

Study N° SE 1404 -10

# Thailand's sugar policy: Government drives production and export expansion

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06/03/2015

## STUDY

### EXECUTIVE SUMMARY

From 2011 to 2014, world sugar prices dropped by 40%. Yet during that same period, sugar exports from Thailand rose by 70%, solidifying Thailand's position as the world's second largest sugar exporter. And, further rapid sugar production expansion – 50% in five years – is planned.

Thai sugar producers are relatively inefficient compared with other major producers, such as leading exporter Brazil. The Thai sugar industry is hampered by inadequate moisture and poor cane quality, small farm size, lack of mechanization, and underutilization of cane mills. How, then, was the Thai sugar industry able to achieve such a production gain while world sugar prices were falling?

The answer is government intervention. The Thai government has been closely involved with the Thai sugar industry for decades, and has taken major steps to expand Thai sugar production and exports, regardless of world market pricing and needs.

Thai government support for its sugar industry amounts to at least \$1.3 billion per year. That includes about \$775 million or more in indirect export subsidies through a price pooling system, which boosts subsidies when world prices decline, and \$500-525 million per year in direct payments. In addition, Thai sugar producers benefit substantially from soft loans and input subsidies the Thai government makes available to all of agriculture.

The Thai sugar regime is patterned after the old European Union quota system, a key aspect of which was declared illegal by the World Trade Organization in 2005. The WTO found that exports generated by the EU system benefitted from prohibited export subsidies.

Essentially, by guaranteeing Thai sugar producers a high price for sugar sold within Thailand, the industry can afford to export sugar onto the world market for whatever price it will bring – a form of indirect export subsidy.

- Brazil and Australia, which had successfully challenged the EU sugar regime at the WTO, have recently joined with the EU in questioning whether the Thai sugar quota system is consistent with WTO rules.

Complementing the indirect export subsidy scheme, the Thai government supports its sugar producers by:

- Providing cane growers with direct payments that rise when world sugar prices fall;
- Providing soft loans – at a fraction of market interest rates;
- Providing input subsidies to cane growers;
- Guaranteeing domestic sugar prices for sugarcane growers and millers, including a government-set revenue sharing system (70% to growers; 30% to millers);
- Directing sugarcane planting decisions;

- Setting quotas for each mill's sales to the domestic market, with no limit on sales to the world market;
- Providing border protection for domestic producers against lower-priced world-market sugar;
- Providing subsidies for production of ethanol, mostly from cane molasses, which amounts to another indirect subsidy for cane growers and millers.

In addition, the Thai government is enticing rice farmers to switch to sugar cane, with a goal of increasing sugar cane production by 50% over the next five years.

- Previously the Thai government had encouraged rice production expansion, and the government massively stockpiled rice, in hopes of exporting their surplus onto a rising world market. However, world rice prices did not rise as the Thais had hoped, and the government is seeking to address the rice surplus problem by diverting rice land to sugarcane.

## 1. OVERVIEW

In a general context of depressed prices on the world sugar market, with prices well below that of production costs of even the largest sugar producing countries, it appears that Thailand is able to persevere in its policy to increase capacity and sugar production to consolidate its position on the international export market. The official goal for the Thai sugar industry is to increase cane production from the 100 million tons of cane currently produced to 150 million tons of cane by 2020.

The official discourse on rapid cane expansion was the same for Brazil in the beginning of 2010. The Brazilian sugar industry was targeting an increase from 600 million tons of cane in 2010 to 1 billion tons of cane in 2020. The current data for Brazil confirm that, confronted with the realities of the market, it is easier said than done.

In Thailand there is definitely a will to reduce the impact of the realities of the market on the sugar industry and on the cane growers. The Thai sugar cane sector is highly regulated and Thai sugar policy has been ruled by the Cane Sugar Act since 1984. The sugar industry is driven and coordinated by a Governmental body, the Office of the Cane and Sugar Board (OCSB), under the jurisdiction of the Ministry of Industry of Thailand.

The Thai sugar policy intervenes on different important aspects of sugar production, including directing sugar cane area and grower payments, setting domestic sugar prices, providing direct payments, soft loans, and input subsidies to producers, and indirect subsidy of exports through high domestic prices. Since 2010/11, Thai sugar exports have risen 70% while the world sugar price was falling by 40%. Indirect export subsidies have been valued at as much as 3 cts/lb.

### The Thai sugar model

The Thai sugar industry is a different sugar model than the Brazilian one. From an agricultural perspective, there are numerous independent and very small farmers and families harvesting different crops, notably sugar cane. Cane, versus rice or cassava for example, requires good levels of prices, especially as climatic conditions are characterized by insufficient rainfall due to very high temperatures and high evaporation levels. Sugar cane is a rain fed crop and agricultural productivity is relatively modest in terms of tonnage (26-28 metric tons/acre) and sugar content (12%). The direct consequence for the millers is that the cost for raw material per ton of sugar is high.

From an industrial perspective, the Thai sugar industry is a big and relatively modern sector, with excess crushing capacities, favoured by a government system of quota allocations that encourages millers to increase their capacities to get more quotas and grow their market share. Length of sugar campaigns is around 120 days, but can be longer.

Thai sugar production is dedicated to exports. Thailand is second only to Brazil and well ahead of Australia, the third largest sugar exporter. About 65% (7 million metric tons) of Thai production goes to exports on the world market, especially to the sugar-deficient Asian market.

The observation one can make is that the sugar production level is still relatively high in Thailand, despite falling prices on the world market. How is that possible while almost 2/3 of the production is exported to the world market?

The Thai sugar industry is relatively low cost, but the current level of world prices (12-15 cts/lb) is not sustainable for any sugar producers. Over the last four campaigns, between 2010/11 and

2013/14, world prices for raw sugar declined from 28.4 cts/lb to 16.79 cts/lb, which constitutes a 40% drop in prices. At the same time Thai exports jumped from around 4.2 mmt in 2000 to 7.1 mmt (on average these last 4 campaigns), representing almost a 70% increase.

There is a transportation advantage for Thai sugar on the Asian market. It is a major sugar-consuming area with a high deficit. There is strong demand and Thailand exports 75% of its sugar in this area, with the geographical advantage of being able to deliver sugar to the heart of the most important and growing market in the world.

But the answers pertain more to political support from the government, than the economics of Thai sugar production.

From an agricultural perspective: To produce sugar, you need sugar cane to be cultivated, harvested and finally crushed. In Thailand, independent growers cultivate cane and have continued to do so even in the four year period of declining world sugar prices. The cane area, which had increased sharply over the past decade, has not decreased in any significant way as prices for cane were kept high by Government intervention, despite the drop with world sugar prices (-40%) over the last four sugar campaigns.

From an industrial perspective: The Thai government organizes the market through two different destinations and with related quotas of production. On the domestic market (A quota), sugar prices are fixed by the Government at higher levels than the world market (20.330 Baht/mt, i.e. 28.12 cts/lb for Plantation White / wholesale). These prices have remained the same since 2008, so there is a very stable framework for sugar producers on the domestic market (28% of the total output). The profit is quite interesting when one considers cost of production for Thai sugars within a range of 18-23 cts/lb.

#### A highly regulated sugar policy

The sugar policy in Thailand is highly regulated by the Government under the Cane Sugar Act of 1984. It is very similar in its philosophy to the European Union Sugar Regime, before the 2006 reform. It is built on three main pillars:

- Quotas to define quantities and related prices. These three quotas are allocated to each sugar mill and there is no limit in terms of production for the C quota, dedicated to exports.
- Guaranteed prices for sugar on the domestic market for millers, and for cane growers, through the Revenue Sharing system of 70/30 (70% to growers; 30% to millers).
- Protection at the border because of the high prices on the internal market relative to low world prices.

**The sugar price pooling advantage:** the logic of the Thai sugar system is to mix, on one hand, the revenues of a protected and profitable domestic market (A Quota) through governmental fixed prices (28% of production), plus world-market exports (72% of output) in direct link with world sugar prices (B,C Quotas). The system of quotas allows a different valuation for sugars, and serves as a basis for cane payment calculation, for each ton of cane, regardless of its final destination. The system of high domestic prices was considered as a cross-subsidy in a recent attack from sugar-export competitors, in the WTO.

Last but not least, the regulatory provisions of the sugar policy in Thailand are completed by a series of measures and tools to encourage farmers and support the sugar industry as a whole. It is organized through different official institutions, the BAAC, State owned bank, that provides direct payments to farmers (\$5.00/mt in 2012, \$5.20/mt in 2013) to mitigate any drop in cane price, through the intervention of the Cane and Sugar Fund (CSF).

The government intervenes also through loans that are rendered available (with low interest rates) for farmers to pre-finance sugar cane campaigns, to buy agricultural machinery and harvesters or to facilitate the improvement of productivity through the purchase of small irrigation equipment. In order to finance this support, the Government uses a fee and the tax-added value collected from domestic sugar sales to repay the Bank for Agriculture and Agricultural Cooperatives (BAAC).

The government is also supporting the sugar industry by ending support that was dedicated to another sector of production, rice. The plan for increasing the area of cane by converting rice growers to sugar cane production is a good example of the type of government decision made to attain the future (2020) goals of the Thai sugar industry.

The price of cane is a very sensitive issue for many small Thai farmers and also politically for the Thai Government. It is an expensive raw material for millers, limited by the natural and climatic conditions and low recovery rates. Thai Government support for their farmers reflects this situation.

Most recently, the Thai sugar regime is being attacked internally and from the outside. The Sugar Act of 1984 is being put under scrutiny following the conclusions of a group of Thai experts dedicated to review the future of this regime in order to improve its efficiency, and to respond to the critics of a sugar regime that has been in place for more than three decades.

