

The Potential of Thai Fruits and Vegetables in the Japanese Market

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ABSTRACT

Young coconut and cashew nut have a great potential to enter Japanese market. Mango, mangosteen, pomelo, papaya and rambutan require the technologies to disinfest fruit-fly and disease before they can be accepted. Banana, pineapple and tangerine however are not competitive. For vegetables, ginger, asparagus, podded-pea and salted vegetables are in high demand. Thailand also urgently needs development in term of transportation and packaging techniques. Chemicals use during the cultivation should be reduced. High quality is the most important requirement for all produces to compete, but promotion is also very important.

INTRODUCTION

Tropical fruits and vegetables are becoming more important in Japan. At the present time, however, imports from Thailand are very small. In order to enhance the possibility to export Thai fruits and vegetables to Japan, the Japan International Cooperation Agency (JICA) granted the author an exploring trip to Central, Eastern and Northern Thailand during June 15 to July 9 in 1990. It was found that many Thai commodities stood a very good chance in the Japanese market as reported here.

1. Fruit

1.1 Coconut

As shown in Tables 1 and 2, not much Thai fruits are being imported by Japan. Among them, the most promising fruit in which exports can be easily increased is young coconut fruit. Japan imported 3,228 tons of coconuts in 1989. These were mostly from the Philippines and generally used as ornamentals. 601 tons

of Thai coconuts, however, were used as drinks and a single nut is sold at 1,000 – 1,100 Yen (160 – 180 Baht) in the “quality fruit stores”. It means the quality fruit stores realize of its value. Very few Japanese consumers, however, know Thai coconut and even many fruit stores do not know it. I will write about Thai coconut in the Fruit Monthly, a journal of the Japanese Fruit Retailers Association, in which I have been contributing articles every month for the past 12 years. When fruit stores are informed about Thai coconut, they will be glad to sell them. There are many kinds of drinks which is better in taste than coconut water, but many Japanese feel nostalgic for coconut probably due to the famous song about tropical coconut by Thoson Shimazaki.

1.2 Mango

The export of Thai mangoes to Japan was permitted in March 1987 with the condition that the fruit must be subjected to Vapour Heat Treatment (VHT). However, the volume was

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Table 1. Fresh tropical fruits imported by Japan in 1989 (Takizawa & Ikeda, 1990).

	Volume (Metric ton)	Exporting country or area and % of total in 1989
Banana	773,723	Philippines 80%, Ecuador 11%, Taiwan 8%, Colombia 1%, Panama, China, Malaysia
Pineapple	135,383	Philippines 96%, Taiwan 4%, Thailand, Indonesia, Hawaii, China, Malaysia, Sri Lanka
Papaya	5,744	Hawaii 100%, Fiji, Taiwan
Mango	5,966	Philippines 78%, Mexico 20%, Thailand 1%, Taiwan, Colombia, Fiji, Venezuela, USA
Avocado	2,693	USA 63%, Mexico 37%, New Zealand
Coconut	3,228	Philippines 80%, Thailand 19%, Costa Rica 1%, Malaysia, Indonesia, Sri Lanka
Litchi	1,485	Taiwan 100%
Durian	89	Thailand 82%, Indonesia 18%, Philippines, Singapore, Sri Lanka
Cherimoya	56	USA 100%, New Zealand, Ecuador, Colombia
Passion fruit	15	New Zealand 67%, USA 33%, Colombia, Fiji
Cactus fruit	10	Mexico 43%, USA 35%, Colombia 22%, Vietnam
Pitaya (<i>Hylocereus undatus</i> B.)	7	Colombia 100%, Mexico
Granadilla (<i>Passiflora quadrangularis</i> L.)	2.4	Colombia 100%, USA
Maracuja (<i>Passiflora ligularis</i> A.)	1	Colombia 100%, USA
Mangosteen	0.6	Colombia

Table 2. Fresh fruit imported from Thailand total imports and domestic production in Japan (Metric tons), (Takizawa & Ikeda, 1990).

