

Marketing and Export of Major Tropical Fruits from Thailand*

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Abstract

Thailand is one of the main producers of tropical fruits in the world. Although most of the tropical fruits produced in Thailand are domestically consumed, many have also been exported. In particular, more than 30% of total production of durian, longan and lychee have been exported. Thai fruits are popular among importing countries as they are of high quality. The Thai Government has set up the national policy for R&D focusing on improvement of quality, economic efficiency, marketing and trade.

The present paper discusses the production, marketing and export of eight major fruits of Thailand, namely longan, durian, mangosteen, lychee, rambutan, mango, pummelo, and pineapple. Domestic and export markets, as well as strength and weakness of Thai fruit industry have also been discussed.

Keywords: Longan, durian, mangosteen, lychee, rambutan, mango, pummelo, pineapple.

1. Introduction

The total area of Thailand is 51.36 mill. ha with the population of 65 mill. It is located in South East Asia at 98-108°E, 25-30°N, with 1,200-1,600 mm of rainfall, average temperature of 25-30°C and RH of 72-78%. This tropical climate enables Thailand to produce a wide range of tropical fruits.

The intention of this paper is to give an account of the marketing and export of major tropical fruits from Thailand. In addition, it aims to outline the intentions of the Royal Thai Government to further the development of tropical fruit production and trade, via its national policies and international commitments.

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2. Major Fruits of Thailand

Thailand is considered as one of the most abundant resources of tropical fruits in the world. Besides high diversification in tropical fruit species, some subtropical fruit are also able to adapt and perform well in certain areas of high elevation, mainly in the northern region. One of the main reasons why Thai fruits are famous around the region or even the world is because they are of high quality. Although a wide range of fruit species exists in this country, only a number of these are of high economic importance. The presentation which follows is specifically addressing Thailand's eight major fruit crops, namely longan, durian, mangosteen, lychee, rambutan, mango, pummelo, and pineapple, based on the statistics presented in Tables 1 & 2.

2.1 Longan (*Dimocarpus longana* Lamk)

Longan originates in Southern China and subsequently spread to many countries in Asia such as Thailand, India, Myanmar, Sri Lanka.

Table 1. Volume and value* of export of major fruits (fresh fruits and products) of Thailand, 2003-2005.

Kinds of fruit	2003		2004		2005		Aver. 2003-2005	
	Volume (tons)	Value (US\$mill.)	Volume (tons)	Value (US\$mill.)	Volume (tons)	Value (US\$mill.)	Volume (tons)	Value (US\$mill.)
Longan	155,430	135.018	199,070	118.217	241,875	142.638	198,792	131.958
Durian	107,028	57.621	153,018	64.035	150,750	77.408	136,932	66.355
Mangosteen	13,264	8.782	27,006	13.206	40,923	20.966	27,064	14.318
Lychee	18,377	17.373	20,810	16.849	24,642	18.507	21,276	17.576
Rambutan	17,192	12.307	13,411	11.714	12,886	11.548	14,496	11.856
Mango	18,315	13.873	16,132	11.238	17,158	13.613	17,202	13.908
Pummelo	7,607	3.261	7,313	2.915	6,293	2.848	7,071	3.008
Pineapple	637,599	523.231	624,126	624.136	670,679	550.640	644,135	566.002
Total	974,812	757.593	1,060,886	862.310	1,165,206	838.168	1,066,968	819.357

Source: Office of the Agricultural Economics, 2006.

*Thai Baht equivalent of US\$ 1 = Baht

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Table 2. Area, production and export of major fruits (fresh fruits and products) of Thailand, 2005.

Kinds of fruit	Area of production (ha)	Total production (tons)	Export volume (tons)	Percent export (%)
Longan	153,189.28	705,534	241,875	34.28
Durian	131,679.68	640,242	150,750	23.54
Mangosteen	66,866.88	207,309	40,923	19.74
Lychee	27,769.28	79,274	24,642	31.08
Rambutan	84,463.84	518,616	12,886	2.48
Mango	316,032.16	2,080,650	17,158	0.82
Pummelo	30,736.48	276,628	6,293	2.27
Pineapple	95,888.32	2,189,293	670,679	30.63
Total	906,625.82	6,697,546	1,165,206	17.40

Source: Office of the Agricultural Economics, 2006.

