

Exploring Market Potential of Malaysian Tropical Fruits in Japan: Assessment of Market Accessibility and Consumers' Acceptance

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Abstract

Although the world market for tropical fruits is growing, Malaysia's share in the overall international fruit trade is relatively insignificant. It has been reported that the market demand for fresh tropical fruits in Japan is increasing, and hence, there are great prospects for the development of such fresh fruit market in Japan. Exporting fresh fruits to Japan is considered very challenging but presents an outstanding opportunity for enterprising exporters. Hence, it is timely for Malaysia to examine the export potential for its fresh tropical fruits to the Japanese market. This study explores the market potential for Malaysian fresh tropical fruits in Japan.

Specifically, the study aims to provide insight into the legal regulations and administrative procedures of exporting fresh fruits to Japan, to examine the distribution system for imported fresh fruits, to assess the awareness level, attitude, taste preference, and acceptance of Malaysian fruits among Japanese consumers, and to ascertain the potential supply of Malaysian fruits to Japan. Research methodologies adopted comprise personal interviews, customer surveys, field visits, analysis of official documents and accessing relevant websites to gather current and pertinent information. The study reveals that mango has the highest potential among the tropical fruits to be marketed in Japan. Recommendations proposed to facilitate Malaysia's entry into the fruit market in Japan include strategies related to production, logistics/supply chain management, regulations and product.

Keywords: Export Marketing, Consumer Behaviour, Tropical Fruits, Malaysian Fruits, Japanese Consumers, Japanese Market, Mango, Market Accessibility

Introduction

Malaysia is a producer of a wide range of tropical fruits such as pineapple, banana, mango, rambutan, durian, mangosteen, jackfruit and star fruit just to name a few. In the domestic market, the supply for these local fruits exceeds their demand especially during the fruit season. The market is saturated and farmers face stiff competition in selling their produce. As such, Malaysia should look to developing international markets for its tropical fruits.

One such promising market is Japan. It was reported that although the world market for tropical fruits is growing, Malaysia's share in the overall international fruit trade is relatively insignificant (Japanese External Trade Organisation, 2005). It has also been noted that there are interesting prospects for future development of the tropical fruit market in Japan where the variety of imported fruits and the consumption of new and foreign fruits are on the rise (Miyachi & Perry, 1999).

Hence, it is timely for Malaysia to examine the export market potential for its fresh tropical fruits to the Japanese market. This effort to expand the market share for Malaysia's fruits in Japan is expected to contribute significantly to Malaysia's agricultural export earnings, in line with the country's objective of increasing its agricultural products export value to RM17.2 billion by the year 2010 (Federal Agricultural Marketing Authority, 2005).

Why Japan?

Japan's population of 127.77 million is considered wealthier and larger than those of other countries. In fact, Japan is the world's second largest market economy after the USA. Furthermore, it represents one of the most important markets for many fruit exporters around the world (Shim, et al., 2001). Being the world's biggest importer for primary produce such as rice, wheat, soybean, beef, fish, prawn, and animal feed (Miyachi & Perry, 1999), its market for fresh fruit is relatively under developed. Furthermore, it was reported that the Japanese fruit growers supplied only 60 percent of the market demand (Japan Trade Directory, 2005). This offers a promising opportunity for foreign importers to penetrate the Japanese market.

The Japanese are very well known as a 'health conscious' society. In terms of its role in the Japanese diet, fruit is heavily consumed as a morning snack and after-meal dessert (Shim, et al., 2001). The older generation prefers fresh fruit but the younger generation prefers fruit juice and processed fruit, which is easy to eat. The Japanese are also very conscious of fruit quality; it is often noted that the Japanese 'eat with their eyes', that is, if a product does not look good, it

does not sell (Dyck & Ito, 2002). Moreover, they possess the economic power to demand and pay for premium quality (Kingdon, 1999).

Fresh fruit is not only an important part of the Japanese diet, but more importantly, fruit consumption is associated with social and cultural practices. For instance, fruit is considered a luxury item and plays an important part in Japan's extensive and elaborate gift-giving practices (Shim, et al., 2001). Indeed, fruit competes not with vegetables but with high-price gift items or sweets and snacks (Gehrt & Shim, 1998). With strong economic background, Japanese households' demand for other types of fresh fruit is steadily increasing. It should be noted that Japanese consumers in general are not price sensitive with regard to fresh fruit. Since placing importance on fruit is unique to the Japanese culture, quality, aesthetics and safety are more important than price.