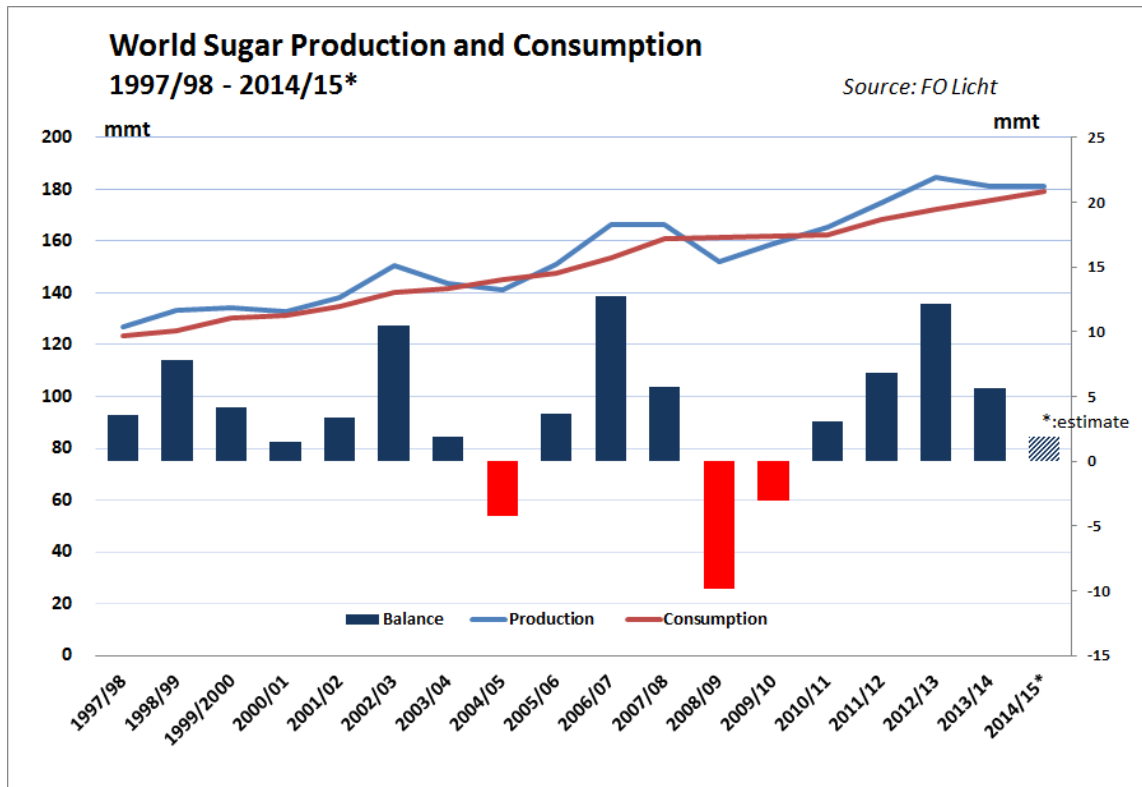
The internal and international pressures, including the fact that the ASEAN Economic Community (EC) will be applicable this year, will probably push the Thai system towards a more free trade environment. However, one can think that the economic and political issues concerning the future of the sugar industry are too important for the Thai Government to let the market dictate their ways.

The long-term outlook for the Thai sugar industry will be more complex, within a fast moving global environment, both national and international.

## 2. CONTEXT OF THE WORLD SUGAR MARKET

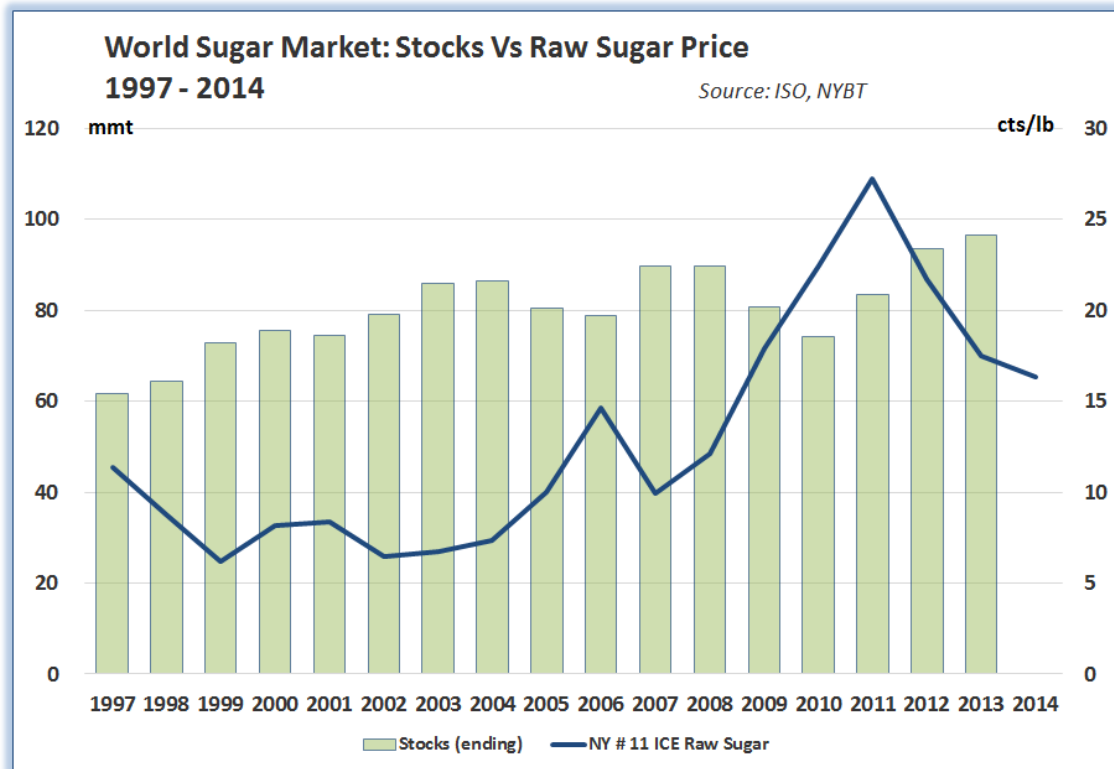
World sugar production is the result of more than 120 sugar producing countries, but the market is clearly influenced by what is happening in two of the world's largest producers: Brazil and India. Brazil is also the largest sugar exporter (26.6 mmt), far ahead of Thailand.

**Graph # 1: Production, consumption and balance of sugar**



The sugar world market is currently emerging from a consecutive four-year period of surpluses, with sugar stockpiling around the world and prices that dropped in the 12-15 cts/lb range.

**Graph # 2: Stocks and prices**



The world sugar market’s landscape has been modified these last years with the European Union becoming a net importer, and the emergence of Thailand as the second major sugar exporter after Brazil, surpassing Australia. Thailand drastically increased its production due partly to the high levels of prices in 2010-2011. Thai sugar production is still on this upward trend despite a consistent drop in sugar prices since then.

**3. THE THAI SUGAR INDUSTRY**

Thailand is a country which is, in terms of size and population, relatively similar to that of France. In terms of sugar production, however, the Thai sugar industry is actually part of the very closed circle of the countries producing more than 10 million tons of sugar annually. It has also become the second largest sugar exporter on the world sugar market.



- **General Overview:**

Thailand is one of the world's top five sugar producers, with 11 million metric tons of sugar produced in 50 sugar mills (about 220,000 mt on average per mill).

- ✓ **Sugar cane sector:** cultivated on 3.459 million acres (1.400 million hectares) by 200,000 families (official figure underestimated) resulting in small average sugar cane areas (17 acres/farmer on average). Sugar cane is mainly a rain fed crop (less than 10% of area cultivated with cane is irrigated) and is characterized by cane yields of about 28.3 mt/acre and with a sugar content of about 12-13%. Such yields are consistent with the natural conditions. Thai yields are modest compared with other major players like Brazil or Australia (32-36 mt/acre), with higher sugar contents (13-14%).
- ✓ **Structure of cane production:** cane is cultivated in four main producing regions and almost 3/4 of total sugar cane production (103.6 mmt) is concentrated in the Central and North East parts of the country - the regions with the best yields and the greatest density of sugar factories.

**Graph # 3: Cane crushed by regions of production (103.6 million metric tons)**

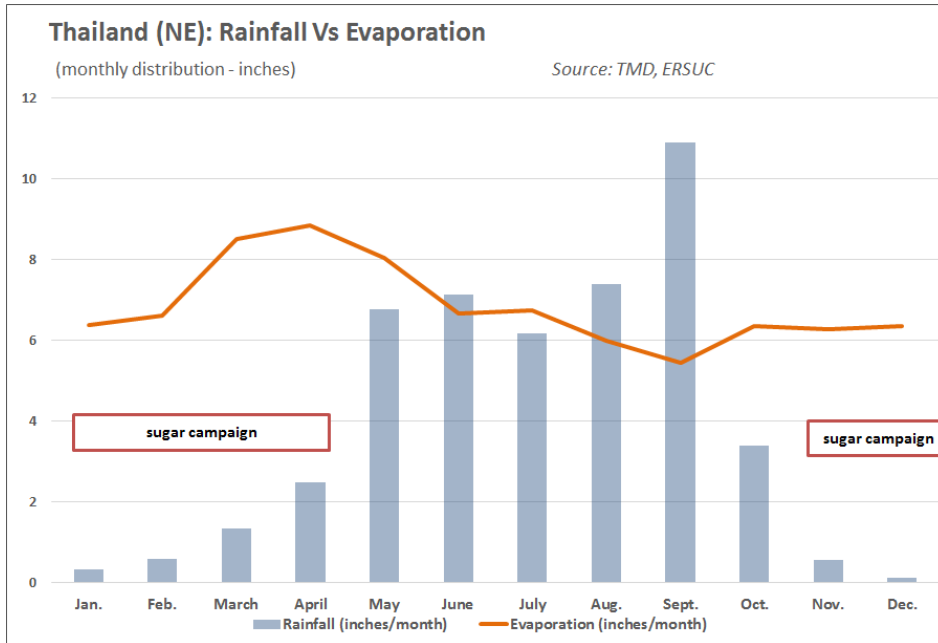


Sources: Ministry of Industry, TSMC

- **Climatic conditions**

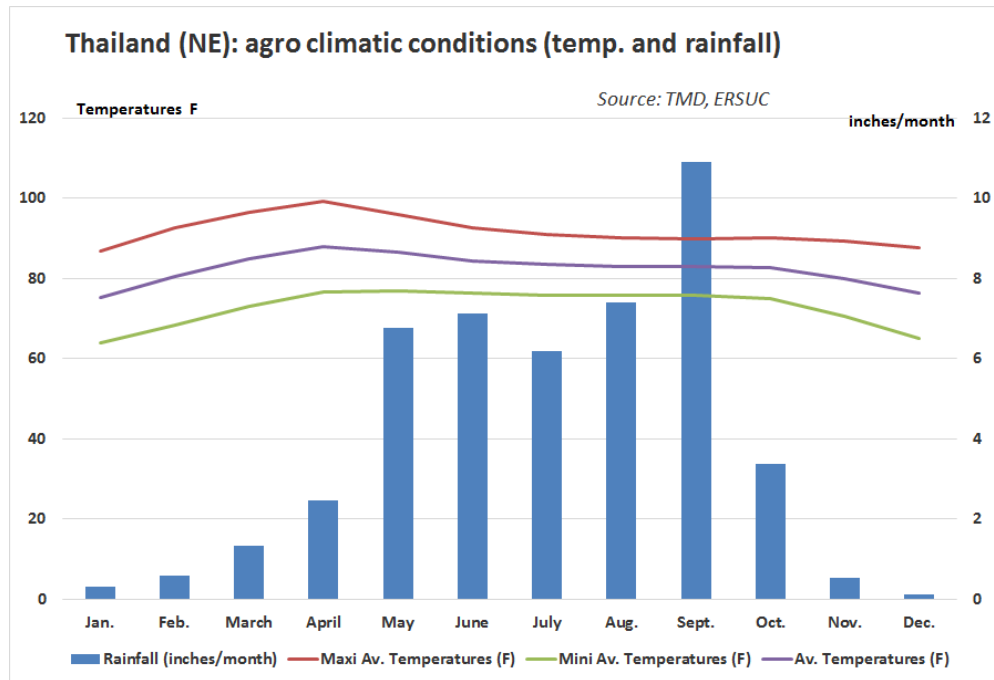
Thailand is located in a tropical zone (13-17 degrees of latitude North) with two well differentiated seasons: a dry season (low temperatures, and less than 2 inches/month of rainfall) and a wet season (high temperatures, heavy rainfall).

