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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
-	<b>7</b> 0 <b>7</b> 0		< <b>7</b> 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.