Many Thai cultivars have been developed with thick flesh and small seeds. They bear quite heavily but seasonally. Quite recently, however, a few cultivars, e.g. 'Phet Sakhon' have been developed and acclimatized in other regions with hot and humid climate and surprisingly enough they bear fruits in different seasons, thus fetch a higher price. Off-season cultivars have also been selected from bud sport although some have been chemically treated to bear fruits off-season. Its total planted area in 2005 was 153,189.28 ha with the production of 705,534 tons. Thailand is the world's largest exporter of longan, mostly to countries where Chinese people reside as they believe that longan energized the body due to its nutritious contents. The export volume in 2005 was 241,875 tons, valued at US\$ 142.64 mill., equivalent to 34.28% of total production. Among the popular cultivars, 'I Do' occupied

the largest area, or 75%, followed by 'Haeo', 'Biao Khiao' and 'Si Chomphu', covering 7% each of the total longan area.

2.2 Durian (*Durio zibethinus* Murray)

Durian originates in Borneo. It is presently grown in many ASEAN countries as well as other tropical parts of the world. It is a very high-value crop and the most famous fruit in Southeast Asia. Its popularity arises not only from its excellent taste but also from its specifically strong aroma. Its quality is well known and appreciated by people of all races including Caucasians who are not familiar with the taste of this wonderful "King of Fruits". There is a saying about its taste and aroma, namely "Tastes like heaven, smells like hell". However, Thai durians, when eaten at the proper stage of ripeness, have a very good taste and mild aroma. The seeds of some cultivars,

especially 'Mon Thong', are quite small or shrivelled. Thailand is the world's largest producer and exporter of durians. Its planted area in 2005 was 131,679.68 ha with the total production of 640,242 tons. Of this amount, 150,750 tons of fresh durian and its products were exported at the value of US\$ 77.41 mill., equivalent to 23.54% of total production. Although about 200 cultivars have been named in Thailand, but only four, namely 'Mon Thong', 'Chani', 'Kradum' and 'Kan Yao', are common in the market.

2.3 Mangosteen (*Garcinia mangostana* L.)

Mangosteen, one of the most delicious tropical fruits, originates in the Sunda Islands close to the Malay archipelago. It is considered the best-tasting fruit of all. Nicknamed "Queen of Fruits", it has the good blend of sweetness and a very pleasant flavor that everyone enjoys. It has widely spread to all over the ASEAN countries as well as some tropical countries in America. However, Thai mangosteen has attracted foreigners and export markets in Europe, the Middle East and many Asian countries such as Japan and China. Since the fruit goes through proper post-harvest handling from the very beginning at the farm or packing house, the rind remain smooth and shiny with the pure white pulp inside the perfect condition when consumed in the importing countries. At present, Thailand is one of the world's largest producers and exporters of mangosteen. The cultivated area in 2005 was 66,866.88 ha, producing 207,309 tons of fruits. Of this amount, 40,923 tons, valued at US\$ 20.97 mill. have been exported, equivalent to 19.74% of total production.

2.4 Lychee (*Litchi sinensis* Sonn.)

Lychee originates in Southern China. It bears fruit biennially but erratically. Many cultivars introduced from China during the reign of King Rama II were grown in Amphawa District of Samut Songkhram Province near Bangkok on the lowlands with high water table. These cultivars have acclimatized to their new habitat and bear fruit

annually. Many cultivars with large fruits of sweet and pleasant aroma have been gradually developed over the last 200 years. These included 'Khom' and 'Chakkraphat'. However, the main production area of lychee is now in the North where sub-tropical climate prevails. Many new cultivars with very large, sweet fruits with a little sour taste, bearing annually and heavily, have been developed by Thai farmers. These included 'Hong Huai', 'Kim Cheng', and 'O Hia'. The total area planted to lychee in 2005, was 27,769.28 ha, yielding 79,274 tons. Of this amount, about a third, i.e. 24,642 tons were exported, earning US\$ 18.51 mill., equivalent to 31.08% of total production.