Over 95 percent of the total import volume of fresh fruit to Japan comprises five types of fruits –pineapple, banana, lemon, orange and grapefruit - and the import volume of these fruits is declining (Japan Trade Directory, 2005). On the other hand, the variety of imported fruits and the consumption of new and foreign tropical fruits are increasing (Miyuchi & Perry, 1999). This reflects that the Japanese consumers desire new varieties or higher quality fruits in the fresh fruit category. In fact, Azuma and Fernie (2001) highlighted that Japanese consumers are characterised by their capricious and variety seeking behaviours and demand good quality and fresh products. Whilst some consumers in Japan looked for unique tropical and exotic foreign fruits such as mangoes, it was found that factors such as 'non availability' and 'lack of knowledge' deterred them from buying mangoes (Miyuchi & Perry, 1999). However, during the researchers' visit to Japan (in June 2007), they observed that mangoes had become one of the most popular fruits in Japan.

Problem Statement

It is an attractive proposition to embark on export marketing specifically to lucrative markets such as Japan; however, a tremendous amount of effort, time and money has to be invested to fully understand the target market and to ultimately gain market accessibility. Therefore, a thorough knowledge of the importing procedures, the Japanese distribution system and business practices, and the Japanese fruit consumption behaviour is imperative to successfully gain market accessibility. Importers might face tremendous challenges as the Japanese market is very different in the areas of plant protection laws and distribution system. Moreover, the Japanese fruit consumption attitude and behaviour are also much different from other cultures (Azuma & Fernie, 2001). Despite these challenges, very little research has been carried out to provide information and insight into this area.

Research Objective

This study explores the market potential for Malaysian fresh tropical fruits in Japan.

Generally, the study aims to identify and determine the market potential of Malaysian fruits in the Japanese market. Specifically, the study seeks to:

1. assess the awareness, preference, attitude and acceptance of the Japanese consumers with regard to Malaysian fruits.
2. provide insight into the legal regulations and administrative procedures for exporting fresh fruits to Japan.
3. examine the Japanese distribution system for imported fresh fruits in the Japanese market.
4. identify and assess the potential supply of Malaysian fruits to Japan.

Research Methodology

There were four objectives for the study; evidently, each objective requires a different method of data gathering. For the first objective that was to gauge the awareness, acceptance, attitude and preference of the Japanese consumers with regard to Malaysian fruits, a survey was carried out at Tottori University in October 2006 during a seminar which focused on fruits commodity. Before the survey was conducted, a power-point presentation was shown to introduce various types of Malaysian tropical fruits, and pamphlets on Malaysian fruits were distributed to the seminar attendees. All attendees of the seminar were given the chance to participate in the survey. A sample of 64 respondents participated in answering questions to gauge their awareness about Malaysian fruits by a show of hands (see Table 1).

After the preliminary 'awareness' survey, another survey was conducted utilising the questionnaire as the instrument. Questionnaires were distributed to the same group of respondents to gauge their attitude, preference and acceptance of Malaysian fruits as well as their previous experience with these fruits. Answers from fifty-one respondents were collected and the key findings are shown in Table 2 to Table 4. To measure the respondents' acceptance of Malaysian fruits, respondents were asked to indicate on a five-point scale whether the overall appearance of each fruit was acceptable to them, where '1' indicates 'most acceptable' and '5' indicates 'least acceptable'.

To determine respondents' attitude towards Malaysian fruits, a five-point semantic differential scale based on the favourable/unfavourable item was employed. In addition, an open-ended question was included in the questionnaire to determine the respondents' favourite fruit. A five-point scale was utilised to

measure purchase likelihood, where 1 means ‘most likely’, and 5 means ‘most unlikely’.