**Graph # 4: Water balance**



The average rainfall in Thailand is situated in a range of 43-51 inches/year. Water is definitely a limiting factor for sugar cane because the rainfall is inadequate during the very high temperatures that favor high evaporation. Thailand's deficit of water required to maximize cane yields is about 23-27 inches/year, versus 6-8 inches/year in normal years in Brazil.

**Graph #5: Temperatures Vs rainfall**

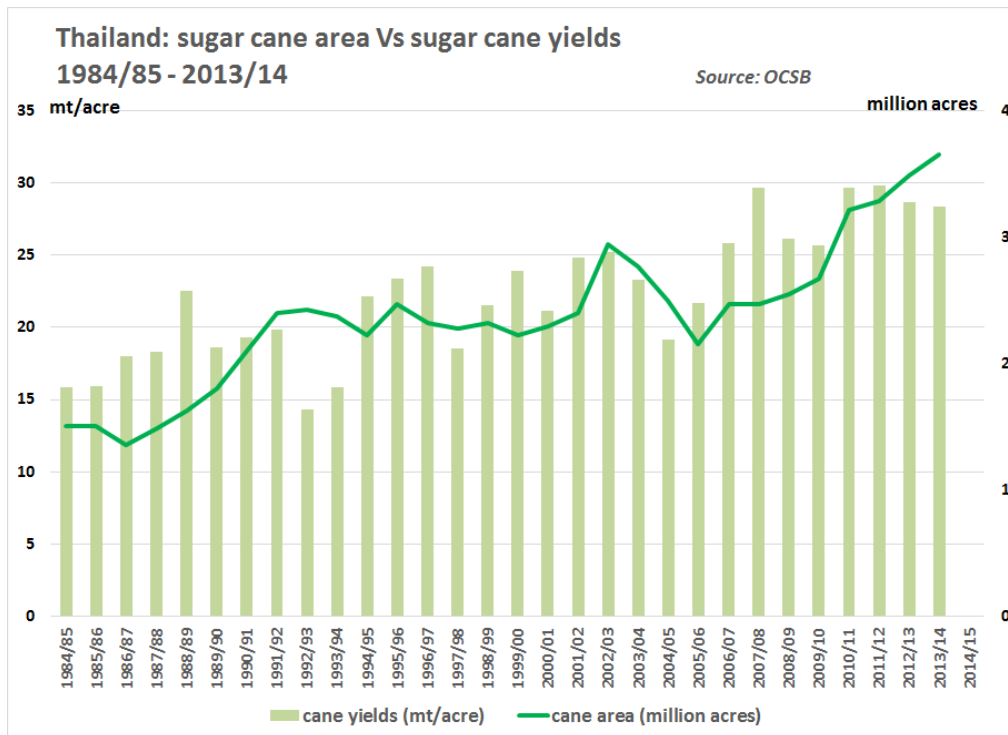


The second important issue is the temperature criterion. Temperatures recorded over the long term period of time (30 years) show on one hand, that on average, the temperatures are very high in Thailand (82.4°F over the year, against 71.6° F in Brazil), and also that the range between high and low temperatures is small (around 19° F, against 22.5° F with Brazil). This is significant in terms of impact on sugar content, as the bigger the gap between highs and lows, the higher is the sugar content.

The sugar campaign could be potentially 150-180 days, but in reality it is closer to 100-120 days, which means that the full potential of sugar production in Thailand is not attained as there is a lack of sugar cane supplied to the mills.

- Sugar cane and sugar production and industrial performances

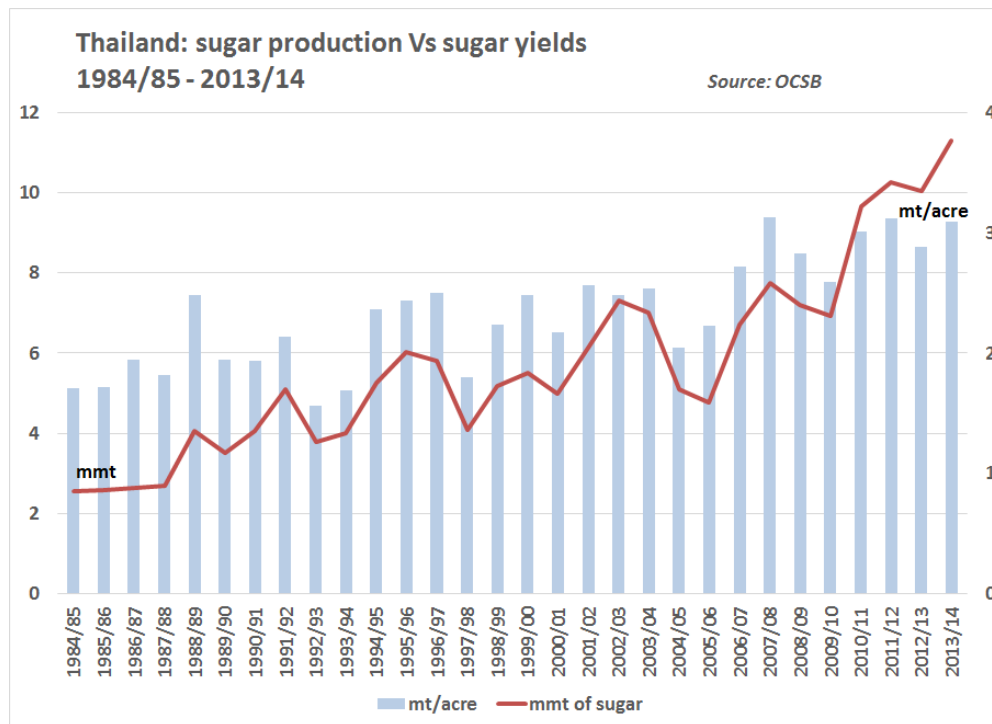
**Graph #6: Sugar cane area and cane yields**



Over a period of 30 years, the sugar cane area has been multiplied by 2.5, as sugar cane yields increased by 75%, from 16 mt/acre to 28 mt/acre. This graph demonstrates that the rise of sugar production in Thailand has been mainly the result of the large increase in acreage, supported also, but to a lesser extent, by the growth of cane yields.

The relatively “modest” level of cane yield, which is currently stable around 28 mt/acre, is a consequence of adverse climatic conditions (temperatures, water and sunshine), but is also linked to the quality of cane varieties and delays in the area of research. U.S. cane yields, by comparison, average about 33 mt/acre.

**Graph #7: Sugar production and sugar yield**

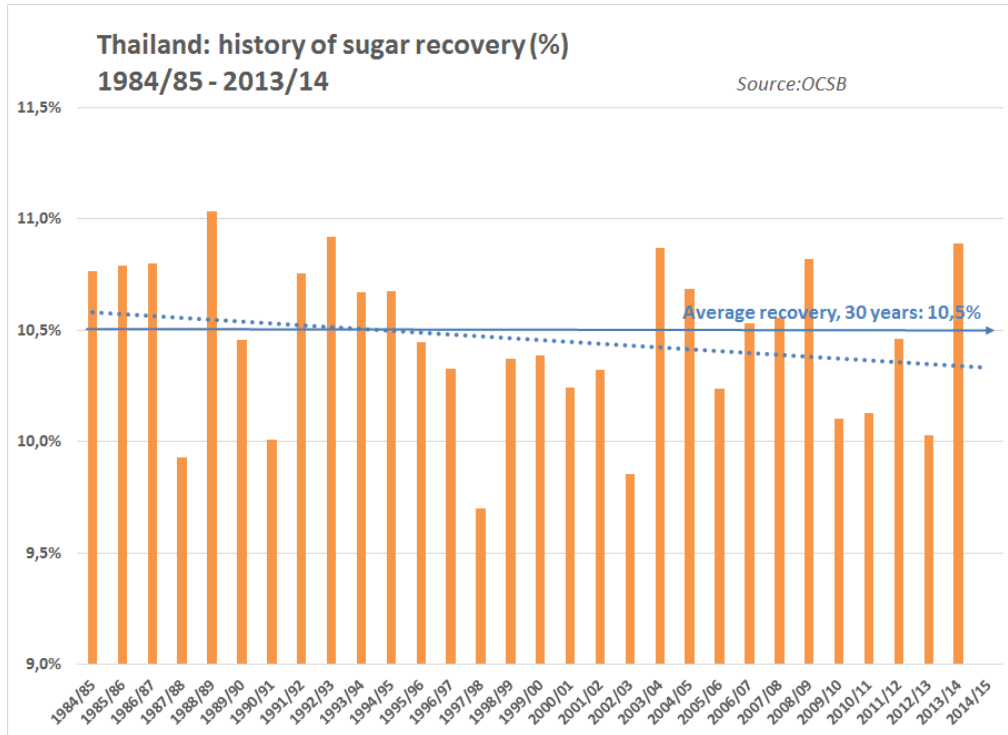


The surge of sugar production over the last four sugar campaigns was the consequence of the increase in acreage, not from yields, which have remained about 3 mt/acre. Sugar production was, for the 2013/14 campaign, slightly superior to 11.300 mmt of sugar, and the sugar yield, was 3.09 mt/acre. Recent U.S. cane sugar yield, by comparison, was 4.13 mt/acre.