2.5 Rambutan (*Nephelium lappaceum* (L.)

Rambutan is native to Malaysia and Indonesia. It has a unique, pleasant sweet flavor. The two standard cultivars, 'Rongrian' (sharing 77% of cultivated area) and 'Si Chomphu', have a loosened seed coat which, unlike most other cultivars, is easily separable from the juicy pulp. De-deeded rambutan stuffed with a chunk of pineapple and canned in syrup is quite popular among foreign customers of canned fruit because of the two fruits' unique blend in taste. In the 2005 a total land of 84,463.84 ha was planted to rambutan with the production of 518,616 tons. Most of the rambutans produced were consumed domestically, however, and only 12,886 tons of canned rambutan, valued at US\$ 11.55 mill. have been exported, equivalent to 2.48% of total production. Yet Thailand is the world's largest producer and exporter of canned rambutan.

2.6 Mango (*Mangifera indica* L.)

Mango is native to the Indo-Myanmar region where it has been cultivated for over 4,000 years. Mango is one of the most popular fruits of Thailand as well as of many other Asian countries. Thailand is considered the origin of many mango cultivars that are commercially produced and marketed as ripe, mature-green and immature-green fruits. Many Thai cultivars have delicate flesh so sweet that they are eaten with glutinous rice as a delicacy,

a favourite dessert for Thais and foreigners alike. Another group of mango cultivars unique to Thailand is the ones that are eaten when the fruits are still green; they are not sour but have a special kind of taste quite difficult to define, the closest description is probably 'nutty' or 'starchy'. Even though more than 100 mango cultivars have been recorded in the country, only a few are grown commercially, such as 'Kaeo' 'Khiao Sawoei', 'Raet', 'Nong Saeng', 'Nam Dok Mai', 'Nang Klang Wan'. In 2005, the planted area for mango in Thailand was 316,032.16 ha and production of 2,080,650 tons. Most of the mangoes produced were consumed domestically, however, and only 17,158 tons have been exported, earning US\$ 13.163 mill., equivalent to only 0.82% of total production.

2.7 Pummelo (*Citrus maxima* L.)

Pummelo is one of the best fruits of South East Asia. The fruit is large, rounded with a rather thick skin, making it suitable for both long-storage period and export. The edible pulp is juicy, tasteful and rich in vitamins A, B1 and C. Thai pummelos are considered the most superior in quality. This is particularly true for those grown in Nakhon Chai Si District of Nakhon Pathom Province, where an optimal match of cultivars, an environment niche and growing skills have yielded fruits of exceptional taste and flavor with no seed. So far, over 20 cultivars have been recorded, of which eight are popular, namely: 'Thong Di', 'Khao Paen', 'Khao Phuang', 'Khao Namphueng', 'Khao Hom', 'Khao Yai', 'Khao Taengkwa' and 'Ta Khoi'. Among these, 'Thong Di' has the greatest planted area, accounting for about 35 % of the total pummelo planting area. Pummelo's planted area in 2005 was 30,736.48 ha, with a production of 276,628 tons. Most of the pummelos produced was consumed domestically and only 6,293 tons, valued at US\$ 2.85 mill. were exported, equivalent to 2.27% of total production.

2.8 Pineapple (*Ananas comosus* (L.) Merr.)

Pineapple originates in tropical South America. It is widely spread over many other tropical areas especially in the ASEAN countries. Although being an introduced crop, pineapple is so adaptive to growing conditions in Thailand that it has made Thailand famous for her high quality pineapples. Not only does Thailand rank first in the world in the export quantity of canned pineapple, but many local cultivars are also unique in their taste and aroma. For example, the 'Phuket' cultivar is fragrant, crunchy and sweet, including the core which is edible. The 'Nang Lae' cultivar of Chiang Rai Province is sweet and aromatic with the most pleasant flavor. Apart from fresh consumption, it can be processed in many ways, such as canned, juice, jam, frozen, etc. In 2005, pineapple was planted in the area of 95,888.32 ha, producing 2,189,293 tons of fruits. Total export volume of fresh fruits and products amounts to 670,679 tons, earning US\$ 550.64 mill., equivalent to 30.63% of total production.

Before leaving this section, it is noted that these eight major fruit crops have brought in the export revenue of US\$ 838.17 mill. in 2005. Judging from the percent of export volume, longan ranks first with 34.28% of total production, lychee ranks second with 31.08%, pineapple ranks third with 30.63%, durian ranks fourth with 23.54% and mangosteen ranks fifth with 19.74%, making Thailand the world's largest exporter of these fruit crops. In terms of the value of export, pineapple ranks first, with US\$ 550.64 mill., followed by longan (US\$ 142,64 mill.)