It is important to highlight that since Malaysian fruits were not yet available in the Japanese market, we were unable to conduct a sensory testing survey to gauge the preference and acceptance of the Japanese with regard to Malaysian fruits. Therefore, the sensory testing and acceptance survey was conducted in Kuala Lumpur at the Japanese Club. The target respondents of the survey were Japanese citizens that patronised the Japanese Club on the day of the survey. A fresh and processed fruit tasting fiesta called “JOM RASA” (LET’S TASTE) was held at the Japanese Club, Kuala Lumpur on 13 January 2007. Two sets of questionnaire (for fresh fruits and processed fruits respectively) were translated into the Japanese language and validated by Professor Katsuaki Takeda (Vice President of Wakayama University). A total of 93 respondents responded to the fresh fruit questionnaires and 80 answered the processed fruits questionnaires which were distributed by the researchers after the respondents had tasted the fresh and processed fruits. Finally, another survey was conducted at Wakayama University in June 2007 to gauge the Japanese’ attitude and acceptance of the processed Harumanis mango sample that we had brought from Malaysia. The self-completion survey was administered to a convenience sample of 196 respondents. This particular survey on the Harumanis was carried out because during our visit to Japan in October 2006, the representative of the Japanese government specifically suggested that Malaysia should enter the Japanese market with the Harumanis.

For the second objective, initially, a focus group discussion was conducted in Malaysia with relevant exporters, importers in Japan, government and non government agencies in Japan, representatives of the Ministry of Agriculture and Agro-based Industry (Malaysia), Ministry of Agriculture (Japan), Federal Agriculture Marketing Authority (FAMA), Malaysia Agriculture Research and Development Institute (MARDI), Department of Agriculture (DOA) and the Japanese Embassy. The main objective of the focus group session was to understand the current rules and regulations for importing fresh fruits in Japan, and to gain insight from bodies in Malaysia that have vast experience in exporting fresh fruits to Japan. While in Japan, several in depth interviews were conducted with relevant key officers of various fruit-related organisations such as the Import Promotion Department of the Japanese External Trade Organisation (JETRO), the import agents and wholesalers of fresh fruits, Fresh Produce Import Facilitation Association in Japan, key officers in the Ministry of Agriculture, Forestry and Fisheries and the Japan Agriculture Association. Besides this, relevant information was also obtained from official reports published in Japan and Malaysia as well as observations from field visits.

22 *Exploring Market Potential of Malaysian Tropical Fruits in Japan:
Assessment of Market Accessibility and Consumers' Acceptance*

The third objective was to examine the distribution system for imported fresh fruits in Japan. Efforts were focused on conducting interviews with representatives from AEON hypermarket, OTA auction wholesale market, Sembikiya Fruit Parlour (for high-end customers) in Ginza, Hanamasa Supermarket, Japanese trading companies, a wholesale market in Osaka, Kobe Yoko Ltd and Showa Boeki Co. Ltd., as well as with executives of Jusco and other importers.

The fourth objective was to identify the potential supply of Harumanis and other fruits to Japan. In this regard, the researchers concerned initiated meetings and interview sessions with FAMA and DOA officials in Kedah and Perlis. A field visit was made to observe the plantation of Harumanis at Bukit Bintang Plantation Perlis. Another field trip was organised to visit the pink guava plantation by Golden Hope and Beverages Sdn Bhd in Sitiawan, Perak.

Findings and Discussion

It can be concluded from the survey conducted in Tottori University in 2006 that the fruits that command high consumer awareness are pineapple, banana, red melon, yellow melon and mango (Table 1).

TABLE 1

FRUIT AWARENESS

Tropical Fruits	Frequency
Pineapple	64
Banana	64
Red melon	62
Yellow melon	50
Mango	45
Papaya	25
Mangosteen	25
White dragonfruit	24
Star fruit	20
Rambutan	19
Durian	10
Pomelo	8
Red dragonfruit	6
Guava	5
Duku	0
Jackfruit	0
Ciku	0

Table 2 indicates that star fruit, followed by mango and pineapple, are highly acceptable in terms of overall appearance. On the other hand, rambutan and durian have the lowest acceptance level in terms of their appearance.

TABLE 2
OVERALL APPEARANCE

Type of Fruits	Mean
Star fruit	1.90
Mango	2.08
Pineapple	2.22
Pamelo	2.47
Papaya	2.55
Mangosteen	2.75
Langsat	2.80
Dragonfruit	2.86
Jackfruit	3.13
Rambutan	3.19
Durian	3.40

Table 3 shows the results that indicate the respondents' attitude towards tropical fruits. The respondents had the most favourable attitude towards mango, and the least favourable attitude towards star fruit.