Over 10 campaigns, from 2000 to 2009, Thai sugar production fluctuated in a range of 5-7 mmt (6.3 mmt on average). Since then, the area under cane recorded a strong growth following the peak in prices on the world market, and supported by a proactive governmental policy in terms of prices for cane that led to the record levels reached in the last years. As with cane yields, there has been no improvement in Thai sugar yields per acre since 2007/08.

### Graph # 8: Industrial recovery

In terms of industrial performance, the recovery rate for the Thai sugar industry is around 10.5%, meaning that 9.5-10 mt of cane are necessary to produce 1 mt of sugar. This is relatively low in comparison with Brazil or Australia where rates are close to 12%, or with sugar beet in Europe at 14-15%, due to higher sugar contents. U.S. recovery rates are about 13% for cane sugar and 15% for beet sugar.



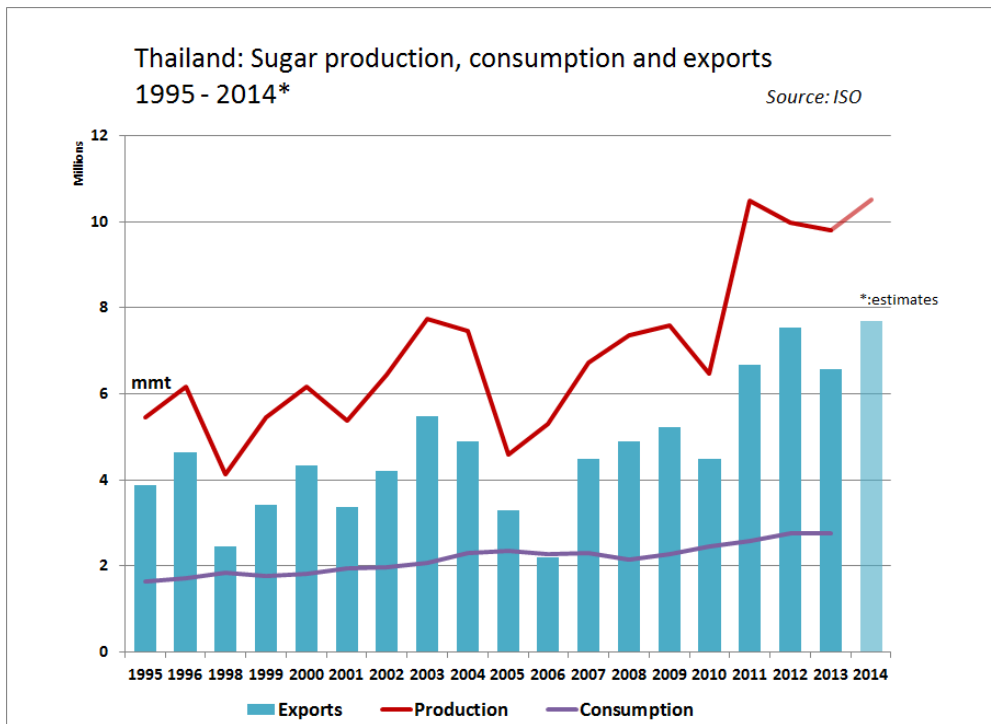
Another observation we can make from looking at this graph is that the recovery rate did not improve over time, but instead declined. There is definitely an issue with cane quality and process.

The other characteristic of the Thai sugar industry is its excess crushing capacity. According to the Thai Sugar Millers, overall crushing capacity (50 mills) is around 940,000 mt of cane/day. With 103.670 mmt of cane crushed in the 2013/14 campaign, it means 110 days of campaign. This is low for a cane sugar campaign and definitely a handicap for competitiveness.

- For a 150-day campaign, which could be technically possible in Thailand, farmers would need to supply 141 mmt of cane, close to the official target announced by officials in Thailand (150 mmt of cane), and to cultivate sugar cane on more than 4.942 million of acres (against 3.459 million of acres currently). Thus, with its unused capacity, Thailand could process 43% more acres of sugarcane without building any new mills.

- Consumption and Trade

**Graph # 9: Production, consumption and exports**



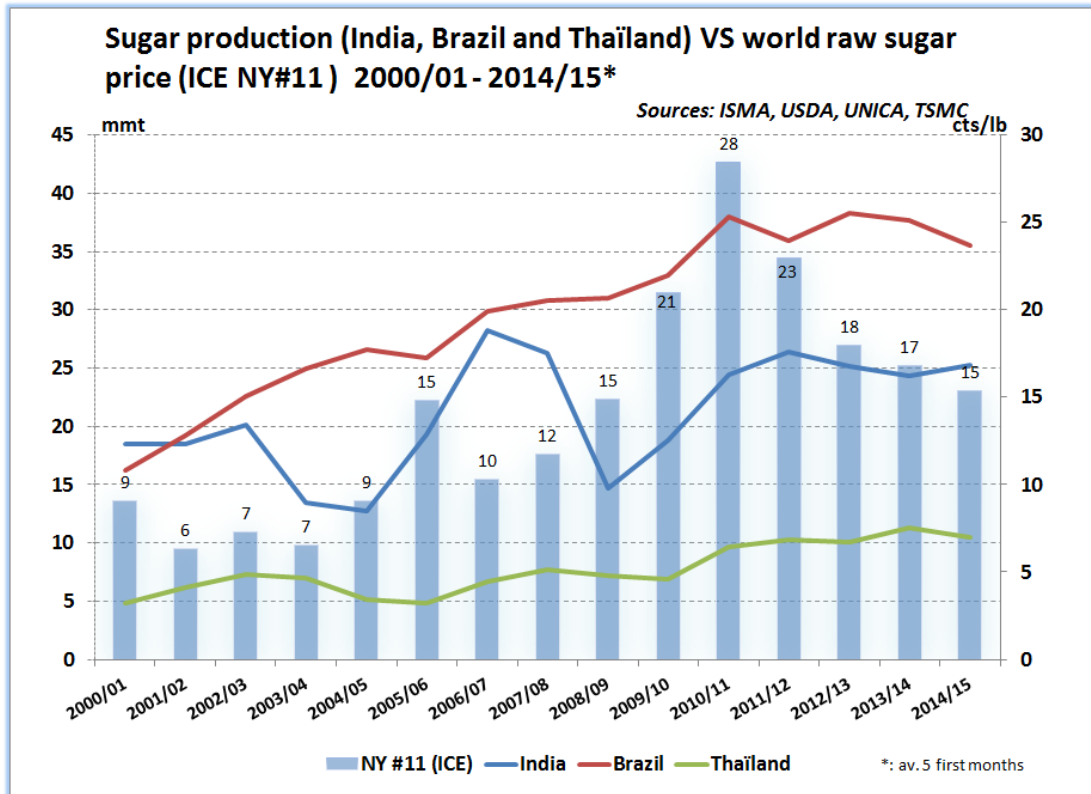
From 1995 to 2005, sugar production in Thailand was erratic. This was the consequence, on one hand, of adverse climatic conditions (1998) as the areas were relatively stable at this period, or, on the other hand, of the drop in cane prices (2001-2004).

The surge of sugar production in 2011 was directly linked to high levels of prices on the world sugar market and the high prices set by the Government for sugar and cane in Thailand.

#### 4. THE MAIN DRIVERS OF SUGAR PRODUCTION IN THAILAND

- Importance of exports

Graph # 10: Production and raw sugar prices



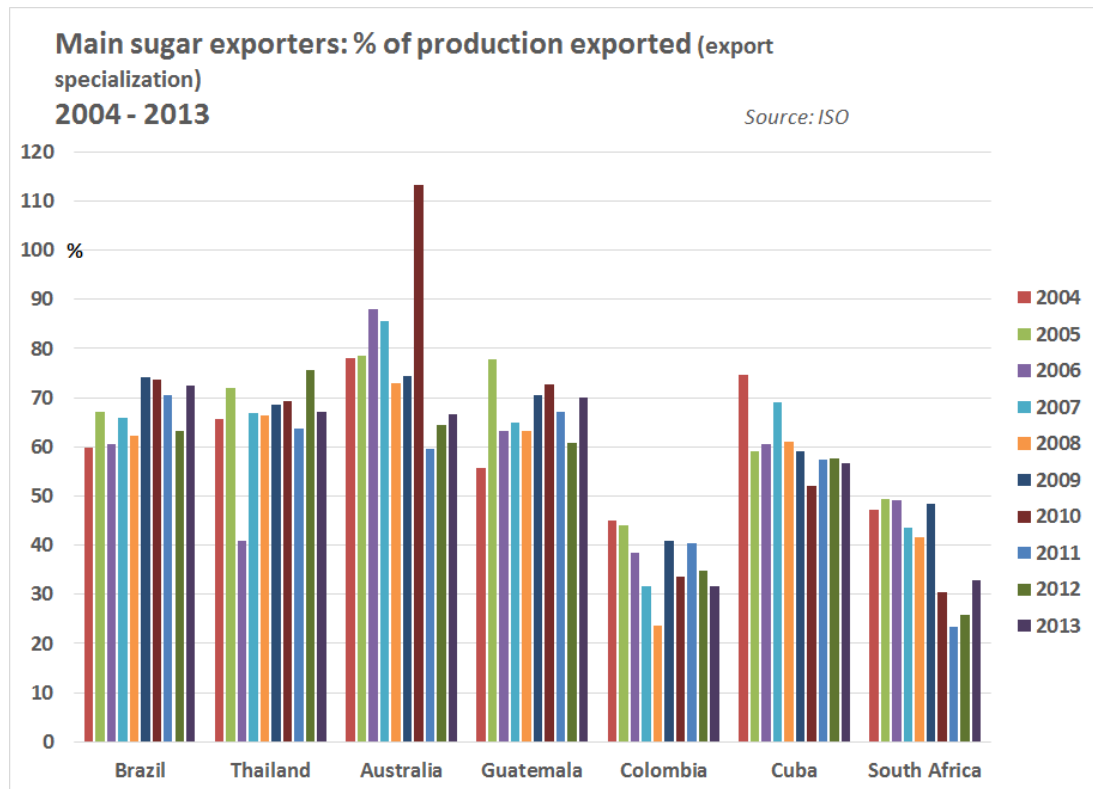
Despite the drop in sugar prices on the world sugar market since 2010/11, the sugar industry in Thailand has continued to expand and has maintained very high levels of production and exports. There is definitely an industry commitment in Thailand not only to ensure production does not decline, but to reach a higher peak. Some industry officials indicate that the next objective is to produce 150 million tons of cane (which means around 15 million tons of sugar produced) by the end of the decade.

