

An Outlook : Flower Industry in Japan

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"An Outlook: Flower Industry in Japan"*₁

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ABSTRACT

Since 1970 the Japanese flower market has shown a steady growth. After 1990 there has been a rapid increase of imported cut flowers and flower bulbs. After 1994 there has been a stagnation in auction sales. The increase in number of growers stopped after 1992.

About 60% of Japanese households never buy flowers at all. The Japanese preference for flowers is the natural setting.

Auction system is very popular: 95% of ornamental crops go through auction markets. Imported cut flowers account for 6-7% of domestic consumption, about 80% of import is also distributed by auction market. Major players in distribution are auction market (\$5.3 billion, 300 auctions), wholesale company (\$1.4 billion, 500 wholesalers) and flowers shops (\$8.2 billion, 26,000 florists). Minor players are supermarkets (\$0.9 billion) and importers (\$0.2 billion). Supermarkets account for less than 10% of final consumption of ornamentals.

Changes in auction systems since the end of the '80 are: the integration of small and medium sized auctions, modernisation with electronical (clock-system) and logistic technology and realignment in organisational structure.

As the flower market was blooming in the middle of '80s, 200 major and big Japanese companies flocked into the flower industry. Unfortunately, most of new entries failed, partly because lack of knowledge and/or personnel in running flower business and partly because of low productivity/insufficient sales volume resulting in low profitability.

Survivors in the middle of '90s are Kirin and Suntory. Kirin Agribio EC is presently one of the leading companies in floricultural industry. Fides, Barbaret & Blanc, SGP and Hiljo are now under control of Kirin and in the domestic market Kirin also bought companies and sets up joint ventures with a retail chain and a wholesale business. In contrast, Suntory focusses on breeding and the nursery sector. Since 1989 they have been trying to breed a 'blue rose'

*1 This paper was originally presented by authors at the opening seminar of the '96 Aalsmeer Flower Show, 'The Flower Industry in Crisis: Overproduction or Undermarketing?' held at the Grand Hotel of Noodwijk in Holland on November 5, 1996. Dr. Imanishi presented the production side of the Japanese industry (sections 1 & 2), and Prof. Ogawa talked about the marketing side of the flower business (sections 3 and 4), and some concluding remarks (in section 5) at the symposium.

in cooperation with the Australian company Floregene. Major chain stores like Daiei and Jusco have not been successful. Independent florists, however, made successful efforts. Direct marketing has been dominated by JFTD.

Information technology will enable us to get around the existing auction markets. Dealing through a real time video auction system, or setting price and quantity in advance via Internet and later obtaining fresh flowers of better quality is possible in the near future. In Japan three companies are planning to establish a virtual trading system as Tele Flower Auction in Holland. Aucnet, a leading satellite auction company in used car business in Japan, announced to expand their business into the flower market. Nippon Steel is experimenting with Electronic Commerce by fresh flowers. Flower Auction Japan is designing a logistic network system with full coverage of all retail and business customers across the country.

1. Trends in Production and Import Sectors

(1) Take-off of the Industry after the Flower Exposition in Osaka

Production of cut flowers and potted plants in Japan has developed rapidly since 1975 (Fig.1). "The International Garden and Greenery Exposition" held in Osaka in 1990 has greatly increased the interest in flowers and plants. For several years before and after the Exposition, flower industry has markedly expanded, but has been stagnant since 1993, probably due to the prolonged economic depression.

Auction sale values of cut flowers has slightly decreased in 1994 and 1995, while potted and bedding plant sales have slightly increased (Fig.2). The supply of the cut flowers increased, which means more product was sold for less money.

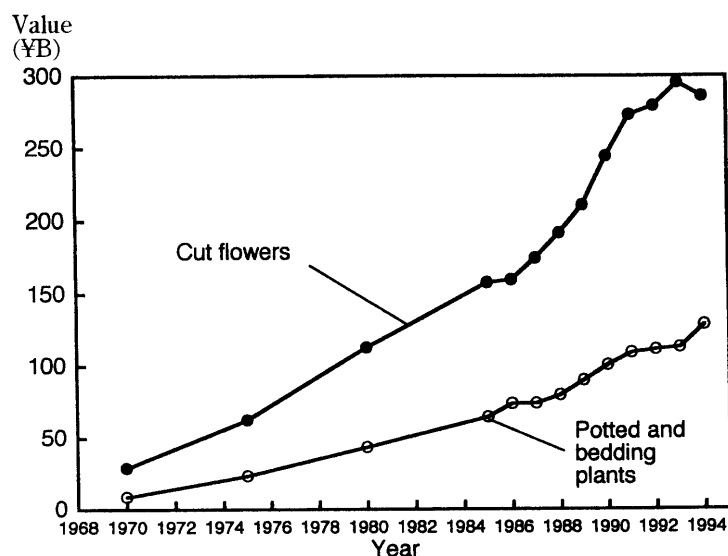


Fig.1: Production Value of Ornamentals in Japan, 1970-1994.