	Imports 1987	from 1988	Thailand 1989	Total imports 1989	Domestic Production 1989
Coconut	21	118	601	3,228	0
Pineapple	46	264	217	135,383	35,500
Mango	24	48	75	5,966	110
Durian	57	79	73	89	0
Grapes	65	27	17	7,741	295,700
Tamarind (Makam)	0	0	0.46	0.46	0
Great hog-plum (Ma-kok-farang)	0	0	0.13	0.14	0
Star berry (Ma-yom)	0	0	0.12	0.12	0
Bilimbi (Ta-ling-pring)	0	0	0.02	0.02	0

very small as shown in Tables 1 and 2. This is not due to VHT since more than 4,000 tons of Philippine mangoes were imported after receiving the same treatment. Fruit stores in Japan say anthracnose and stem end rots are

very serious at their stores, so they do not want to handle Thai mangoes.

Anthraco-nose and stem end rot are troublesome diseases in the area of high rainfall and the infection occurs on the tree. When

European fruits were introduced to Japan in the early 20th century, it was found that the diseases were very serious due to high rainfall during the growing season. Fruit growers developed bagging wherein each fruit is covered with paper bag on the tree before the infection occur. At present, many fruits such as apples, peaches and pears are produced with bagging. In Njisseiki pears, growers put two bags, a small bag just after petal fall and large bag about one month later. In strongly recommend bagging to Thai mangoes. In Cebu of Philippines, bagging of mangoes are being done extensively even if the tree is very high.

Also, I found Nang Klangwan, the variety which is permitted to be exported to Japan, not the variety similar to Carabao in the Philippines. Carabao is the typical and main variety in the Philippines, but not Nang Klangwan in Thailand. It is necessary therefore to ask the Japanese government to permit the importation of other varieties.

1.3 Durian

Eighty nine tons of durians were imported by Japan in 1989 and 82% were from Thailand (Table 1). One piece of durian in Japan is sold at 10,000 Yen (1,600 B) at the quality fruit stores. According to the fruit stores, Japanese who buy durians are mostly old soldiers of World War II, but their number is decreasing. For most Japanese durian flavor is too strong, but I found Mon Thong very mild and I think the Japanese will like it. Recently, many tourists visit Thailand, but they do not have the chance to taste durian because it is prohibited in the hotel. I think Mon Thong will not cause any problem even if it is served in the hotel. The best way to

increase durian export to Japan is for the tourists to have the chance to taste Mon Thong.

1.4 Grape

The biggest volume of export of Thai grapes to Japan was 65 tons in 1987 and thereafter the volume decreased as shown in Table 2. Thai grapes are mostly exported in February to May when Japanese grapes are out of season. Recently, however, Chile started to export big volume of grapes to Japan in the same month. The volume reached 7,400 tons in 1990 which was 2.5 times more in 1989. Their quality is fairly good and I think it is difficult for Thai grapes to compete with the Chilean grapes.

1.5 Banana and Pineapple

I was asked by many people regarding the possibility of exporting banana and pineapple. Japan imported from the Philippines 620,476 tons of bananas and 129,681 tons of pineapples in 1989. These fruits were produced in big plantations in Mindanao and carried by 3,000 to 4,000-ton chartered boats from Davao. Their CIF price was 75 Yen (12 B)/kg for banana and 67 Yen (11 B)/kg for pineapples and they are the cheapest tropical fruits in Japan. So, it is very difficult to compete with Philippine bananas and pineapples unless Thai fruits are very good in quality or of different types. A good example is bananas and pineapples from Taiwan. CIF price of Taiwan banana was 107 Yen (17 B)/kg and that of Taiwan pineapples was 119 Yen (19 B)/kg in 1989. So, they were 1.4 and 1.8 times more expensive than the Philippine banana and pineapple. Even though, 6,152 tons of banana and 5,386 tons of pineapple were imported from Taiwan in 1989, because their quality

is known to be good to the Japanese consumers.

1.6 Citrus Fruit

Also, many people asked me regarding the possibility of exporting **tangerines**, but Japan is the biggest tangerine producing country in the world. The production was 3,665,000 tons in 1975. The volume is decreasing due to overproduction and was only 2,090,000 tons in 1989. The Japanese cultivar "Satsuma" is the best in quality in the world and I think the possibility is very small for Thai tangerines.

I found Thai pomelo to be good in quality. Pomeloes production in Japan in about 8,000 tons but it is not enough. Japan is too cold for producing pomeloes. Since there is no importation, I think pomeloes have the potential.