There will probably be a decrease in production for the 2014/15 campaign that started last December, because of the very low levels of prices on the world sugar market and the drought in Thailand in 2014.

Thai sugar exports averaged about 4.2 mmt per year during 2000 to 2010. From 2011 to 2014, exports averaged about 7.1 mmt: This represents a surge in exports of nearly 70%, while prices on the world sugar market dropped by almost 40%, between 2010/11 and 2013/14.

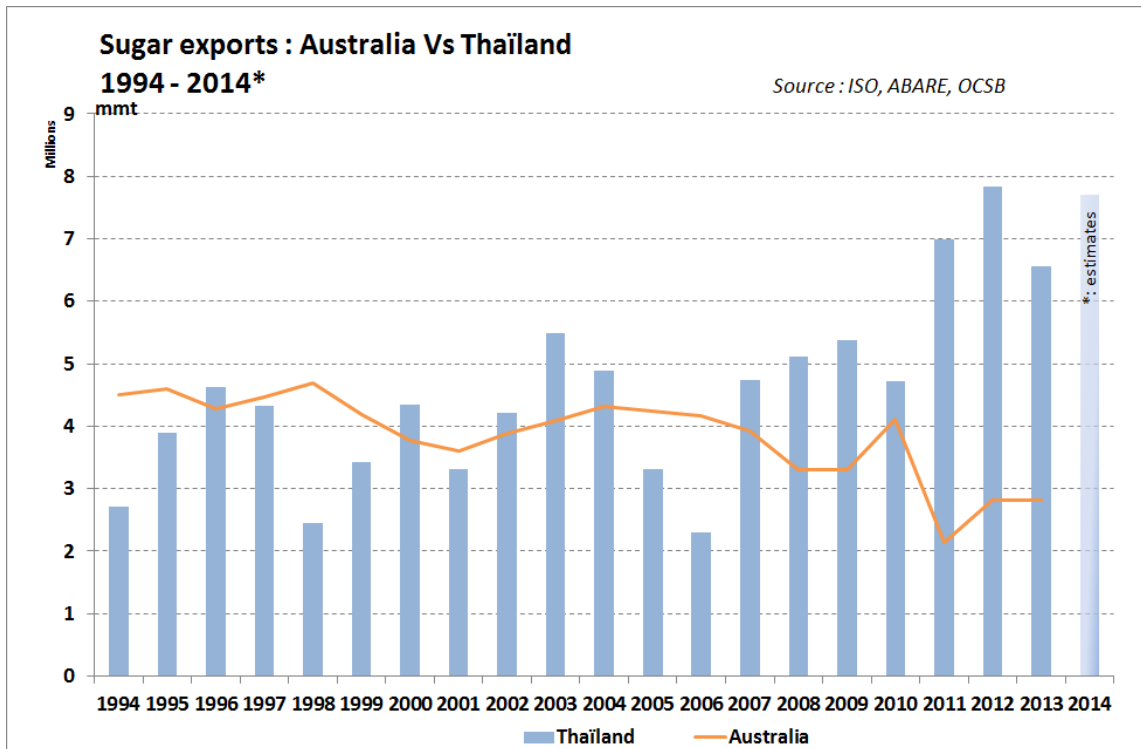


**Graph # 11: Export specialization**

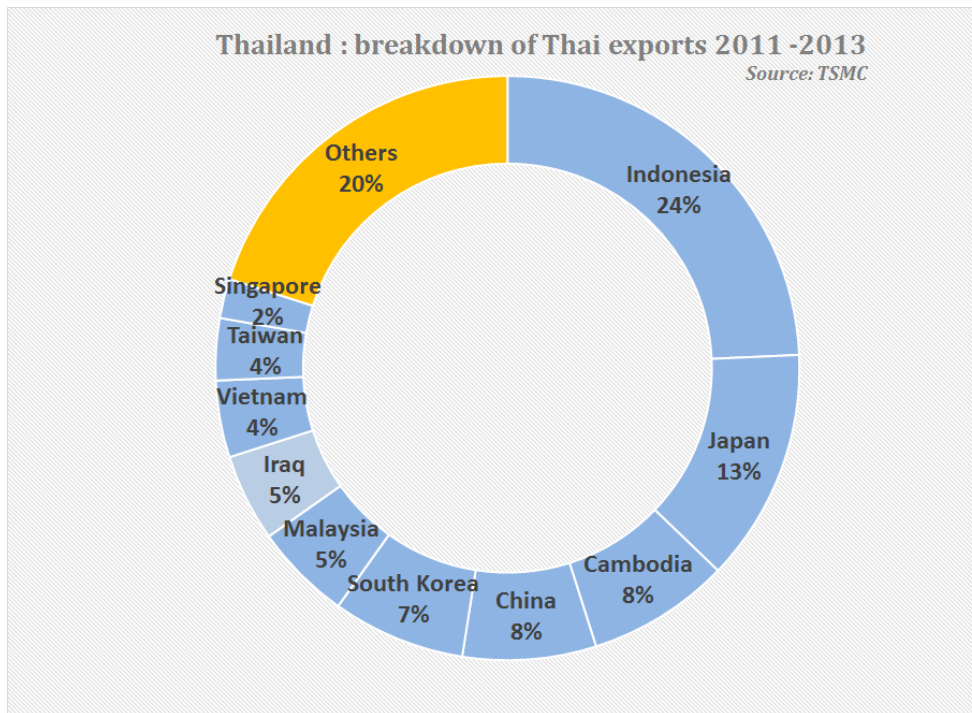


This graph shows clearly the export specialization of Thailand, with around 65% of production exported, on average, these last ten years, like Brazil (67%) and Australia (74%). The increase in production was mainly dedicated to exports, and to a lesser extent to the domestic market, which has grown more slowly than the export one.

**Graph #12: Thailand in competition with Australia**



Thailand had always been an important exporting country but close to Australia in terms of volumes and geographic area, until the end of the 1990's, with regular ups and downs in volumes exported. From 2007, through two different levels (5 mmt and 7 mmt), Thailand became the second largest world sugar exporter, more than doubling Australian exports over the last four campaigns.

**Graph # 13: Structure of sugar exports (2011-2013)**

The structure of sugar exports shows Asia as the paramount final destination for Thai sugar, accounting for 75% of Thai exports. Thailand is located in the heart of an important deficit regional market, which is a huge advantage in terms of cost of freight and trade.

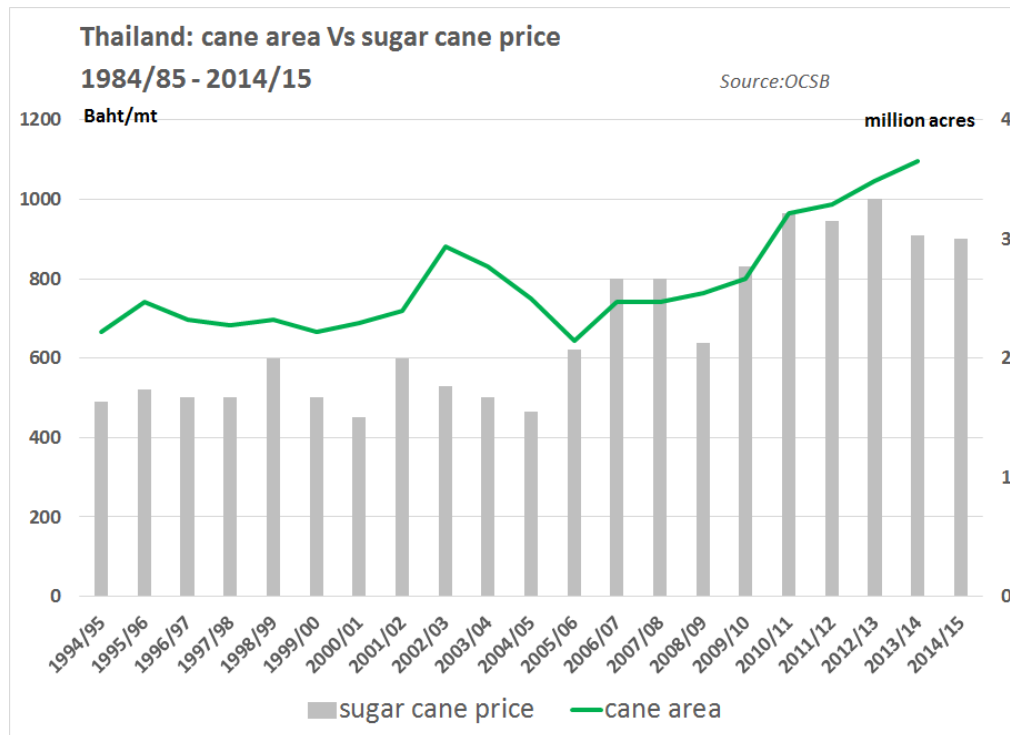
- **The “economics” of sugar production**

- ✓ Sugarcane price

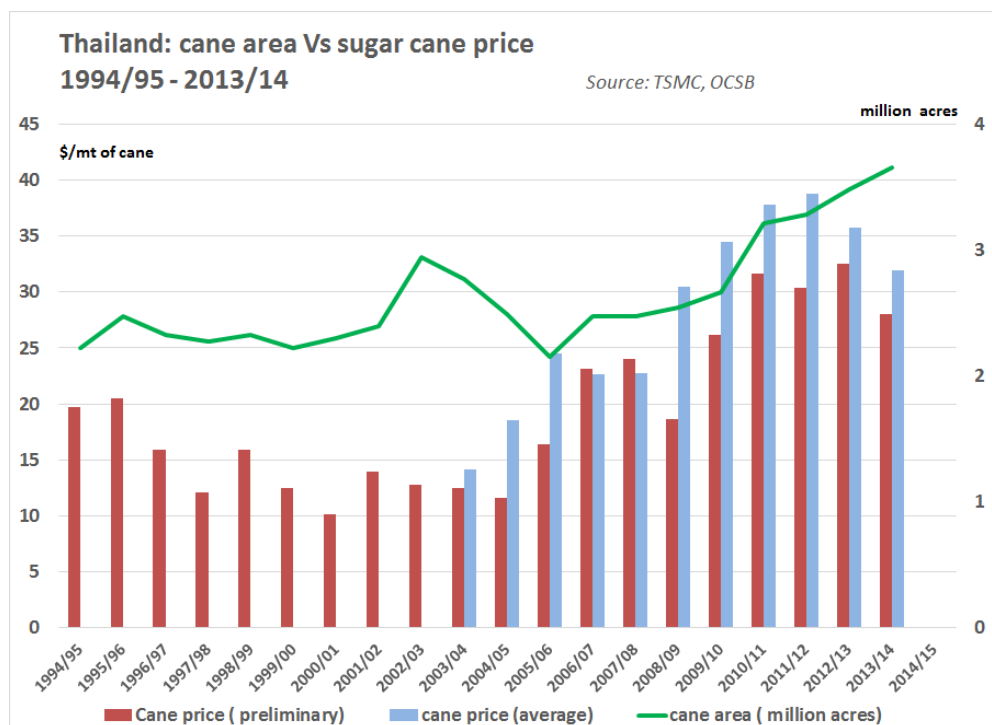
Prices of sugarcane and sugar are mainly fixed by the Government under the Cane Sugar Act of 1984, which introduced a revenue-sharing system (70/30) between growers and mills.

