

The prospect of exporting Malaysian temperate cut flowers by sea shipment to Japan

(Prospek mengimport bunga temperat keratan Malaysia ke Jepun dengan kapal)

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Key words: prospect, Malaysian, temperate cut flowers, sea shipment

Abstract

Floriculture is one of the lucrative industries in Malaysia. It is being emphasised in National Agriculture Policy to be promoted as one of the potential industries in Malaysia. Japan is the major import market for Malaysian dried flowers. Japan is also the second major importer of tropical orchids, temperate cut flowers and dried foliages from Malaysia. The cut flower imports by Japan have indicated an increasing trend. Before the use of sea shipment, Holland was the major supplier of cut flowers to Japan. However, the price is higher as compared to that of other suppliers. Due to the price factor and the freshness of the flowers, Japan prefers to outsource the floricultural products from neighbouring countries, including Malaysia. Chrysanthemum is the most popular cut flower in Japan. Due to good market potential of chrysanthemums, sea shipment trials to Japan were conducted in 2002-2003 to explore the opportunity of reducing the transportation cost. The results of the trials showed that the transportation costs of cut chrysanthemums from Cameron Highlands to Fukuoka, Japan was RM0.43 and RM0.42 per stalk in summer and in winter, respectively. The transportation cost for winter was cheaper as all flowers delivered were in good condition and well accepted by the auction markets. The average air shipment cost per stalk was at RM0.79. Hence, delivery via sea will reduce the transportation cost by 88% and 84% in winter and summer, respectively.

Introduction

Due to good markets, lucrative returns, government support and campaigns, the floricultural industry has grown from only 773 ha in 1984 (Anon. 1984) to 2,000 ha in 1995 (Third National Agricultural Policy, 1996). Based on the Cameron Highlands Flower Growers Association, Commercial Orchid Growers Association, and Ornamental Growers Association, the production area was estimated to have increased to 3,370 ha in 2005.

The Second National Agricultural Policy had targeted the floricultural industry to increase to 7,000 ha by 2010. The Malaysian floricultural industry plays an important role in the development of the agricultural sector despite the recent economic crisis. The industry has managed to generate lucrative returns, even though the input prices such as fertilizers, pesticides, herbicides and also labour cost have increased by more than 30% since 1997.

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The hiking of oil price keeps the cost of air transportation on the increase. In addition, the industry faces lack of cargo space. In order to be more competitive and to increase the export market share in Japan, MARDI had undertaken sea shipment trials of cut chrysanthemums in 2002–2003 during the winter and summer seasons. The objectives of this paper were to analyse the prospects of exporting chrysanthemums to Japan, and to find methods to reduce the transportation costs.

Methodology

This study involved a case study of two sea shipment trials. The sea shipment trials were carried out in winter and summer. This study also involved the collection of primary and secondary data. The primary data were collected by interviewing importers, wholesalers and retailers in the Japanese market in Fukuoka, Japan.

Overview of the floricultural industry

World

The retail floriculture trade in the world had increased from US\$12.5 billion in 1985 to US\$77 billion in 2000 (*Table 1*). The wholesale price of floricultural products had also increased from US\$21 billion in 1997 (Anon. 1997) to US\$24.68 billion in 2000. The United States is the major consumer of floricultural products in the world, followed by Germany, Japan, France, Italy and the United Kingdom. The wholesale value in 2000 for USA was at US\$4.57 billion, Japan at US\$3.65 billion and Holland at US\$3.25 billion (Starman n.d.).

In the world market scenario, the consumption of cut flowers was highly pronounced in Western Europe, the United States and Japan. It was estimated that

Table 1. Retail floriculture trade in the world

Year	Value (US\$billion)	Source
1985	12.5	de Groot (1998)
1990	25.0	de Groot (1998)
1995	45.0	Anon. (1997)
2000	77.0	Starman (n.d.)

44% of the floricultural products was used in Western Europe, followed by the United States and Canada (21%), Japan (15%) and other countries (20%) such as Hong Kong, Korea, Taiwan and Singapore (Starman n.d.). It is anticipated that cut flower consumption will increase in the United States and Japan. About 70% of cut flowers in Japan is used for wedding and funeral ceremonies, corporate gifts and hotel decorations (de Groot 1998).

The world import value of floricultural products had increased by 1.7% to US\$7.9 billion from 2000–2001 (Nancy Laws 2003), and according to the Global Trade Atlas Navigator, it had further increased to US\$13.05 billion in 2004. The floricultural products traded worldwide consisted of 50% cut flowers, 41% ornamental plants and 9% cut foliages (Anon. 2006).