At present, however, Thai citrus fruit can not be exported to Japan due to oriental fruit fly (*Dacus dorsalis* Hendel). When I visited a citrus grower in Nakhon Pathom, he said he do not like Japan and do not want to use Japanese car because Japan segregate his citrus fruit. I have never seen oriental fruit fly attack on the citrus fruit. So, I said that Florida citrus growers said he same thing when I first visited Florida in 1975. Florida citrus fruits exported to Japan have to be fumigated to get rid of Caribbean fruit fly, but according to them the fruit fly attacks guava but not citrus. Also, there were misunderstandings about the use of post harvest chemicals and they were going to boycott Japanese car. So, I explained to them international plant quarantine and the differences of food additive laws between Japan and U.S.A. Now, Florida is exporting some 200,000 tons of grapefruit to Japan which has become their most important con-

sumers. Besides Florida, citrus fruits of Taiwan, Australia and Israel are being exported to Japan after receiving cold treatment for disinfestation. For Thai citrus fruit, a study on disinfestation of Oriental fruit fly is urgently needed.

1.7 Papaya

At present, only cultivar Solo of Hawaii subjected to VHT is permitted to Japan. The volume was 5,744 tons in 1989 (Table 1). They were all transported by air and therefore the CIF price was very high, 505 Yen (81 B)/kg. The quality of Thai papaya is very good and there is a big potential. I think the Japanese government will request VHT for Thai papaya too. The researches on disinfestation and transportation are necessary.

1.8 Mangosteen, Rambutan and Longan

The Japanese like mangosteen, rambutan and longan very much especially the mangosteen. At present, very small volume of fresh mangosteen is imported from Colombia and is sold at 1,200 Yen (190 B) per piece at quality fruit stores. However, imports of these fruits from fruit fly living country is not permitted by the Japanese government. I do not know what kind of disinfestation treatment will be required for these fruits. Thus, research on this line needs to be carried out.

1.9 Frozen Fruit

There is a big potential for many Thai fruits in Japanese market, but the most difficult problem is the fruit fly. Frozen fruit, however, can be shipped without any problem. At present, about 500 tons of frozen mangosteen are exported from Thailand and they have good reputation, but most Japanese do not know of the delicacy. If they know the taste and

where can they get, the export will be greatly increased.

1.10 Cashew Nut

I did not visit any producing area of cashew nuts, but I heard that northeastern Thailand could produce good cashew nuts and the production has been increasing recently. In 1989, Japan imported 3,794 tons of cashew nuts. 3,660 tons were from India (CIF price 764 Yen (123 B)/kg and only 4 tons from Thailand (CIF price 721 Yen (116 B))/kg. If Thai cashew nut is good in quality, it will have big potential.

1.11 Fruit for Japanese

Japanese people enjoy the delicious and exotic fruits very much. For the Japanese, eating fruit is a special luxury, similar to the use of alcoholic drink. Japan produced about 5,500,000 tons and imported 1,500,000 tons of fruits in 1989. There is still a big demand for Thai fruits if they are of good quality.

One of the characteristic features of the fruit industry in Japan is the presence of "quality fruit stores" which sell only fruits. In the first class shopping area of a large city there are stores in which fruits are sold on a large scale at very high prices. Fruits of high quality get extremely high price because they can be sold at quality fruit stores but the price of slightly lower grade is greatly reduced. The difference in price between high quality and low quality fruit in Japan is much larger compared to other countries. If high quality fruit is exported, the importers get profit and they buy more. But if the quality is poor, they lose money and they do not want to buy again. Thus, quality is the most important in the fruit trade in Japan.

2. Vegetables

2.1 Onion

As shown in Table 3, not much Thai vegetables are imported by Japanese. The biggest volume were onions with 6,626 tons in 1989, but it was only 8% of the total imports. Japanese imports of onions, however, is greatly influenced by the domestic production. When the domestic production is more than 1,300,000 tons, the imports are small and if less than 1,000,000 tons, the importers try to buy onions from all over the world. They are mostly imported from February to May when domestic onions are not in season. According to the importers, Thai onions are soft, similar to the Japanese onions. I think onion consumption will be greatly increased in the near future because Western dishes will become popular in Thailand. Production and storage of onions are very important not only for export but also for domestic consumption.

2.2 Okra

978 tons of okras were imported in 1989. This is 69% of the total imports. It was more than 10 years ago when a Japanese trading company asked my suggestions about the possibility of growing okras in Thailand for export to Japan. In winter, Japanese vegetables are grown in plastic houses with oil heaters. Since okras need high temperature to grow it needs much oil. So, I answered imports of okras during winter will be promising but transportation will be very difficult. Since then, importation started but it is still less than 1,000 tons. The research on growing and transportation of okras are necessary in Thailand.