At the beginning of the sugar campaign (November-December), growers receive an initial payment (preliminary price) negotiated by the Government, based on a forecast of revenues from domestic and export sales. This sends a strong signal in terms of prices for cane growers, which is a good incentive for planting or cultivating.

Graph # 14a: Area vs cane prices (Baht/mt)



Graph # 14b: Area Vs cane price (\$/mt)



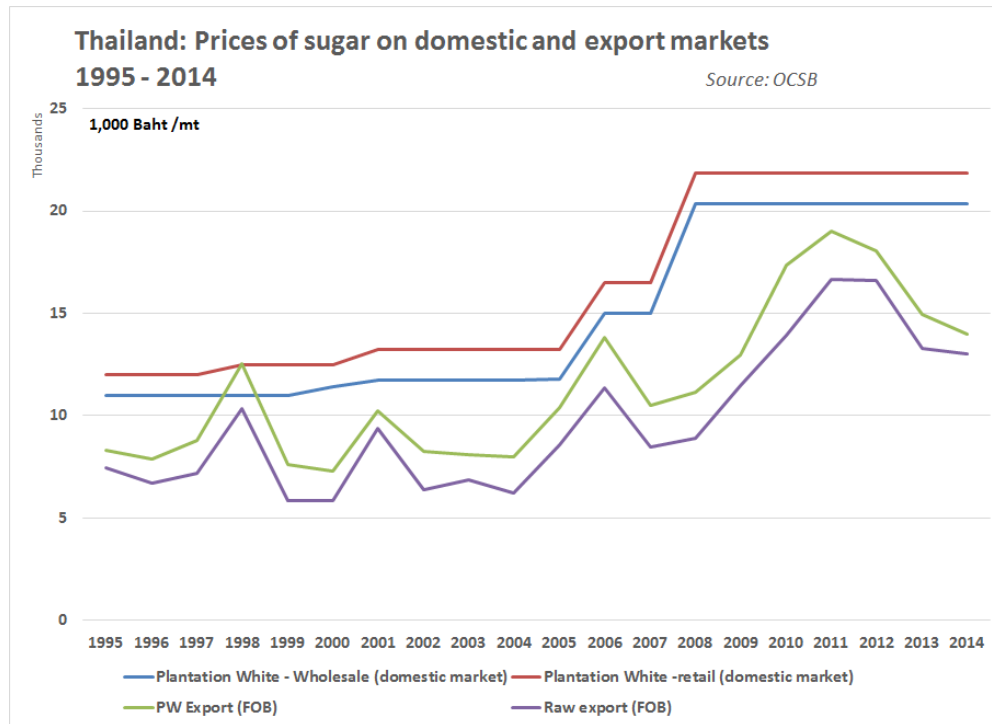
Graph # 10 showed the steady decline of prices on the world sugar market over the last four sugar campaigns (-40%), but one can see in graph #14b that the Thai preliminary cane price did not follow the same trend (-11%), as cane prices stayed at relatively high levels during these years of world sugar declining prices.

This graph clearly shows the direct impact of the price for cane on the acreage of cane. The rise in production is primarily the result of an increase of area, and not a consequence of productivity gains.

✓ Prices of sugar

The key characteristic of the Thai sugar regime is the Quota system with different prices related to final destination of sugars (A quota for domestic market and B and C quotas for exports).

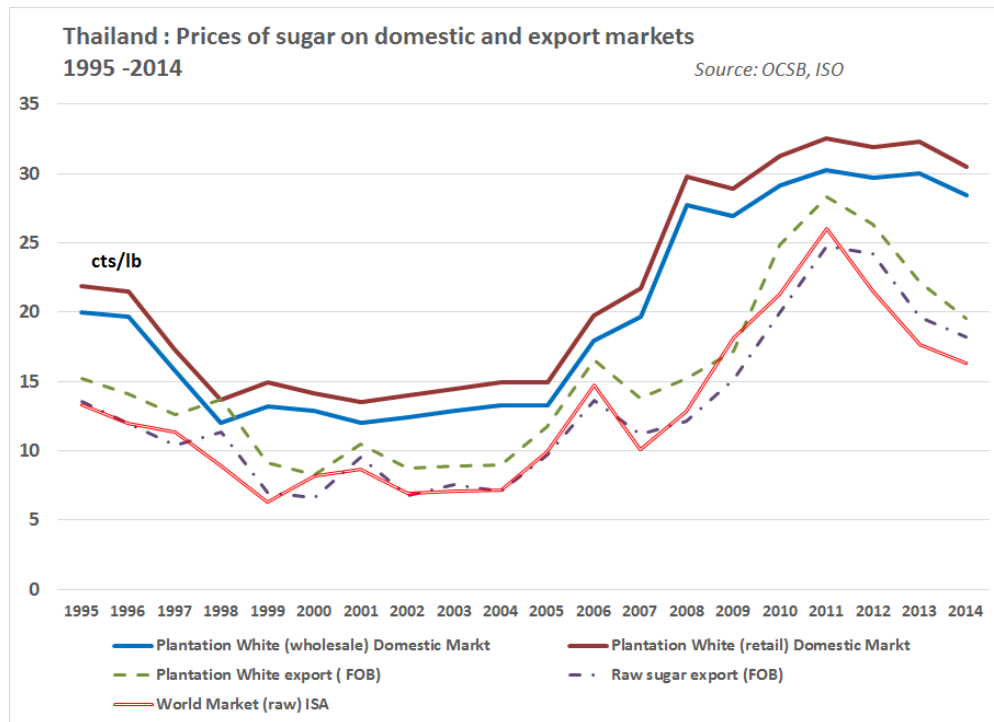
**Graph # 15: History of sugar prices on domestic and export markets**



On the domestic market (Quota A), sugar prices (Baht/mt), which are fixed by the Government, were increased by 25% in 2006 and again by 32% in 2008. The fixed prices are considerably higher than prices on the world market and more stable, and are unaffected by the huge drop in sugar prices on the world market.

On the export side, the evolution is completely different, as the prices for the sugar exported (Quota B and C) follow a similar trend to the prices on the raw sugar world market.

Graph # 16: Raw sugar prices Vs Thai prices



This graph shows perfectly the alignment between Thai sugar prices (cts/lb) for exports and ISA<sup>1</sup> prices on the world sugar market for raws, with a regular premium for Thai Plantation White.

<sup>1</sup> The International Sugar Organization calculates the International Sugar Agreement (ISA) price as a simple average of the three nearby futures positions of the Intercontinental Exchange (ICE) sugar contract #11.

## The “economics of sugar production”

<b>Price of cane (10% CCS)</b>			
Baht/mt	800	950	1000
\$/mt	<b>24.4</b>	<b>29.0</b>	<b>30.5</b>
<b>Recovery rate (%)</b>	10.5	10.5	10.5
<b>Cost of raw material*</b>			
Baht/mt	7 600	9 025	9 500
\$/mt	<b>232</b>	<b>276</b>	<b>290</b>
* Tons of cane to produce 1 metric ton of sugar multiplied by the price per ton of cane.			

*Note: the CCS system*

*The purchase of cane based on the CCS (Commercial Cane Sugar) started in the 1993/94 crushing season with the standard quality of cane at 10 CCS. It comes from the Australian system, where CCS estimates the level of extractable sucrose minus a negative weighting based on the level of impurities at harvest. It is the basis of payment to the farmer in the Australian sugar industry. So the price for cane is based on that standard, and if the quality of cane is better and extractable sucrose higher, there will be a compensation.*

The cost of raw material is the paramount factor on the total cost of production for sugar in Thailand. The price for cane is relatively high, in a range of \$24-30/mt.

The raw material is expensive because of the modest level of agricultural yields and its relatively poor quality (sugar content) and recovery rate (the mills need between 9.5 and 10 metric tons of cane to produce 1 metric ton of sugar). It is an important limiting factor for the Thai sugar model, where mills have to deal with a large number of farmers, who can hedge between the different competitive crops (cassava, rice,...), and struggle to supply their own sugar factories.

In terms of industrial costs of production, Thailand's sugar industry is considered as a somewhat low-cost sugar producer (about 18-23 cts/lb), but within a large range of competitiveness as sugar mill efficiency can be variable, depending on the regions of production, the industrial efficiency of the mill, recent investments, or the capacity of the factory. The actual trend in terms of costs is upward, as labor, mechanization and irrigation are factors that will continue to increase in the future and weigh on their competitiveness.

**Profitability of sugar production:** Clearly profit depends on all the aspects we just mentioned, and varies with the markets of destination and the quotas concerned. Prices are higher for the domestic market and fluctuate for exports, depending on world raw sugar markets.

Domestic market (Quota A) prices are 20,330 Baht/mt for Plantation White sugar, (28 cts/lb). Profit on this part of production is in a range of 5-10 cts/lb.

An import tariff of about \$107/mt helps to defend the domestic price.

On the exports, the profit is less important and is directly dependent on the prices of the world market. But one can see that currently with world prices in a range of 13-15 cts/lb, the profit is low for even the most competitive, or nonexistent in most of the cases. Yet exports continue to rise or stay at high levels because Thai producers are shielded from world price declines by a system of Government protections and subsidies.