Even with the fruits in which only a small percentage of the total production was exported, like rambutan (2.48%) and pummelo (2.27%), yet their export volume and value have made Thailand the world's largest exporter of these fruits.

3. Marketing of Major Fruits of Thailand

3.1 Domestic Market

3.1.1 Marketing System: In a free-trade system, supply and demand (marketing and prices) are important mechanisms that mobilize commodities from production origin to the consumers. Inefficient marketing results in a higher cost of transaction, affecting both the producer and the consumer prices. Development of an efficient marketing system is therefore very important, and the more so for tropical fruits, which are very perishable and mostly seasonal in nature.

Marketing systems for fruits are generally less complex than that of cereals and other agricultural commodities. Although different characteristics do exist among specific markets, depending on the type of fruits, all are from local traders to wholesale and retail markets, operating freely according to the existing supply and demand conditions. Among various activities involved in the marketing system, transportation (coupled with road condition) is the most important component of marketing cost. Therefore, any location having poor transport and communication facilities will be disadvantageous in terms of market competitiveness. Although the fruit processing industry is at present highly developed and modernized, the lack of quality raw material and an irregular supply has become a primary constraint that prevents the industry from operating at full capacity, and this has also affected the export.

3.1.2 Price Determination: The determination of prices for fruits is generally done by local traders who offer farmers a buying price, based on market information of the previous days. In certain areas of the central region where horticultural production has been established for a long time and where farmers have a long standing relation with traders from various wholesale markets in Bangkok, farmers contact the wholesalers on their own behalf. They then arrange the shipment according to the trader's advice and

are informed of the price later on.

Since road conditions have improved drastically over the last decade, a steadily growing number of truck merchants (brokers) and individual farmers alike have stepped in the trading business. This has changed the traditional nature of marketing channels, in that farmers themselves load their produce to sell directly to the wholesale and retail markets in Bangkok and other large cities.

3.1.3 Wholesale Markets: The determination of prices in wholesale markets is done by the traders mainly based on their observation on the quantity supplied and the demand in that market at that time. Therefore, the change in prices of fruit in the market occurs frequently and rapidly, depending on the supply and demand situations of any particular day. The auction system for trading fruits in the existing markets has not yet been adopted. Each merchant in the market thus acts rather like an agent doing transactions with the middlemen (brokers) who deliver the commodities from the production area to the market. The long-standing wholesale markets in Bangkok are located in Pak Klong Talat, which includes the markets of the Farmers' Marketing Organization, the Thai Agricultural Promotion Market (Talat Songsoem Kaset Thai) and Yot Phiman Market. These are wholesale markets of both vegetables and fruits. In particular, the traditional wholesale markets for fruits are in Wang Maha Nak, which includes Maha Nak Market and Phadung Krung Kasem Market. At present, wholesale market centers, both for vegetables and fruits, have extended to many locations, especially in Bangkok's outskirts and neighboring provinces such as Si Mum Mueang Market (Rangsit), Talat Thai (Pathum Thani), Bang Khae Market, Chedi Front Market in Nakhon Pathom Province, and Nonthaburi Market in Nonthaburi Municipality.

It can be said that the present fruit marketing system is different from the traditional one which had most activities concentrated in Pak Klong Talat and Wang Mahanak areas. Now, the central markets have extended to other places, and provinces which have been developed as centers of transport

and communication, e.g. Talat Thai. Hence, market competitiveness has become more intense than ever.

3.1.4 Marketing Infrastructure: At present, and in order to facilitate more efficient marketing and export services, the Thai government has developed a so called "one-stop" service policy. The latter aims to shortcut the lengthy chain of handling, grading, packaging, quality control and certification, customs formalities, etc., which presently have to be executed at different places (multi-stop system), by providing all these services at one central market. There is a need for a new physical marketing infrastructure, which adopts the auction system and integrates the services of the various government and private organizations concerned with fruit trade, to the benefit of producers and traders in the domestic and export markets.

3.1.5 Marketing Channels: The domestic marketing channels of fresh and

processed main channel of fruit trade from farm through brokers - wholesalers – retailers - consumers. The majority (80%) of Thai fruit supply goes to fruits are illustrated in Fig. 1. It presents the domestic market whereas a remaining 20% of fresh and processed produces are exported to the foreign markets.