Table 3. Fresh vegetables imported from Thailand, total imports and domestic production in Japan (Metric tons), (Takizawa & Ikeda, 1990).

	Imports from Thailand			Total imports	Domestic production
	1987	1988	1989	1989	1988
Onion	669	5,932	6,626	80,779	1,250,000
Okra	202	566	978	1,421	10,413
Asparagus	—	100	667	10,736	38,654
Baby corn	67	176	130	134	—
Ginger	42	268	36	1,837	70,787
Chinese broccoli (<i>Brassica oleracea</i>)	0	1.4	7.7	7.7	—
Neptunia (<i>Neptunia oleracea</i>)	0	5.9	5.9	5.9	—
Lemongrass (Chakai, <i>Cymbopogon citratus</i>)	0.4	0.8	3.6	3.6	—
Zingiber (<i>Zingiber mioga</i>)	0	0	3.0	3.0	841
Acacia leaves	0	0	2.3	2.3	—
Krachai (<i>Boesenbergia pandurata</i>)	0	0.4	1.5	1.5	—
Basil (<i>Ocimum basilicum</i>)	0	0.2	1.2	1.2	—
Banana leaves	0	0	1.1	1.1	—
Sweet basil	0	0.1	0.8	0.8	—
Swangi leaves (<i>Citrus hystrix</i>)	0	0.3	0.8	0.8	—
Greater galangal (Kha, <i>Alpinia galanga</i>)	0	0	0.7	2.6	—
Podded pea	0	0	0.2	4,854	61,900
Curcuma (Kamin, <i>Curcuma domestica</i>)	0	0	0.2	0.2	—

2.3 Asparagus

667 tons of Thai asparagus were imported in 1989 and it was only 6% of the total imports. Japan imported 4,304 tons from USA, 2,119 tons from Mexico, 2,072 tons from Australia and 1,215 tons from New Zealand. The import from Thailand is increasing remarkably as shown in Table 3. I saw very good asparagus fields in Kamphaengsaen. With the efforts of Kasetsart University staff, growing good quality asparagus has succeeded. The farmer I visited said that his sales on that day were 5,000 B and

on good day he got more than 10,000 B. Also, packaging asparagus in the cool room at packing houses has been well developed. I think the export of asparagus will be greatly increased in the near future.

2.4 Baby Corn

One hundred and thirty tons of baby corns were imported from Thailand in 1989. It was 97% of the total imports. About 400,000 tons of sweet corn is produced in Japan, but very little amount for baby corn. It needs much labor for the trimming so it is difficult

to produce in Japan. I think there is a big potential in the Japanese market. Baby corns are quite new in Thailand and even the variety which is suitable for baby corn production is not well known. The research for good quality baby corn seems to be necessary.

2.5 Ginger and Podded Pea

Thirty six tons of gingers and 0.2 tons of podded peas were imported from Thailand in 1989. The total Japanese imports were 1,837 and 4,854 tons, respectively. They were mostly from Taiwan; gingers 1,281 tons and podded peas 4,839 tons. Recently, labor has become expensive in Taiwan and it is becoming difficult to produce these vegetables. So, if Thailand can grow good quality ginger and podded pea, there are big potentials.

2.6 Salted Vegetables

Many kinds of pickled vegetables are made in Japan. Due to high labor cost, pickle manufacture companies are having difficulty in obtaining domestic raw materials and are importing salted vegetables instead. For example, 54,600 tons of salted cucumbers, 40,850 tons of salted gingers and 15,100 tons of salted eggplants were imported in 1988. Among them, 59% of the gingers were from Thailand, but others were mostly from China and Taiwan. Since it is becoming difficult for Taiwan to produce these vegetables, there are big potentials for Thailand.

2.7 Frozen Vegetables

In 1988, 36,840 tons of frozen young soybeans (total imports; 36,842 tons), 14,150 tons of frozen snap beans (total imports; 21,444 tons), 3,718 tons of frozen peas (total imports; 23,236 tons) were imported from Taiwan. These frozen vegetables also have big potentials.

I saw several newly built food processing factories in Thailand, especially one in Chiang Mai which is for large scale frozen food processing. They were mainly built to process young soybeans for Japan. According to them, however, producing good quality soybeans is a big problem. I think this is due to day length effect. Soybeans are photosensitive and flower easily before enough vegetative growth under short day condition. Research to find suitable soybean variety in Thailand is urgently needed.