**Ethanol:** mainly produced from molasses and cassava and is not currently in competition with sugar production.

21 Ethanol plants operate in Thailand (2013):

- ✓ 14 use molasses as feed stock (66% of ethanol production),
- ✓ 6 plants are cassava based (28%),
- ✓ 1 is cane juice based (6%).

Ethanol production was 950.0 million liters in 2013, but the objectives of ethanol production in the Alternative Energy Development Plan (AEDP 2012-2021) launched by the Ministry of Industry, is to more than double the installed capacity (9 million liters per day against 3.8 million liters/day currently) to produce about 2 billion liters in 2021(if one considers a length of campaign of 250 days).

As sugar cane provides 2/3 of the feedstock for Thai ethanol output, one can say that the ethanol program amounts to an indirect subsidy for sugar cane and sugar production.

#### Limiting factors:

- ✓ Climatic conditions and rainfall distribution are absolute limiting factors. The main consequences are:
  - modest productivity of cane and low sugar content;
  - limited agricultural potential;
  - huge production ups and downs;
  - regular shortage of cane (short campaign) and also struggle for cane supplies (high prices) .
- ✓ Very small farm structures with a large number of cane growers on a short cane cycle, which induces:
  - risks of switching from one crop to another rapidly depending on the price and the profitability; and,
  - difficulties to achieve technical advances because of the large number of small farmers (lack of mechanization,...).
- ✓ Excess crushing capacity with regard to the availability of cane. Excess capacity is very well known in the North East part of the country where the authorities try to encourage farmers to switch from rice to sugar cane.



## 5. THE SUGAR POLICY IN THAILAND

The Thai sugar cane sector is highly regulated by a Government-controlled Cane and Sugar Board. The Thai sugar policy intervenes on different important aspects of sugar production, such as:

- cane area cultivated, through the payment for cane;
- domestic sales at a fixed price (for 25-30% of Thai sugar production);
- exports (unconstrained by WTO rules).

### 5.1. Official policy/support for sugar in Thailand

- **Sugar Policy and the Cane Sugar Act of 1984**

The current legal framework of sugar policy in Thailand was adopted in 1984 to support, on one hand, cane growers and sugar millers, and on the other hand, to boost sugar production and exports on the world sugar market. Before the Sugar Act, the sugar industry was in a state of permanent dispute, with grower demonstrations and front page articles.

- The main actors

Thai sugar policy is ruled by the Cane Sugar Act (1984). The sugar industry is driven and coordinated by a Governmental body, the Office of the Cane and Sugar Board (OCSB), under the jurisdiction of the Ministry of Industry of Thailand. The current system has defined rules for the negotiation process, with the Government acting as a mediator and a regulator.

The **Office of Cane and Sugar Board** performs its duties and responsibilities as derived from Article 61 (1) – (11) of the Cane and Sugar Act of 1984. Their general responsibilities are to:

- Perform all administrative tasks for the Cane and Sugar Board.
- Formulate policies and plans for the development of the cane and sugar industry.
- Monitor cane and sugar production and distribution, complying with rules and regulations defined by the Cane and Sugar Act.
- Coordinate cooperation on technical aspects with regards to the promotion and development of the industry between local and international organizations.
- Promote research and development of cane varieties, sugar products and by-products, as well as technology development to enhance the competitiveness of the industry.

The **Bank for Agriculture and Agricultural Cooperatives (BAAC)**: the bank was established in 1966 as a government-owned bank to provide credit to agricultural producers, either directly or through agricultural cooperatives and farmers' associations.

The BAAC is a 99.79% State-owned bank (Ministry of Finance) that finances the State-run Cane and Sugar Fund (CSF) activities. It facilitates the implementation of the various sugar programs, such as direct payment programs. The BAAC approves loans for the CSF in order to provide support for the growers; the loans are used to finance sugar mills' pre-season credit to the farmers, to help them to finance their expenses with the incoming sugar cane campaign.

### The Cane and Sugar Fund (CSF)

The CSF borrows money from the BAAC to pay support to the growers. It can provide, for instance, extra Baht per ton of cane to the growers in order to compensate for a drop in sugar prices, so the growers will continue growing cane.

The Government collects a fee (5,000 Baht/mt, i.e. \$154/mt) and VAT (7%) from domestic sugar sales (A Quota) to repay the BAAC and its action through the CSF, in order to finance the sugar cane price support and direct payments to growers.

### The Thai Cane and Sugar Corporation Ltd (TCSC)

The TCSC was set up jointly by State, growers and millers during the 1982/83 campaign to:

- manage the long-term contracts (LTC) entered into with the trade as a guarantee for the loans contracted to support the price of cane; and,
- implement a new cane payment system based on the sharing of proceeds (70/30).

Nowadays, TCSC focuses on the pricing of sugars for export and on computing of the preliminary and final price for cane.

#### ➤ Sugar cane support:

Essentially, the support is brought through domestic control on cane supply. Under the scheme, growers receive 70% of the revenue from domestic and export sales of sugar (and molasses), less costs and taxes. Mills receive the remaining 30%.

Upon delivery of cane to a mill, growers receive an initial payment for cane calculated on a base price negotiated by the Government. This advance payment (preliminary price) is not to be less than 80% of the share expected at the end of the season and does not take into account the sugar content (CCS) of cane that will be integrated in the final calculation, at the end of the season.

In other words, if the final price for cane rises above the preliminary price, the mills that benefited from a higher world price will adjust the final level and compensate the growers.

On the other hand, if the cane final price is lower than expected at the start of the campaign, the Government reimburses the mills for the loss (they paid too much to the growers according to the final calculation) through the CSF. This mechanism of compensation gives the grower a subsidy equaling the difference between these two levels of prices.

The Thai sugar model is very different from the Brazilian one and is mainly based on a cane grower's interest in cultivating sugarcane versus multiple other competing crops. As the rise in sugar production is directly linked to the acreage in cane, it is easy to understand the paramount importance of the cane price for the Thai sugar industry and its exports, as every ton of cane produced beyond the A quota will be geared to exports.

#### ➤ Quota system and Export Regulation

The legal provisions contained in the Cane Sugar Act are geared for exports with an annual surplus of production over domestic needs. Government policy towards sugar production and exports has remained generally unchanged in recent years. Each season, the Government,

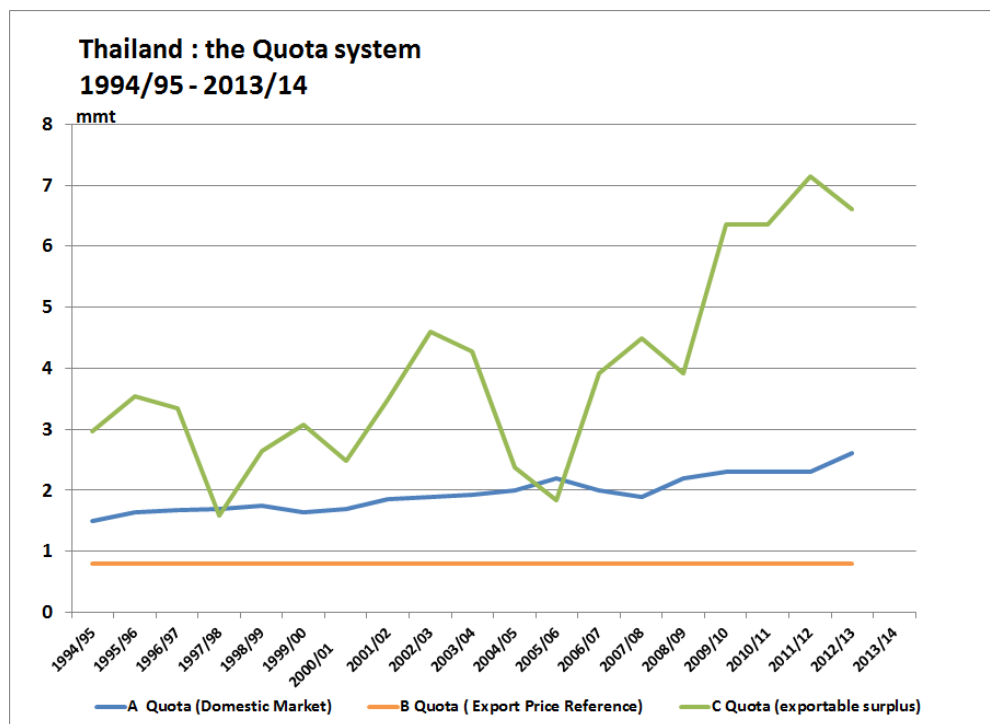
through the OSCB, estimates production, internal needs, and export commitments, and then divides sugar supplies into three quotas. These quotas are allocated for each sugar mill:

**A Quota:** Part of national production (all refined sugar) allocated to mills by the Government on the basis of production capacity. This quota is then sold on the domestic market at a fixed price higher than the world price. This quota has been increased over the years, in line with domestic consumption. Over the last 10 years, A Quota has made up 28% of total sugar production.

**B Quota:** Covers 800,000 tons of raw sugar for export and is used as a reference for the pricing of cane. Sugar is sold on behalf of the Thailand Cane and Sugar Corporation (TCSC). Half of this volume is sold directly by the TCSC, the remaining quantity is sold by the mills for export. Over the last decade, B Quota has averaged 10% of Thai sugar output, with the same quantity (800,000 mt) since the very beginning of the sugar policy and the quota system.

**C Quota:** The exportable surplus of Thai sugar production. The mills undertake their own pricing of this sugar, but the price used in calculating the return to growers must be at least the B Quota sale price set by the TCSC. Mills must meet production targets for A and B Quotas before exporting under C Quota. It is by definition a variable that makes up about 61% of total output (close to 2/3 in the recent campaigns).

**Graph # 17: The quota system**



New quota tonnages are annually allocated to mill groups with the largest C Quota production to encourage mills to crush as much cane as possible.