TABLE 3
ATTITUDE (FAVOURABLE/UNFAVOURABLE)

Type of Fruits	Mean
Mango	1.40
Mangosteen	1.68
Rambutan	1.87
Jackfruit	2.62
Durian	2.82
Star fruit	1.96

24 *Exploring Market Potential of Malaysian Tropical Fruits in Japan:
Assessment of Market Accessibility and Consumers' Acceptance*

Table 4 indicates that mango is the most favourite fruit while jackfruit is the least favourite one.

TABLE 4

ATTITUDE (FAVOURABLE/UNFAVOURABLE)

Type of Fruits	Percentage
Mango	48.4
Mangosteen	21.5
Rambutan	9.70
Durian	8.60
Star fruit	7.50
Jackfruit	4.30

Most importantly, mango was the tropical fruit that respondents would most likely purchase when available. Evidently, the mango has great potential to be marketed in the Japanese market (Table 5).

TABLE 5

PURCHASE LIKELIHOOD

Fruits likely to be purchased	Mean
Mango*	1.01*
Mangosteen	2.27
Rambutan	2.35
Jackfruit	3.30
Durian	3.44
Star fruit	3.48

From the results of the preliminary survey, it is concluded that mango appears to be highly acceptable in terms of appearance, was the most favoured /liked fruit and was the highest ranked in terms of favourite fruit of the respondents. Most importantly, the respondents indicated that mango would be the tropical fruit they are most likely to purchase when available. Hence, we are quite confident that mango has a great potential to be marketed in the Japanese market.

Survey results derived from the “JOM RASA” Fruit Tasting Fiesta in 2007 are consistent with the earlier results, which suggested that star fruit and mango

were both perceived as the most acceptable fruits in terms of overall appearance, and that durian was the least acceptable (Table 6).

TABLE 6

OVERALL APPEARANCE

Type of Fruits	Mean
Star fruit	1.35
Mango	1.45
Rambutan	2.11
Mangosteen	2.12
Jackfruit	2.77
Durian	3.05

Interestingly, mango was evaluated as having the most acceptable sweet taste and texture. Indeed, it was found that mango was the most favourite fruit because of its sweetness and juiciness. In addition, the respondents had a positive attitude towards mango as they indicated it as the fruit they were most likely to purchase. Table 7 shows that the respondents were most likely to purchase mango (1.61) and least likely to purchase star fruit (3.48).

TABLE 7

LIKELIHOOD OF PURCHASE

Types of fruits	Mean
Mango	1.61
Mangosteen	2.27
Rambutan	2.35
Jack fruit	2.12
Durian	3.44
Star fruit	3.48

With regard to processed fruits, mango juice is the most preferred form of processed mango. Likewise, mango ice cream, mango nata de coco and mango jam are also evaluated highly as preferred processed fruits.

26 *Exploring Market Potential of Malaysian Tropical Fruits in Japan:
Assessment of Market Accessibility and Consumers' Acceptance*

According to the import agents, most of the fruit imports which constitute about 30% of the total imports are sourced from the U.S. In 2004, Malaysia was placed 21st in rank in terms of the volume of fresh fruits imported by Japan (Japanese External Trade Organisation, 2005). The opportunities for exporters to export fresh fruits to Japan are great if they could produce good quality fruits. It was also revealed that most of the foreign fruits are imported by traders. Since May 2006, the Japanese government has imposed stringent regulations on the importation of fresh fruits. The chemical content of the fruits has to be checked against the Japanese positive chemicals listing. Following the stringent 'traceability' protocol, recently, Japan has managed to detect traces of prohibited pesticides in fresh fruits in 2007, particularly mangos from India.

From interviews conducted with seven Japanese fruit importers, it was found that importing fresh fruits into Japan was particularly difficult. There are only a few suppliers or traders (namely HANAMASA and AEON) who are able to import the fresh fruits. The factors critical to importing fresh fruits are the overall quality of the fruits and the presence of fruit fly. Of late, Japanese importers have started to import mangoes from India which are a new entry to the Japanese market. This will create stiff competition in the fresh mango market where mangoes imported from other countries are already available. It was also found from the interviews that only those traders who abide strictly by the rules and regulations for importing foreign fruits would be successful in supplying fresh fruits to Japan. The Japanese importers interviewed further identified mangosteen as a fruit with good market potential. The external and internal appearance, size and sweetness of mangosteen meet the criteria for fruit choice among the Japanese.