For processed fruits, the brokers take on a role of fruit collectors, i.e. they purchase the raw material (fresh produce) from farmers and delivers it to the processing company. In many instances, processing companies have their own land, which they produce the needed fruits (e.g. pineapple) or work through the system of contract-farming in order to ensure their own supply.

3.1.6 Modern-Trade System: There are two big wholesale markets near Bangkok: Talat Thai and Si Mum Mueang.

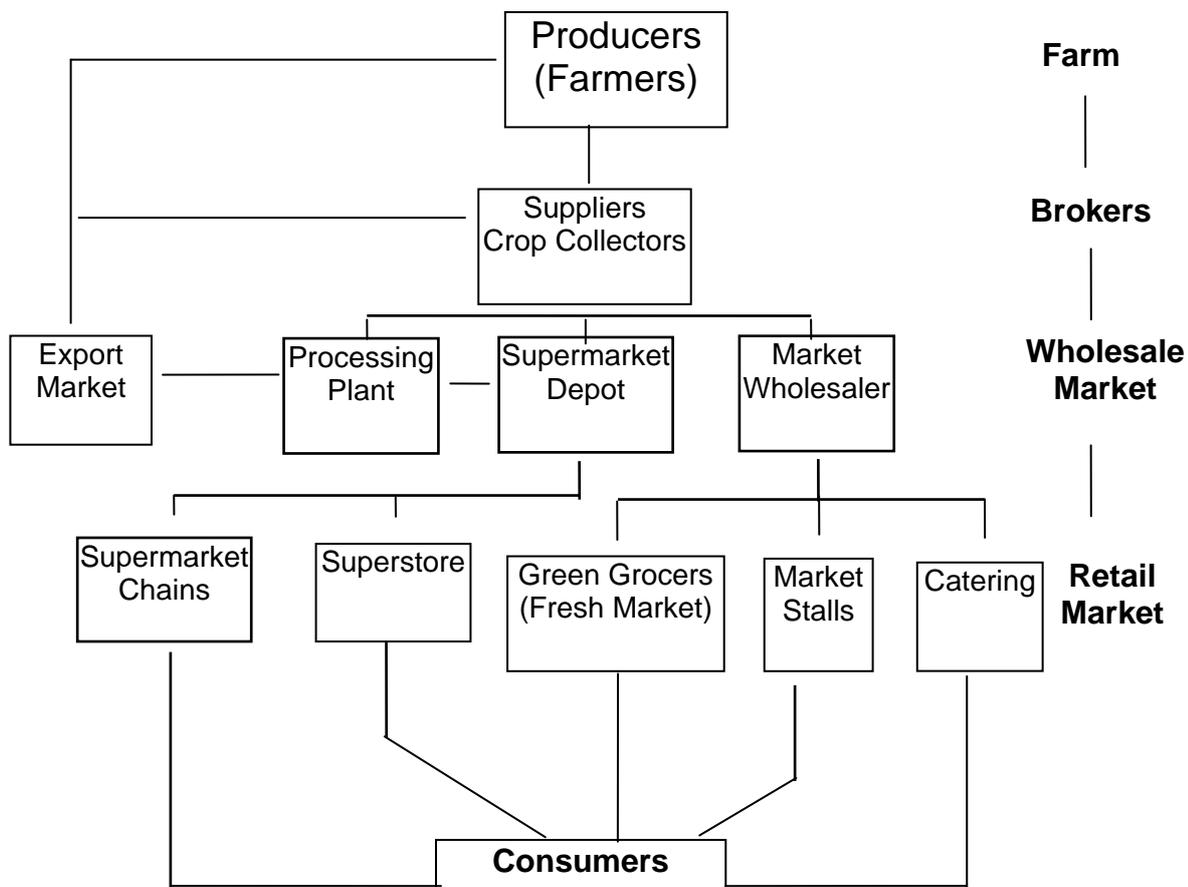


Fig. 1. Marketing Channels of fresh and processed fruits in Thailand.