Generally, the selling price of the floricultural trade worldwide has decreased. This is clearly indicated by the trade statistical records, whereby the trade value of world floriculture trade has increased by only less than 1% in 2001 from 1997, but the trade volume has increased by 61%. In the European markets, the trade value has dropped by 3%, but the volume increased by 62%. In USA, the trade value increased by 13%, with the volume increasing by 61% (Nancy Laws 2003).

The United Kingdom is the major importer of cut flowers in the world, followed by Germany, USA and others as shown in *Table 2*. Japan is ranked in the sixth position, with its import value increasing from US\$166 million in 2000 (Nancy Laws 2003) to US\$218 million in 2004 (Anon. 2006). Japan has also recorded an increase of 27% between 2003 and 2004.

Japan

Flower markets About 80% of the imported flowers are sold via the auction markets in Japan. Imported flowers are used to meet the peak demand period for celebration such as Mother’s day. There are more than 200 auction markets in Japan.

Table 2. World major importers of cut flowers and cut foliage in 2004

	Value in 2004 (US\$1,000)	Annual growth value (%)		World import (%)
		(2000–2004)	(2003–2004)	
Cut flowers				
United Kingdom	1,018,677	19	12	18
Germany	975,911	7	15	17
USA	886,979	4	15	15
France	507,385	9	5	9
Netherlands	491,584	4	3	8
Japan	218,089	7	27	3
Italy	191,336	7	4	3
Switzerland	166,293	7	6	2
World estimation	5,544,720	9	13	100
Cut foliage				
Netherlands	211,841	6	4	23
Germany	147,066	2	-1	16
USA	114,008	5	6	12
France	48,795	10	11	5
Japan	47,390	4	7	5
United Kingdom	47,297	16	5	5
Belgium	41,281	12	36	4
Switzerland	34,369	3	6	3
World estimation	904,339	7	8	100

US\$1 = RM3.8

Source: Anon. (2006)

In the past, Holland used to be the main supplier of cut flowers to Japan. But due to cheaper transportation cost and flower freshness, Japan has currently outsourced cut flowers from the nearby regions, including Malaysia (Anon. n.d). The auction value for cut flowers has increased from RM8.7 billion in 1996 to RM14 billion in 1998, which is an increase of 61% during the period (Anon. 2001).

Import trend The import of cut flowers by Japan started in the late 1960s, when chrysanthemums were imported from Taiwan, and orchids from Southeast Asia, especially Thailand. However, due to the recession, the import of cut flowers had dropped in the early 1990s. Holland and Thailand are the major exporters of cut flowers to Japan, making up 45% of the Japan import value (Anon. 2001).

In general, the import value of the floricultural products for Japan had increased

from RM64 million in 1985 (Anon. 1990) to RM652 million in 1997 and to RM686 million in 2001. The cut flower import had increased from 14,164 tonnes in 1997 to 18,827 tonnes in 2001, but the value decreased from RM521 million in 1997 to RM504 million in 2001 (Anon. 2002). However, the value increased to RM829 million (US\$218 million) in 2004 (Table 2).

In terms of value, Holland is the main supplier of cut flowers to Japan, sharing 16.2% of the export value, followed by Thailand at 15.9% (Table 3). Japan imported roses, freesias and tulips from Holland. In the marketing of lilies and chrysanthemums, Holland is competing with the Republic of Korea, and has already lost some of the market's share to the Korean Republic. The Republic of Korea supplies mainly chrysanthemums to Japan, and also leads in supplying lilies to Japan.

In the fourth position, with 9% export share, Taiwan exports mainly

Table 3. Major exporting countries of cut flowers to Japan (1997–2001)

	1997	1998	1999	2000		2001	
	(t)	(t)	(t)	t	RM million	t (% share)	RM million (% share)
Holland	2,864	2,727	2,675	3,242	123	2,282 (10.8)	88 (16.2)
New Zealand	1,267	1,229	1,305	1,438	69	1,510 (7.1)	62 (11.4)
Republic of Korea	206	797	1,726	2,730	67	4,752 (22.4)	69 (12.6)
Thailand	3,488	4,212	4,202	4,101	101	3,867 (18.2)	87 (15.9)
Taiwan	1,711	1,347	2,549	2,159	36	1,899 (9.0)	34 (6.3)
Other countries	4,628	4,915	5,583	6,125	195	6,881 (32.5)	205 (37.6)
Total	14,164	15,227	18,040	19,796	591	21,191 (100)	545 (100)