It was observed that the Japanese are less favourable towards the consumption of processed fruits; nevertheless, processed fruits are generally used as dessert toppings. For the traders, price is a factor that determines whether they are willing to import frozen fruits. For processed fruits like juice, the challenge lies in the life span of the juice itself, which is generally only about two weeks in the convenient stores. To date, Japan has been working with traders in Thailand and Philippines for juices. Other processed fruit-based food which is gaining in popularity among the Japanese is mango pudding that are mainly imported from Singapore. Apart from life span, lead-time is also another issue that must be addressed if traders plan to export processed fruits to Japan.

From the interview with two leading supermarkets (AEON and HANAMASA), it was found that AEON and HANAMASA both imported quite a variety of frozen fruits. For example, rambutan, mangosteen, dragonfruit and durian in frozen form were imported from Thailand. Other frozen fruits like pineapple were imported from Taiwan and grapes were from Chile. There is a high demand for frozen mango and pineapple but there is a low acceptance for

dragonfruit. The main reason for dragonfruit's lack of popularity is because the fruit is considered new and most consumers do not know how to eat it. Again, the issues of quality and lead-time were cited as factors that could impede the opportunities for the import of fruits by traders.

A key representative from one of the leading supermarkets in Tokyo asserted that the Japanese generally enjoy eating fresh fruits; however, they are not favourable towards having to peel off the skin of the fruits. Hence, most prefer to consume processed fruits such as pudding and juices. This resulted in a reduced demand for fresh fruits, which caused the supermarket to reduce its import of fresh fruits. Furthermore, the supermarkets faced problems with their imported fruits, such as black spots on most of the fruits. Apart from that, they also had delivery period issues where most traders could not comply with the prior agreement on delivery date. Timely delivery of the fruits is important to maintain the sweetness of the fruits. Other processed fruits that have gained popularity are the mango jelly and mango pudding. Besides the normal consumption by individual consumers, they are also served in the restaurants. Among the fresh fruits imported by the supermarket are the papaya, mangosteen, durian and mango which are regarded as the next popular fruits sold by this supermarket. In order to maintain their freshness and sweetness, the fruits are kept in the cold room in the region where the outlets are located. As the fruits are covered by insurance, the supermarket could claim reimbursement for any damaged fruits. The sales volume for the tropical fruits has been about 2 million yen per year (Japan Trade Directory, 2005).

On the possibilities of importing fresh fruits into Japan, the fruit importers that we interviewed highlighted the importance of the import quarantine procedures (see Appendix 1). Following the procedures, exporters have to establish a protection method where the fruits either have to be frozen at -17.80°C , or have to undergo vapour heating treatment (fumigation method) in order to eliminate fruit flies. So far, the mango and other fruits from the Philippines have been exempted from the quarantine procedures as the Philippine exporters have set up the vapour heating treatment facility. The importers interviewed import green bananas from Malaysia as this fruit is not on the prohibition list.

The Japanese Association of importers also highlighted the importance and requirement of the import quarantine procedures by Japan. Any country that wished to have its fruits imported into Japan has to develop a quarantine method to protect the fruits. So far, among the Asian countries, Thailand is among the successful ones after they developed the quarantine method and technology that are required by Japan. The diagram for the import quarantine procedures is shown in Appendix 1.

An importer at the interview mentioned the requirement for the vapour heating treatment (VHT). Different fruits would require different temperatures for the heating treatment. It is advisable for exporters to focus on one fruit only at the beginning to ensure success if they would like to bring the fruit into Japan, as it is more cost effective. In addition, exporters are also advised to select carefully the type of fruits for export to Japan in order to ensure acceptance, preference and marketability. Some of the fruits that are likely to have good demand by the Japanese consumers are mango, papaya, lychee, and mangosteen. Currently, Japan is importing about 12,000 tons of mangoes of many different grades from many different countries. It was suggested that Malaysia send mangoes of high-end quality that are comparable to the type of mangoes favoured by the Japanese, and which are facing an undersupply. Malaysia does not have to compete with the mango species from Thailand and Philippines which are of low-end quality. However, it was emphasised that fruits like yellow pittaaya have been banned except for frozen ones.