2.8 Chiang Mai, Old Capital of Herbs

My biggest surprise in this visit is I found Thailand a country of herbs. Not only pakchee but many herbs like sweet basil, lemongrass, neptunia, acasia leaf and swangi leaf are used in Thai dishes. At present, herbs are in big fashion among Japanese housewives. SIAM JUSCO is going to organize Chiang Mai Fair in September in Japan. I suggested JUSCO to use a catchphrase of "Chiang Mai, Old Capital of Herbs" and invited beautiful ladies to the fair to demonstrate cooking Thai dishes using these herbs. As shown in Table 3, a small amount of these herbs are imported even now. They are mostly used at the Thai restaurants in Japan. If Japanese housewives know how to use herbs, the imports will be greatly increased.

3. Transportation Method

At present, fresh fruits and vegetables except onions are mostly transported to Japan by air. According to Thai Airways, the cargo space for Tokyo is almost full and there are still a little for Osaka and Nagoya, but it will be all full up in the very near future. Thus, transportation have to be done by container

ships which take nearly 2 weeks. The research on transportation by containers is urgently needed. The volume of commodities which will be successfully carried by containers will be greatly increased.

4. Agricultural Chemicals

I was surprised to see a lot of high quality American apples selling at 10 B even in rural areas. The apple used to be an exotic fruit and was very expensive in Thailand. This seems to be due to the alar (B 9) problem in the USA. Alar is an agricultural chemical which prevents preharvest drop of apples and keeps the fruit firm after harvest and has been used for many years in the USA. In early 1988, a news on TV reported that alar was carcinogenic. Even though the government denied the fact, consumers stopped buying apples and the apple consumption in the USA became very low. So, the American apple industry started to dump apples in overseas markets.

Japan is very strict in the use of agricultural chemicals, especially post-harvest chemical to prevent decay. In Japan, only a few salts of benzoic acid for fruits and fruit type vegetables, biphenyl for lemons, grapefruit and oranges, OPP (orthophenyl phenol) and SOPP (sodium salt of OPP) for citrus, TBZ (thiabendazole) for citrus and banana are permitted to be used. The regulation on the use of chemicals varies in each country, and Japanese and the USA regulations are not the same, the regulations of the importing country have to be followed. When fruits and vegetables are imported, samples are taken for chemical analysis at the harbor. If unpermitted chemical

is found, their landing is not allowed. So, the exporters should consult with Japan Fresh Produce Import Facilitation Association (NISSEIKYO), 3-3, Kanda Nerihei-cho, Chiyoda-ku, Tokyo before starting to ship to Japan.

5. Grading and Packaging

Many growers and exporters that I met complained that Japanese grade was too strict or Japanese importers buy only A grade. Also, they complained that packaging for Japan was troublesome. It was 35 years ago when I first visited the USA and even at that time, Japan was exporting many commodities to the USA but they are all of poor quality. Made in Japan meant cheap but poor quality products. At that time, TOYOTA started to export pick up truck to the USA. One of my American friends read TOYOTA as Toy OTA. He said it is like a toy not a car. Since then, TOYOTA tried to improve the quality and it has become world famous. If Thailand can succeed in the Japanese market, it will be very easy to export to Europe and North America. This is true not only for the export market since fruits and vegetables for domestic consumption will also need high quality. At present, fruits and vegetables are mostly sold at open markets and some department stores in Bangkok start to sell a little. The price at these stores are expensive than that of open markets, but according to the store, consumers have started to buy two or three years ago, because the quality is better and well packed. Techniques on producing, grading, packaging and keeping fresh will be very important not only for Japan, but also for the domestic markets.

6. World Competition

Since Japanese market is very big, many countries are aiming to export to Japan. When I was invited to New Zealand to speak about Japanese market at the Trade Fair, the prime minister wanted to see me and asked the possibility of exporting to Japan. New Zealand is very eager to export fruits and vegetables and the main objective of the Department of Scientific and Industrial Research (DSIR) is to develop technologies for the promotion of fruit and vegetable for export. Also, advertisement in Japan is very important. Sunkist, a citrus growers association in California and Arizona, spend about 700 million Yen (113 million ฿) a year to sell about 280,000 tons of citrus fruits to Japan. Advertisement needs much money and I think the fruit basket of Rama Garden in Bangkok where I stayed is a good promotion for Japanese tourists with a small money spent for Thai fruits.

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