Source: Anon. (2002)

Table 4. Main cut flowers imported by Japan (2001)

	First				Second		
	Tonnes	Countries	Share (%)	Yearly change (%) (2000–2001)	Countries	Share (%)	Yearly change (%) (2000–2001)
Orchid	6,130	Thailand	62.3	94.1	New Zealand	10.9	97.7
Chrysanthemum	4,904	R. Korea	38.8	201.2	Holland	20.1	79.2
Lilies	826	R. Korea	83.4	126.0	Holland	7.2	25.9
Other fresh flowers	9,113	R. Korea	23.7	175.3	Colombia	14.9	125.5
Cut foliages	11,787	China	70.9	111.5	Malaysia	6.8	119.7

Source: Anon. (2002)

chrysanthemums to Japan. In the fifth rank, New Zealand with 7.1% share, exports mainly orchids to Japan. In terms of volume, the Republic of Korea occupies the highest share, sharing 22.4% of the Japanese import markets, followed by Thailand at 18.2% (Table 3).

In 2001, orchid (6,130 tonnes) was the major type of cut flowers imported by Japan. The major variety imported was *Dendrobium phalaenopsis*. Thailand was the main supplier of orchid to Japan, followed by New Zealand in the second place. Chrysanthemum was the second important cut flower imported into Japan, followed by lilies and others (Table 4). Chrysanthemum is the major cut flower exported by Korea to Japan, followed by lilies. The import of chrysanthemums from Korea in 2001 had increased by 201.2% from 2000.

The import of cut flowers will increase in the future as a result of the hiking of land cost and also because the Japanese growers are getting older. The survey results in 2000

showed that only 5.3% of the growers were less than 39 years and only 54% of them had replacements (MOA n.d). Therefore, there will be an increase in the importation of cut flowers, especially chrysanthemums from Malaysia, the Republic of Korea, and Taiwan, with roses as well as lilies from the Republic of Korea (Anon. 2001).

Flowers are believed to improve the quality of life and also influence feelings, as compared to words and other gifts, which will result in the continual increase in the consumption of cut flowers (Hideo Imanishi and Kohsuke Ogawa 1997). In addition, the industrial sources also forecast that the importation of cut flowers into Japan will increase in the future because the exporters will be able to offer other unique flower types to the country. They will also be able to supply flowers during fall and winter when Japan produces less flowers during these periods.

Table 5. Cut flower consumption and import (stems) for Japan, 1998–2004

	1998	1999	2000	2001	2002	2003	2004
Chrysanthemum	1,000,296	1,026,373	989,558	833,345	809,517	862,985	963,151
Carnation	211,811	201,626	200,355	178,064	184,178	192,999	209,256
Rose	259,967	275,914	291,329	248,544	244,386	257,276	264,876
Orchid	48,420	51,475	49,488	41,699	39,649	40,444	44,134
Gerbera	52,003	54,231	56,814	50,514	48,894	52,009	52,832
Total wholesale*	3,204,310	3,385,512	3,365,466	2,916,032	2,785,306	2,968,544	3,240,655
Imports**	137,395	153,040	165,606	154,743	150,737	171,258	218,089

*MAFF Statistics 2005 and the total wholesale value included other flowers

**Comtrade statistics data base

Source: Anon. (2006)

Consumption trends Even though Japan has faced a recession period, the consumption of cut flowers keeps on increasing because there are more utilization of cut flowers during Mother's day and birthday celebrations. The demand for cut flowers increases during Christmas, New Year and Mother's day celebrations (MOA n.d). This usually drops in January/February and June/July because not many celebrations occur during these periods. However, the demand still keeps on increasing due to increased individual consumption and usage of cut flowers as gifts (Anon. 2001). The per capita consumption was forecast to increase from 50 stalks in 1993 to 76 stalks in 2005 (de Groot 1998). The 'Japan Flower Promotion Centre' forecasted that the demand for cut flowers would increase by 60% in 2005 due to the increase in daily utilization and the gift markets.

Due to the economic situation, the total wholesale volume had increased from 3.2 million stems in 1998 to 3.4 million stems in 1999 and 2000. The volume decreased in 2001–2003, but increased again to 3.2 million in 2004. Chrysanthemum is the main flower consumed in Japan, followed by carnation, rose, orchid and gerbera (Table 5).