During our meeting with the fruit wholesalers in OTA market, it was revealed that the wholesalers mostly handled local fruits. Imported fruits such as banana and pineapple from the Philippines, grapefruit from the U.S. and South Africa, oranges from the U.S, kiwifruit from New Zealand and avocados from Mexico are also imported and distributed by the wholesalers. It was mentioned that banana is Japan's flagship fresh fruit import, which account for the majority of total fruit import. The Japanese believe that bananas are good for brain development besides having other nutrients which are good for health. Bananas are highly in demand during school examinations. For the past three years, importation of mango has increased in volume; this suggests that demand for it has continued to grow steadily. However, it was emphasised that if Malaysian exporters wished to bring fresh fruits into Japan, they would have to comply with the positive list to trace the chemical residues on the fruits.

Besides being consumed as dessert, fruits are often used as gifts by the Japanese. In Tokyo, consumers have the opportunity to eat fresh fruits in a more luxurious way, in places called the fruit parlours which are a hit amongst the rich and famous. The fruit parlour serves the best quality fruits available. Interestingly, the fruits are displayed in very attractive packaging. They are either consumed in the parlour itself or taken away as a gift. Prices may go as high as RM750 per fruit.

According to the Japan External Trade Organisation (1998), Japan has imported fruits like avocado and papaya because these two fruits are not produced in Japan. Other fruits which have high potential in the Japanese market are mango and rambutan. However, these fruits require the vapour heating treatment; otherwise, Malaysia has to consider exporting frozen fruits instead. Japan is also considering importing bananas from Asian countries since bananas do not require the vapour heating treatment.

Conclusion

Japan has very stringent legislation such as the Plant Protection Law and the Food Sanitation Law for fresh fruits to be imported. The Japanese quarantine system for imported plants consists of prohibition of import, designation of port of import, phytosanitary certificates issued by the exporting countries, and import inspection. Under the Plant Protection Law, any importer of fresh fruits shall submit an “Application for Inspection of Plants and Import Prohibited Articles” to the designated port of entry. In addition, a “Phytosanitary Certificate” must be issued by a reliable and competent government agency of the exporting country, which shall be attached to all quarantine-designated plants. Imports of host fresh fruits are prohibited from countries or areas where certain destructive insects including fruit flies, and diseases exist. Because of such stringent plant protection procedures, only a few suppliers or exporters are able to export their fresh fruits to Japan. In most cases, more than 90 percent of any fresh fruit imports come from a single country or region (Japan Trade Directory, 2005). In fact, via a Government-to-Government Trade Agreement, Malaysia has applied for the lifting of the ban on its special mango variety. The procedure for lifting the ban comprises 13 steps (see Appendix 2). However, until today, Malaysia has only successfully complied with steps 1 to 6.

Since May 2006, the Japanese government has imposed new regulations on exporters. There are many fresh fruits which are prohibited to be imported under the Plant Protection Law. This law requires the fruits either to be frozen at -17.8C or to have to go through the vapour heat treatment (VHT). The reason for the treatment is to eliminate fruit flies that could damage the quality of the fruits. Different fruits would require different temperature for the vapour heating treatment. It is advisable for the exporters to apply for the lifting of the ban for one fruit initially as a gateway for other fruits to follow (see Appendix 2). It is more cost effective to do so in order to deal with the stringent importation protocol.

Another challenge facing the exporters is price. Since there are many exporters from many different countries competing to penetrate the Japanese market, price becomes a critical factor. It is pertinent for fruit exporters to carefully and clearly position their fruits in terms of uniqueness and nutrition value such that the fruits are able to compete against other tropical fruits from other countries. High quality translates to high returns, as the Japanese are willing to pay for quality as well as for good or attractive presentation.

Japanese consumers’ great concern for the quality of their fruits is reflected in the manner in which they scrutinise the fruits based on their appearance. The skin of the fruits must be free from any scratches, black spots or blemishes, as these imperfections imply damaged and low quality fruits. In addition, the

Japanese consumers are also less tolerant towards fruits that lack size and shape uniformity (Gendall, Betteridge & Bailey, 1999). Furthermore, the Japanese are very particular about visual presentation; therefore, in order to be successful in this market, fruits must be attractively packaged, with important information such as nutritional value included. In addition to attractively packaging and displaying the fruits, effective packaging technology should also be innovated to ensure that fruit quality is maintained. More importantly, Japanese importers are very concerned about exporters' ability to supply the fruits in a consistent manner and to fulfil the market demand.

With regard to processed fruits which are gaining in popularity in Japan, the exporters are subjected to the provisions of the Food Sanitation Law, meeting quality standards and labelling requirements. Besides these procedures, importers must handle the issue of shelf-life and lead-time to ensure product quality. In addition, fruit processors should attempt to keep the processed fruits' appearance and taste as close as possible to those of fresh ones.