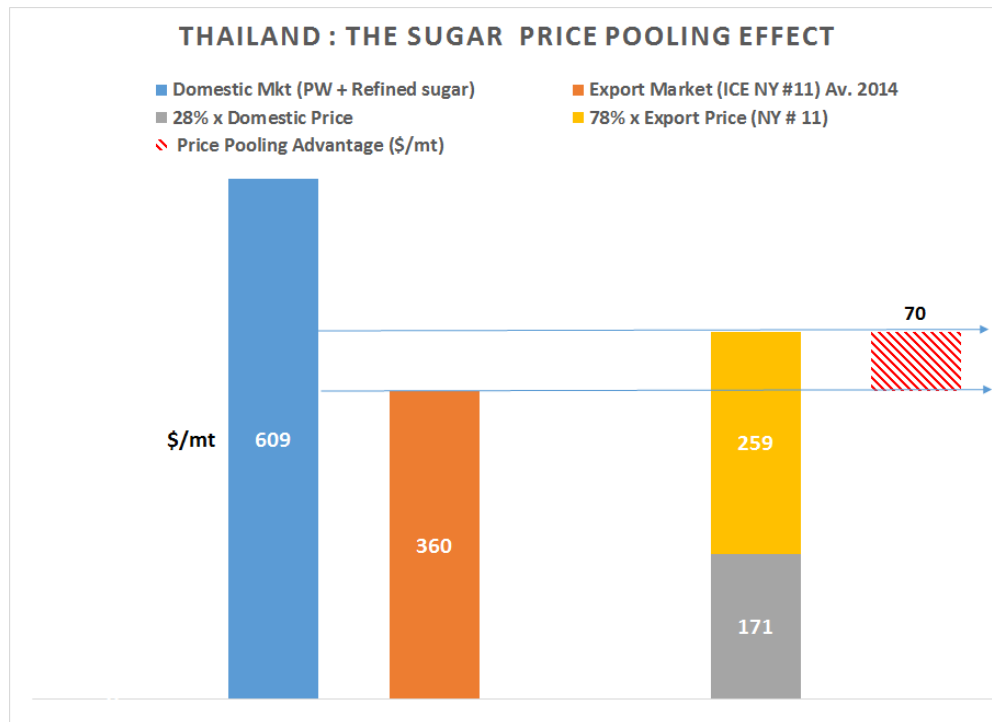
Thai authorities encourage the mills to increase their production capacities to get larger quotas. This creates problems for the industry. The increase in cane crushing capacity increases the role of exported sugars with much lower prices and thus, can push down domestic cane prices. The vicious circle starts at that point as the mills (and the Government) encourage the farmers to continue to supply the factories with cane, by paying compensation per ton of cane to growers, in order to compensate for low cane prices.

It is particularly difficult for the mills that have been investing to increase capacities, and need to render those investments profitable, when world sugar prices are low.

➤ Price (pooling) for sugar

The Government fixes the price of sugar for the domestic market, which makes up about 28% (on average over 10 years) of total sugar production. It is what one calls a “home price scheme” that drives up the domestic consumer and producer prices. It subsidizes the sugar exporter at the expense of the consumer on the internal market.

**Graph # 18: Sugar price pooling**



Here is an example of this price pooling advantage, schemed on this graph, with values of sugar on the Thai domestic market in 2014:

- Plantation White /wholesale: 20,330 Baht/mt (28.4 cts/lb)
- Refined sugar /wholesale: 21,400 Baht/mt (30.5 cts/lb)
- Export raw sugar (ICE NY #11): \$360 mt (16.33 cts/lb)

The revenues of sugar in Thailand are linked to the world sugar market for 72% of production. In other words, as every mill gets the same proportion of A, B and C quota (on the basis of a 3-year average sliding reference), there is indeed a permanently adjusted sugar price pooling. This is a blend of the revenues according to the final destination of sugar produced: sold on the domestic or export markets.

The revenue blending provides an advantage compared with the world market prices. The difference would be, with this example, about \$70/mt (3 cts/lb), which is quite substantial and amounts to a significant indirect export subsidy. On 2013/14 production of 11.3 mmt, the value of this price pooling system to Thai sugar producers was about \$775 million.

## 5.2. Non Official policy for sugar / non direct support

In 2012 and 2013, the Government also supported the cane growers by approving direct payments of respectively \$5.00/mt of cane and \$5.20/mt (154 Baht/mt and 160 Baht/mt) through the CSF program, in order to compensate for the drop in sugar prices on the world market. The total annual cash value of this payment can be estimated around \$500-520 million.

The Government intervenes also through the BAAC and the CSF that support growers indirectly with low-interest-rate loans, such as:

- Soft loans for crop management: this service was assumed before by commercial banks, and after the crisis of 1997, it became impossible to repay the loans (the Baht lost 50% of its value against the US dollar) on schedule. Commercial banks then stopped providing loans to the mills, which were in turn unable to provide the growers with pre-season credit. The system was blocked. Then the Government directed the BAAC to play this role of pre-financing the system by advancing money to the growers.
- Soft loans for cane harvesters and farm machinery: the CSF provided funds in order to help the growers to buy harvesters (\$33 million in 2011/12, \$100 million in 2012/13) at a low interest rate (2%, compared with commercial rates around 6-7%). Through this program, loans can be repaid over three or eventually five years.
- Soft loans for small irrigation schemes.

Another way to influence the future of the Thai sugar industry is to intervene on competing sectors of production. It is definitely what the government is trying to implement through a land zoning program aimed at reducing rice production. This is currently happening in the Northern region of production, where the government is encouraging farmers to shift from rice to sugar cane by ending the rice subsidy scheme (See note below). This could involve converting as much as 740,000 acres of land to sugar cane, which would yield around 2 million metric tons of sugar.

**Note: the Thai rice policy** (“the rice pledging scheme”)

*In 2011, right after the election, the Thai government implemented the “rice pledging scheme” to give Thai farmers the opportunity to pledge and then to provide an unlimited supply of their rice to the government at a higher price than they would obtain by selling at market rate. The ultimate goal of the scheme was to increase rice prices to safeguard farmers from middlemen.*

**Criticism of the scheme**

*The price that the government offered to farmers who pledged rice was higher than the market price by almost 50%. The critics claimed that for the scheme to succeed, the government would need to provide subsidies amounting to approximately 300 billion Baht (about US\$9.375 billion) for pledging rice within two years.*

*In mid-June 2013, the Thai government admitted that its rice subsidy program had lost 136 billion Baht (about US\$ 4.4 billion) in payments to support a rice pledging scheme for the country's 2011/12 growing season. The Prime Minister announced the amount paid to farmers for pledging rice would be cut by 20%. However, the PM reversed this decision when the announcement brought protesting farmers to the streets of Bangkok. The government then announced that it would sell up to 1.5 million tons of rice a month through tenders and sales to other governments.*

**A shift in policies in May 2014**

*The Thai coup d'état of the 22<sup>nd</sup> of May acted to suspend democratic politics within Thailand, and rice farmers lost much of the ground, which they had gained over recent years. This relates, in particular to the relatively generous rice subsidies, which had acted to almost double the incomes of many small-scale rice farmers.*

**The reality of the rice market in Thailand**

*According to a USDA report (ERS Rice outlook), “despite a smaller 2014/15 crop, prices of rice in Thailand remain under pressure from large stocks of government-held rice accumulated from late 2011, until early 2014, under its Paddy Pledging Scheme”.*

### 5.3. Trade and border protection for sugar

Thailand is one of the most important sugar exporters in the world. With regards to trade, there are some particular rules and protection mechanisms:

- **Tariff protection:** The general provision regarding imports is a specific duty for sugar of \$107 per mt (3,500 Baht/mt) for beet or cane sugar.
- **Minimum Access:** within the framework of WTO Agreement, Thailand is committed to import sugar from WTO Members, with a tariff rate quota of 13,760 metric tons of sugar, with an Ad Valorem duty of 65% within the quota, and 94% above-quota.
- **For Members of the ASEAN EC (2015):** Under this free trade agreement (FTA), sugar imports will be duty free within the member countries, except for the Philippines (5%), Indonesia (5-10%) and Myanmar (0-5%). Before, the system was set on the basis of a specific duty of \$107/mt plus an Ad Valorem duty of 5%.
- **FTA with Australia:** the Ad Valorem duty is decreasing from 65% (2005) to 0% (2020); the tariff rate quota is increasing from 1,376 mt (2005) to 5,225 mt (2019) and finally no quantitative limits in 2020.

## CONCLUSION

Besides the will to massively increase sugar production in the future to continue exporting on the world sugar market, particularly the ASEAN market, there are a couple of issues that the Thai authorities will need to address.

Some of these issues are the continuing rise in costs of production due to the increasing cost of labor, the necessary mechanization of cane production, and the need for more and better irrigation to improve productivity.

Most recently, the Thai sugar regime is being attacked internally and from the outside. The Sugar Act of 1984 is being put under scrutiny following the conclusions of a group of experts dedicated to reviewing the future of this regime in order to improve its efficiency, and to respond to the critics of a sugar regime that has been in place for more than three decades.

Sugar cane growers and millers are strongly opposing Government plans in 2015 to free up retail sugar prices ahead of implementation of the ASEAN Economic Community. These plans challenge the existence of the sugar regime, with floating prices and major uncertainty about the revenue sharing policy between growers and millers.

From the outside, the Thai sugar regime has recently been attacked by Brazil, Australia and the EU, at an informal consultation of the WTO. These countries believe that, in particular, the system of high domestic prices qualifies as a cross-subsidy, allowing Thai sugar producers to export increasing quantities of sugar onto the world market.

The reasons driving Thai Government support for its farmers and millers have not changed. The price of cane is a very sensitive issue for a great number of Thai small farmers. It is an expensive raw material for millers, growers are limited by natural and climatic conditions, and the recovery rate of the sugar industry remains low.

The internal and international pressures, including the fact that the ASEAN EC will be applicable this year, may push the Thai system toward a more free trade environment. However, given the economic and political issues concerning the future of the sugar industry, it seems unlikely the Thai Government will let the market dictate its way.



**Antoine Meriot**

*Founder of Sugar Expertise LLC, Bethesda, Maryland*

Antoine Meriot is the founder of Sugar Expertise LLC and has been working in the sugar industry for almost two decades. He also has been President of CODETEC, a consortium of French companies involved with sugar technology and equipment, since 2005. Previously, he served as Director of TSM, a French company specializing in studies, expertise and technical assistance for the sugar industry, very active in Africa. Antoine also worked for ERSUC, a French think tank owned by major European sugar companies, specializing in studies and research for the sugar industry. He was a member of the Board of AFCAS (French Association of Cane and Sugar Technologists) from 2004 to 2014.

Antoine graduated from the Institute of High Studies for Rural Law and Agricultural Economy in Paris, and the University of La Sorbonne at Paris where he studied Rural and European law.

*Antoine has been married since 1992 and has four children. They reside in Bethesda, Maryland.*