Consumer preferences and peak seasons Chrysanthemum is the main cut flower preferred in Japan, followed by roses, carnations, lilies, orchids,

gypsophila, freesias, tulips and alstromerias. Chrysanthemum is commonly used as presents during funeral ceremonies while carnation is most popular during Mother's day. Roses are mainly used during weddings, birthdays and also as gifts. Orchids are also popular as gifts (Anon. 1990). Generally, white is the most popular colour in Japan. Pastel colours are also popular where pink and light purple are the vogue in Japan (Anon. n.d).

The demand for cut flowers increases during festive seasons, such as Christmas and New Year (December–January), St. Valentine's (February), Vernal Equinox (Mar), Mother's day (May), Father's day (June), and the Autumnal equinox (September) (Anon. n.d). A major portion of cut flowers is used as gifts (39%), followed by house decoration (28%), commercial, party and funeral ceremonies (22%), as well as for ikebana and other flower arrangements (11%) (Hideo Imanishi and Kohsuke Ogawa 1997).

Malaysian overview *The industrial status of temperate cut flowers*

The total area for temperate cut flower production based on the Cameron Highlands Flower and Vegetable Growers Association survey was 489 ha. The survey results showed that chrysanthemums made up 228 ha or 47% of the total temperate flower production area in Cameron Highlands, followed by roses (63

ha), carnations (55 ha), peacock (33 ha), and the rest (102 ha) were flowers such as gerberas, lilies, anthuriums and asters (Anon. 1998). However, there is not much change in the production area in Cameron Highlands (President of Temperate Flowers Association, pers. comm. 2006).

The total temperate flower production had increased from RM67.7 million in 1995 (estimated by FAMA) to RM216.3 million in 1997 (estimated by Roger White, a marketing specialist from the International Trade Center), an increase of 220% over the period (Anon. 1998). However, due to the recession, the production value dropped to RM206 million in 1998 (Cameron Highlands Flower and Vegetable Growers Associations). The total chrysanthemum production had increased from RM37.2 million in 1995 to RM144 million in 1997, and due to the recession again, it had dropped to RM130 million in 1998. Due to lack of land and hiking of production cost, the current production value has not changed.

Trade

About 65% of the temperate cut flowers produced are for the export markets. The growers' association survey results indicated that RM133.9 million worth of cut flowers was exported in 1998. However, the statistical figures showed that the total value of cut flowers exported by Malaysia had dropped from RM59 million in 1992 to RM35 million in 1997. An increase was again recorded at RM125 million in 2002. The total value of temperate cut flowers exported from Malaysia had dropped from RM33 million in 1992 to RM10 million in 1997. The value increased again to RM49 million in 2002, but had reduced to RM47 million in 2004. Japan, with an import value of RM42 million, was the major export market for Malaysian temperate cut flowers.

The potential of sea shipment to Japan

Presently, *Maskargo* has no direct flight to Fukuoka. In 2001–2002, the cost for

the air shipment was RM6.80/kg. The first trial on the sea shipment was conducted in winter (December) of 2002. The second trial was conducted in summer (September) of 2003. Fukuoka was chosen as it is the second largest auction market in Japan, and a day less in travel time from Malaysia as compared to Tokyo. Tokyo has the largest flower auction market in Japan.

The trial was carried out with the cooperation of a Japanese importer, who operated at both the auction markets at Fukuoka and Tokyo. There are more untapped markets at Fukuoka according to the importer. Furthermore, most of the Malaysian exporters conduct their business via Fukuoka. The results of the sea shipment study could be used directly by the Malaysian exporters due to the large volume of shipments.

The total number of flowers involved in the sea shipment trial was 40,000 stalks per 20 foot-container. The trial showed that there was no effect on damage quality to the flowers during winter shipment. In summer shipment, there was 5.8% damage resulting in 39,564 saleable flower stalks. Thus, the average transportation cost by sea shipment from Cameron Highlands to Fukuoka was RM0.42 and RM0.43 per stalk in winter and summer, respectively. The cost of air shipment was RM0.79 per stalk (*Tables 6 and 7*). This would mean that the exporter would have saved 88% and 84% of the cost by transporting by sea in winter and in summer, respectively.