It should be highlighted that for fruits that are difficult to be exported fresh, exporting them in processed form such as juice, jam, dried fruit or frozen fruit is an option. Besides the fresh fruits, the processed fresh-fruit base is also gaining in popularity. Among the popular ones are the mango pudding and juice concentrates. However, it is noted that the taste of frozen fruits is significantly different from fresh ones. The fresh fruits are apparently juicier and sweeter.

Currently, there are a few supermarkets in Japan that have imported tropical fruits such as durian, mangosteen, dragonfruit and rambutan, mainly from Thailand. The fruit that has good potential in the Japanese market would be mangosteen because of its interesting exterior and interior appearance, size, and its undeniable sweetness. Presently, mangosteen is imported primarily from Thailand. However, the importers must ensure that the fruits look fresh as any scratches and irregular spots found on the skin of the fruits are considered as defects. Other fruits that have high potential are the banana and durian because these two fruits are not on the prohibition list for importation of fruits. Japanese consumers dislike the strong smell of the durian; hence, if Malaysia plans to export durian to Japan, obviously the durian has to be of the odourless variety. It is noted that recently Thailand has produced a thornless and odourless durian variety.

The market potential of mango in Japan must not be overlooked. From our field observation and the consumer acceptance survey, it was found that the Japanese hold a very favourable attitude towards mango and are most likely to purchase it when it is available in the market. Furthermore, the mango was also rated as respondents' favourite tropical fruit when assessed against mangosteen, rambutan, durian, star fruit and jackfruit. Clearly, the taste of the mango, which

is sweet and juicy matches the taste preference of the Japanese consumers. The results of this study confirm that there is significant potential market for tropical fruits in Japan, particularly for the mango. We foresee the mango as the most promising fruit to be marketed in Japan, as it is able to meet consumers' preference and market demand. Most importantly, these findings provide strong justification for Malaysia's efforts in applying for the lifting of the ban on its special mango variety (Harumanis). At present, Malaysia has successfully completed the sixth step in the thirteen-step procedure for the lifting of the ban (see Appendix 2).

Four strategies are recommended to facilitate Malaysia's entry into the fresh fruit market in Japan. They are:

Strategy 1 – Production

The main constraints to efficient production and quality improvement of fruit on a commercial scale are the knowledge and ability of human resources in adopting modern technology. Large export income earners like Thailand and the Philippines are supported by commercial plantations. Commercial orchards of fruit crops require technology inputs to the production, post harvest, processing and marketing systems. If Malaysia intends to export on a large scale, it must begin to plan for commercial farming. The government should also assist in marketing as access to international markets is usually only possible through a Government-to-Government (G-to-G) approach. The government's involvement would also lend credibility to the quality of the produce. The management of fruit quality is of utmost importance, as this will enable Malaysia to export products with confidence to the most discerning customers such as the Japanese.

Strategy 2 – Logistics/Supply Chain Management

Supply Chain Management (SCM) is a network of connected and interdependent organisations mutually and cooperatively working together to control, manage, and improve the flow of materials, products, and information from suppliers to end users. In order to ensure Malaysia's success to enter the Japanese market, it is recommended that Malaysia should collaborate with a Japanese partner especially at the initial stage. The international market requires standardised, consistent, reliable and high quality produce/products. Areas related to facilities and human resource development that need collaboration are in quality assurance, standardisation and certification, long distance transport, quarantine development, and consumer and promotion.

Strategy 3 – Regulations

As suggested by the Japanese Ministry of Agriculture, Malaysia must complete steps 7 to 13 on the Procedures for Lifting the Ban of Importation. Food safety standards and traceability have become important concerns in the marketing and export of agricultural produce of many trading nations. There are stiffer food

safety regulations, increased productivity, improved efficiency, transparency and branding. Sanitary and Phytosanitary (SPS) measures are technical regulations designed to prevent potentially adverse impact of international trade on human, animal or plant life or health.

