 11.60 |
| 1992/93 | 11.74 | 11.10 | 11.79 | 12.40 | 11.58 |
| 1993/94 | 11.35 | 10.98 | 11.09 | 11.95 | 11.30 |
| 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 | 10.20 | 10.73 | 11.89 | 11.11 |
| 1998/99 | 11.32 | 10.97 | 11.15 | 12.56 | 11.66 |

TABLE 11 THAILAND: Average Quality of Cane Measured by C.C.S.

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

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

| | Sugarcane | Business tax applied for | Export of Raw and White Sugar | Local Trade of White Sugar | | |
|-------------|--------------------|--------------------------|----------------------------------|-------------------------------|--|--|
| | | Exp & Local Trd | (Actual Colle | ected Taxes) | | |
| | | | Percent | | | |
| | | | - | | | |
| 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/ | | |
| domestic sa | les, it does not a | pply to exports. | ive on January 1, 1992 a | | | |
| 2/ The gov | ernment revised | the value added tax fro | m 7 to 10 percent on Au | ugust 10, 1997. | | |
| 3/ The valu | e added tax has | brought back to 7 perc | cent since Apr 1, 1999. | | | |
| Source: Of | fice of Cane & S | ugar Board, Ministry o | f Industry. | | | |

TABLE 12 THAILAND: Business Tax rates for Cane and Sugar, 1980/81 to Present.