Conclusion

The floriculture sector in Malaysia is still growing positively. The world consumption per capita keeps on increasing due to the globalization effect and the sophistication and improvement in the standard of living in most countries. On the other hand, the competition of growing cut flowers among the producing countries is getting tougher. Despite the traditional producing countries such as USA, Japan, Italy, Holland and Columbia, new production areas keep

Table 6. Cost (RM) of sea shipment for a 20 foot-container

Container rental and transport cost from Cameron Highland to Port Klang and Fukuoka	11,780.00
Labelling	299.2
Cost of document and handling	480
Cost of phytosanitary certificate	55
Fumigation	4,216.00
Total	16,830.20
Cost per stalk in summer = RM16,830.20/39,564 = RM0.43	
Cost per stalk in winter = RM16,830.20/40,000 = RM0.42	

Table 7. Cost (RM) of air shipment cost (5,000 stalks)

Document and handling (RM0.05/stalk) Cameron Highlands to KLIA (RM0.03/stalk)	250.00
Phytosanitary certificate	55.00
Freight charge (RM6.80/kg x 500 kg)	3,400.00
Agromet (RM100/bottle of 10 ml), insecticide	100.00
Total	3,955.00
Cost per stalk by air shipment = RM3,955/5,000 = RM0.79	

increasing. Floriculture production in Latin America and Africa is growing rapidly. In Asia, India, China and Vietnam are actively developing their floriculture production. This has caused the supply to exceed faster than the demand and very stiff market competition occurs in some export markets.

Malaysia, however, has a very good temperate cut flower quality. In the Asian region, it is second to Japan, even though Thailand is the largest cut tropical orchid producer in the world. Malaysia has a very good quality of cut tropical orchids because of its production technology compared to that of Thailand. Climatic conditions also permit Malaysia to grow good quality monopodium orchids such as the *Aranda* and *Mokara*. These orchids can be grown under an open-system, without shade.

In addition, the industrial sources also forecast that the increase in the importation

of cut flowers into Japan in the future. This is because the exporters will offer a lot of unique flower types to Japan and also be able to supply flowers during fall and winter seasons as Japan can only produce small amount during these periods. Furthermore, the younger generation in Japan is not interested in floriculture, although growing flowers is still lucrative in the country.

The results of the study showed that sea shipment could reduce more than 80% of the transportation cost. According to the Japanese importer, Taiwan had tried but did not manage to ship good quality flowers to Japan. So Malaysia has the comparative advantage over other countries in the world to increase its market share to Japan. According to the Floriculture Growers Association in Cameron Highlands, most of the cut chrysanthemums now are exported by sea shipment during peak demand seasons. Therefore, to boost the growth of the Malaysian floriculture industry, sea shipment trials of mixed flowers should be conducted to make sea shipment the main transportation means of Malaysian cut flowers. Malaysia will have the comparative advantage over other countries in the region in exporting cut flowers to Japan because of the relatively cheaper cost of transportation while preserving the quality.

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Abstrak

Industri florikultur adalah salah satu industri yang menguntungkan di Malaysia dan diberi penekanan dalam Dasar Pertanian Negara untuk dipromosikan sebagai industri yang berpotensi di Malaysia. Jepun ialah negara pengimport utama bagi bunga kering Malaysia. Jepun juga pengimport kedua bagi orkid tropika, bunga keratan hawa sederhana dan daun keratan kering dari Malaysia. Bunga keratan yang diimport oleh Jepun menunjukkan arah aliran yang meningkat. Sebelum menggunakan kapal laut, Holland ialah pembekal utama bunga keratan ke Jepun. Tetapi harganya terlalu mahal berbanding dengan pembekal lain. Disebabkan faktor harga dan kesegaran bunga, negara Jepun lebih suka mendapatkan bekalan dari negara jiran, termasuk Malaysia. Kekwa ialah bunga yang paling popular di Jepun. Disebabkan potensi yang baik bagi bunga kekwa memasuki pasaran Jepun, percubaan penghantaran kekwa melalui kapal laut telah dijalankan pada tahun 2002–2003 untuk mencari peluang menjimatkan kos pengangkutan. Hasil percubaan menunjukkan kos penghantaran bunga kekwa dari Cameron Highlands ke Fukuoka, Jepun ialah RM0.43 dan RM0.42 setangkai masing-masing pada musim panas dan sejuk. Purata kos penghantaran melalui udara ialah RM0.79 setangkai. Dengan ini kos penghantaran melalui kapal laut dapat diijimatkan sebanyak 88% dan 84% masing-masing pada musim sejuk dan panas.