There are also some other regional wholesale markets in many areas and small seasonal wholesale markets in specific production sites for durian, rambutan, mangosteen, such as in the eastern provinces (Rayong, Chanthaburi, and Trat). These markets function via the fruit merchants in any markets who have a growers' network in any production area. The fruit merchants buy produces and sell to the retail markets around Bangkok on a day-to-day basis.

At present, the modern-trade system has been established in Thailand which composes of retail markets like hypermarket, supermarket, cash & carry, convenient store, etc. They occupy the prime area of the city and suburb. The lifestyle of the people has changed a lot in recent years. They usually shop at these new shopping stores instead of an old-style market. The recent market survey shows that 60% of the people do shopping via this modern-trade system which buys fruits from the wholesale markets or brokers who are linked to the growers' networks.

Most foreign stores have their own chains throughout the world. They have bargaining power to buy local fruits or imported produces from oversea at a very low price. This phenomenon has changed the fruit industry in Thailand dramatically in terms of competition between local tropical fruits and imported temperate fruits.

3.2 Export Markets

In case of fresh produce, local merchants play an important role as brokers. They buy fresh produce from farmers and sell it to either the wholesale market or to the supermarket chains in town. Examples of major fruit wholesale markets in Bangkok are Pak Khlong Talat, Maha Nak, Si Mum Mueang and Talat Thai markets. In addition there are supermarket depots which are company-owned wholesalers or individual private wholesalers who provide post-harvest handling facilities in order to minimize the post-harvest losses from farm to packing house and from packing house to retail outlets. Examples of supermarkets and smaller retail outlets in Thailand are numerous: in

major towns, there are well established retail markets such as the Big C superstore, Lotus superstore, Makro superstore, Top supermarket, etc. The Big C, Lotus and Mackro superstores are companies which have their own depots located in the Talat Thai wholesale market in the outskirts of Bangkok. There are also numerous local fresh markets, at provincial, district and sub-district levels.

3.2.1 Major Exporting Countries of Tropical Fruits: Thailand is the world's largest exporter of tropical fruits. Its total volume exported in 2004 amounts to 120,886 tons, valued at US\$ 40.692 mill (Table 3). Malaysia is the second world's largest exporter of tropical fruits, with the volume of 71,191 tons, valued at US\$ 21.682 mill. The rest of the major exporting countries of tropical fruits included the USA, Kenya, Australia, Indonesia, Venezuela, China, Egypt and Madagascar, but their volume were significantly much lower than those of the first two countries. It should be noted, however that the quantities and values cited in this table are much lower than the one cited by the Thai Government agencies. For example, the quantity of tropical fruits exported from Thailand in 2004 (Table 1) was 1,060,886 tons, not just 120,886 tons as given by FAO in Table 3, while the value was US\$ 862.310, not US\$ 40.692 mill.

3.2.2 Importing Countries of Thai Fruits: Most of Thai fruit customers are in Asia, namely China, Indonesia, Malaysia, Laos, Vietnam, Cambodia, Singapore, Taiwan, Japan and Korea. For some processed fruits like pineapple, the EU countries are important customers. For frozen fruits like longan and durian, Canada and the USA are major customers.

Potential markets for Thai fruit exports include Canada, Australia, Sweden, Germany, and France. These countries are showing increasing trend in importing Thai fruits due to their rising popularity.

Competing countries are the Philippines (mango, banana), Indonesia (mangosteen), Malaysia (papaya), Taiwan (carambola), Vietnam (dragon fruit), China: Guang Xi,

Table 3. Major exporting countries of tropical fruits, 2004.

Country	Quantity (Mt)	Value (000 US\$)	Unit value (US\$)
1 Thailand	120,886	40,692	337
2 Malaysia	71,191	21,682	305
3 United States of America	18,293	21,104	1,154
4 Kenya	16,966	9,621	567
5 Australia	2,760	8,473	3,070
6 Indonesia	3,152	3,394	1,077
7 Venezuela	6,117	2,043	334
8 China	8,400	1,260	150
9 Egypt	2,847	1,144	402
10 Madagascar	1,574	1,008	640

Source: FAO, 2004.

Table 4. Export of various products of tropical fruits from Thailand during 2002-2004*.