Strategy 4 – Product

The action plan includes the decisions on packaging, branding and positioning of the Harumanis mango against other mangoes available in the Japanese market. The product must be delivered according to the Japanese expectation and specification. This includes good taste (good flavour), freshness (which can be assured using suitable logistics), well-controlled maturity and excellent packing and packaging style. As the Japanese ‘eat with their eyes’, the first impression on the fruit and packaging must be appealing. Malaysia must ‘do it right’ the first time during the introductory period and maintain the standard in order to sustain its competitive advantage. It has been widely acknowledged that the Japanese are very concerned about packaging; therefore, packaging must fulfil these criteria which are: pleasing, practical and protective. Building a positive image must be seen as an investment and a means to differentiate the product against those of the competitor. In essence, the packaging and promotion materials should emphasise the health value, taste and freshness of the fruit. Furthermore, use of packaging material that is environmentally friendly is considered a plus point for the export country.

In conclusion, the mission to export our fruits, specifically the Harumanis mango to Japan will only materialise if the recommended strategies and action plan are implemented or executed immediately by the relevant authorities. Time is of the essence especially when India has been sanctioned temporarily in 2007 for chemical residue found in their premium Indian mango when they first exported the mango for the ‘high-end’ customers in Japan in early 2007. As such, the time is right for Malaysia to take advantage of the excellent opportunity available, and attempt to enter the market in 2008, and to fulfil the ‘unfinished job’ of Government-to-Government agreement between the two countries. Any further delay in completing the terms of the agreement will further tarnish the image and reputation of the country, business trust and governmental relationship between Malaysia and Japan.

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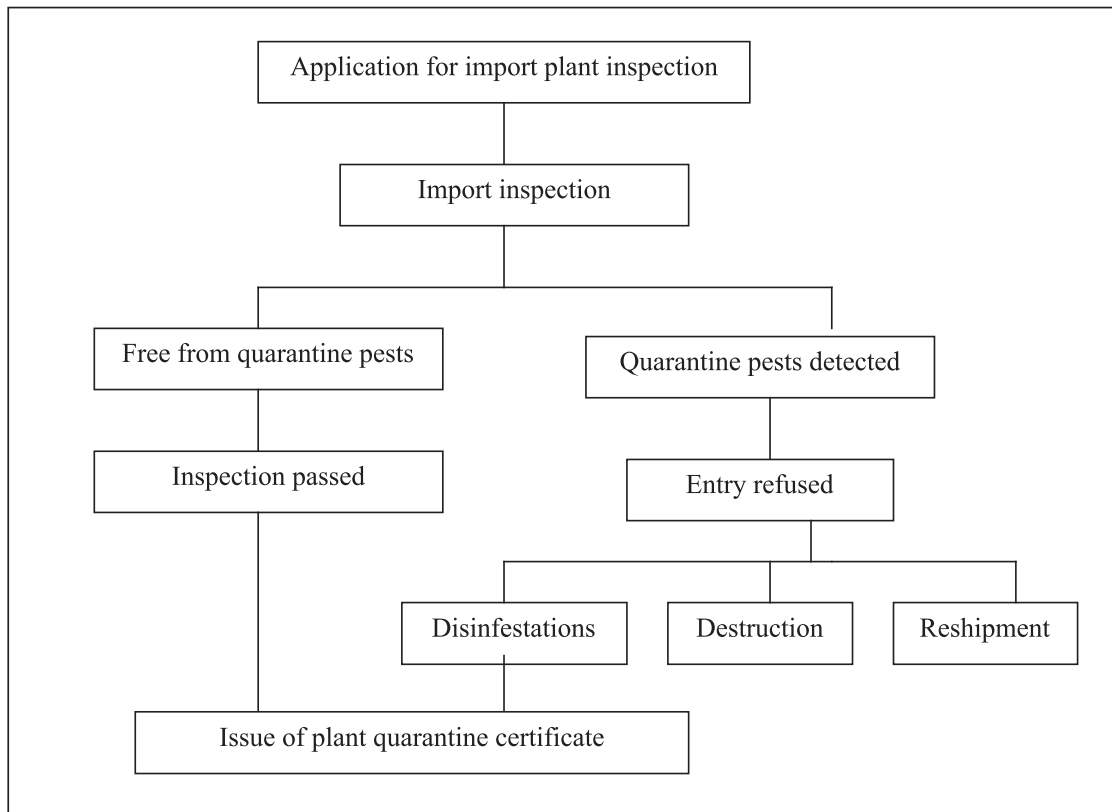
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Appendix 1: Import quarantine procedure, Japan



Appendix 2: Procedures for Lifting The Ban of Importation