Details	2002		2003		2004	
	Quantity (Mt)	Export Value (US\$ million)	Quantity (Mt)	Export Value (US\$ million)	Quantity (Mt)	Export Value (US\$ million)
Fresh Fruits	332,723	169.56	239,749	136.08	354,425	172.14
Frozen Fruits	36,020	29.48	40,248	29.15	41,013	32.57
Dried Fruits	50,500	49.39	88,692	88.53	161,242	65.35
Fruit Juice	178,549	170.07	207,714	229.97	212,634	204.05
Jam	5,482	6.95	5,859	6.63	6,245.0	7.65
Other Proc-essed Fruits	612,390	549.55	727,007	632.29	784,237	710.70
Total	1,215,664	975.01	1,309,269	112.09	1,559,796	1,192.47

Source: Department of Agricultural Extension, 2004.

*Thai Baht equivalent of US\$ 1 = Baht

Yunan, and Hainan (pineapple), Canton Province (longan and lychee).

With regard to consumer behaviors, consumers from various countries are in favor of Thai fruits, which are known for their diversity in flavor and choice. For example:

- China, Hong Kong, and Taiwan's consumption preference is young coconut.
- Japan and Korea's preferences are ripe mango along with mangosteen. At present, both Japan and Korea permit importing 'Nam Dok Mai', 'Nang Klang

Wan' and 'Raet' mangoes that have passed vapor heat treatment.

- Singapore's preference is pummelo.

3.2.3 Future Trend of Thai Tropical Fruits in Terms of Competitiveness: Due to the globalization and the emergence of new economic countries like China, Thai tropical fruit industry is facing with new enemies never met before. Many growers face bankruptcy or are forced to sell their properties and seek new jobs, or they must change their practice from being conventional growers to professional ones via a group of cluster of small growers.

But this is the opportunity for the big growers with professional carrier in terms of production and marketing.

On the other hand, the nutritional fact and pharmaceutical properties of many kinds of tropical fruits, like mangosteen, have been assembled. This new trend of the industry in producing higher-value produces than the previous ones, together with the professional growers and group or cluster of growers with professional management scheme will help balance the demand and supply of the produces. This will benefit the industry with more sustainability.

3.3 Constraints in Marketing

3.3.1 Domestic Market Constraints:

Domestic processing outlets and high value fresh produce retail markets receive their products by road transportation. In view of this, there are several limiting factors impeding the expansion of wholesale markets, particularly for the fresh produce. These factors include:

3.3.1.1 Quality of Produce: Produce quality does not always meet market requirements, probably due to the lack of market orientation in the production, indicating that proper post-harvest handling systems, designed to maintain the quality of the produce, may be insufficient.

3.3.1.2 Irregularity of Supply: Mostly, the produce is seasonal and the harvesting season is short, resulting in an irregular market supply. This, in itself, leads to wide fluctuations in price. Meanwhile, the processing markets and supermarkets always demand continuity of supply.

3.3.1.3 Packing Techniques: Lack of know-how and standard requirements for packing, container sizes and materials in use locally, result in crop damage during post-harvest handling and transportation from farm to packing centres.

3.3.1.4 Geographical Distance: Production areas and the location of the processing companies are often too far apart, which results in high transportation costs and substantial post-harvest losses.

3.3.1.5 Market Information: In Thailand, there is insufficient marketing information, especially from processing companies and wholesale markets, regarding grades, quality, quantity requirements, trends in demand, prices and consumer preference. There is also a lack of systematic and reliable statistics on market demand and supply so that promoting agencies are not in a position to foresee what crops are in demand, the quantities needed and the prices likely to be paid to farmers. This makes it difficult for the promoting agencies to develop satisfactory working relationships with the processors and wholesalers and to enable them to enter into agreements with farmers to promote particular crops.

3.3.2 Export Market Constraints:

Tropical fruits are considered as highly perishable in nature and, therefore, more research efforts in post-harvest handling are needed in order to prolong the shelf life of fresh fruits. For example, a breakthrough in lengthening the storage life of durian, up to 15 days, provided an alternative trading route, i.e. from air cargo to sea transport. This reduced the transportation cost and resulted in more durian export.

At the same time, very few people around the world, especially the westerners, are familiar with tropical fruits. It is a matter of fact that these fruits are very nutritious and delicious too. More consumer awareness is needed, in order to expand the markets of this sector. Enhanced cooperation among tropical fruit-producing countries is seen as one of the best strategies for a joint promotion campaign.

In addition, most exporting countries face importer-specific trade barriers, as the quality standards set by the individual importing countries can differ from country to country. It is therefore deemed necessary, to jointly develop a common understanding and a global set of regulations, such as is being proposed in the Sanitary and Phytosanitary Measures System.

4. National Policies

At present, economic and social situations in the world are undergoing change. Each country is advancing in both academic and technological terms and there is much competition in trade. Some countries impose trade barriers for importing goods, particularly agricultural products, which are required to meet a certain standard of quality in order to be competitive in the world market without any problems. The majority of agricultural goods are horticultural products, such as fruits, vegetables, ornamental plants, herbs and spices, and industrial crops. It is widely known that, under today's circumstances, each country's priority is to swiftly develop agricultural production for better quality and productivity. The development can be accomplished in many ways such as implementing new technologies, increasing the efficiency of management and administration, improving cultural practices, selecting better raw material or improving production input, using domestic raw material instead of importing (import substitution), selecting and improving new strains of horticultural plants, as well as minimizing various losses to reduce cost of production. For the above, the Thai Government has consistently promoted research and study, which are beneficial to farmers (Sarikaputi 2004).

The Thai Government exercises Free Trade Area (FTA) policy, which is a proactive strategy in opening markets for trade, investment, service, custom procedure, and intellectual property. Currently, the main trade obstacles are non-tariff barriers. For example, phytosanitary measures have made exporting fruit, vegetables, etc. much more difficult, and in response, a consideration to reduce import from the country at the other end of an agreement must be made. FTA trend in Asia is powerful. For a country to ignore it would mean lagging behind. Currently, there are FTA agreements being made between many countries. Without such agreements, trade must be conducted through various tariff measures and other barriers. Even then for every case, the agreement must be considered upon by weighing the benefits of both parties (Sarikaputi 2004).

Under its FTA policy, the Thai Government has signed four bilateral FTA agreements, as well as showing an inclination to make additional agreements with other countries. Since the FTA agreements have been effective, especially between China and Thailand, there have been many consequences. Firstly, the import of Chinese fruits into Thailand has increased by 128%, particularly apple and Chinese pears. This resulted in falling prices and sale of certain Thai fruits. On the other hand, there has been an increase in Thai export of fresh and dried longan, durian, and mangosteen by 70%. The previous export value of Baht 2,514 million was increased to Baht 3,385 million between October 2003 and September 2004 (Singampai 2004). Thailand has already made bilateral FTA agreements with China, India, and Australia. Moreover, it is likely to sign more FTA agreements with Japan, the United States, Bahrain, Peru, South Korea, Bhutan, Bangladesh, Sri Lanka and others. It should be noted that the Thai Government has decided to expand its market in the form of bilateral FTA.

5. Strength and Weakness of Thai Fruit Industry

5.1 The Strength

The strength of Thai fruit industry can be listed as follows:

- The majority (90%) are small, skillful growers with their own property, so they can handle their business effectively by themselves.
- There are good central hubs of transportation to the world market destination, including a good logistic foundation for both local and export destinations via air- and sea-freight.
- Most climatic conditions are suitable for production of good quality tropical fruits like durian, mangosteen, lychee, rambutan, longan, pummelo, pineapple and mango.

5.2 The Weakness

The followings are the weakness of Thai fruit industry:

- Growers are not well organized throughout the supply chain in terms of competitiveness. Only some growers are organized via cluster for export by the exporting companies.
- The majority (90%) of the small growers do their business via their sense and skill, not from the experience in farm operation, research and marketing information. Thus, they always have a big problem in terms of pricing war from the over supply of fruits produced in any season.
- High cost of production as compared to the market price.
- Labor shortage is the big problem confronting the industry.

5.3 The Threat of Thai Tropical Fruits

From the day Thailand became a member of WTO and signed bilateral agreement with some countries like China and others, the flooding of temperate fruits with very low price in the local markets throughout the country has occurred in spite of controversy. On the other hand, Thai tropical fruits could be exported only a little more than before through the agreement scheme.

5.4 The Opportunity

Thai tropical fruits have a great potential in world market because they have unique taste. Once the industry have been well organized in terms of balancing the supply of production and the demand of the market with

strong support from the Government and the industry as a whole, the opportunity to expand export trading is obvious.

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