(2) Aging Population of Growers

As Fig. 3 suggests, the growing area for cut flower or potted and bedding plant production has been slightly on the rise. Approximately 47% of them are under protection.

The number of growers has not increased since 1992 (Fig.4). About half of growers are entirely or almost specialized in growing cut flowers or potted and bedding plants, but its average size per grower is small, for example, 22a in 1994. Most of the nurseries are family owned and employ workers at the busy seasons, such as planting and harvesting.

Cut flower growers over 60 years old or older exceeds 40% and only 13% of growers have their successors (Fig.5), whereas there are more younger growers and successors for potted and bedding plants growers. This fact indicates that the number of growers is expected to decrease gradually due to the aging of growers and the shortage of successors and thus, the problem of excess supply will be solved in the near future.

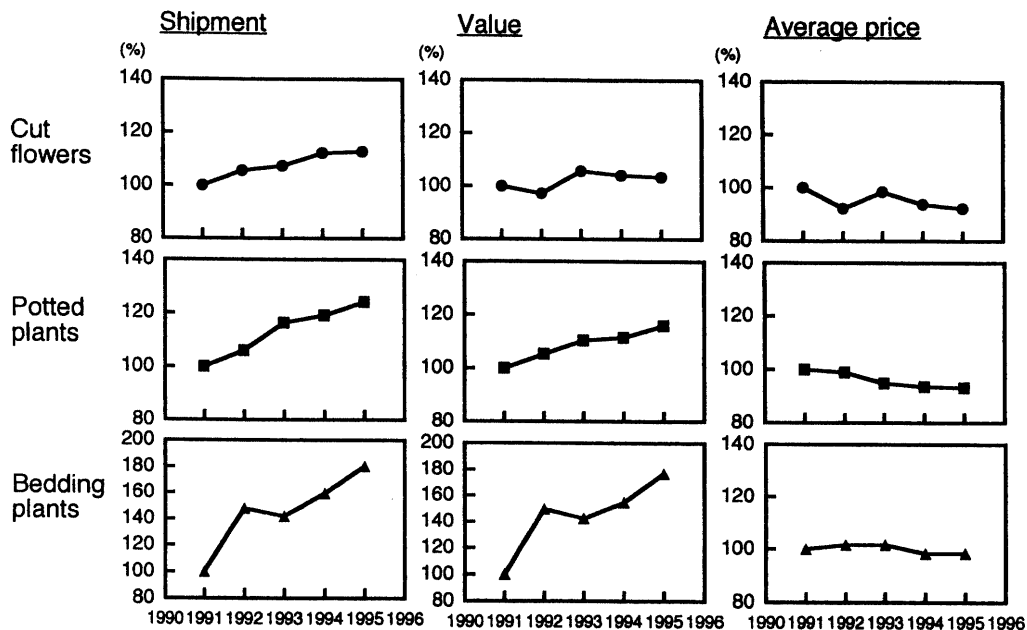


Fig.2: Change in Auction Sales of Flowers in Japan, 1991-1995.

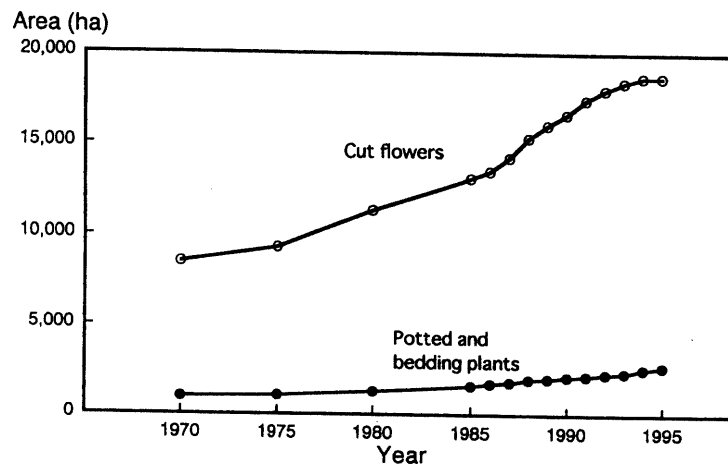


Fig.3: The Growing Area of Ornamentals in Japan, 1970-1995.

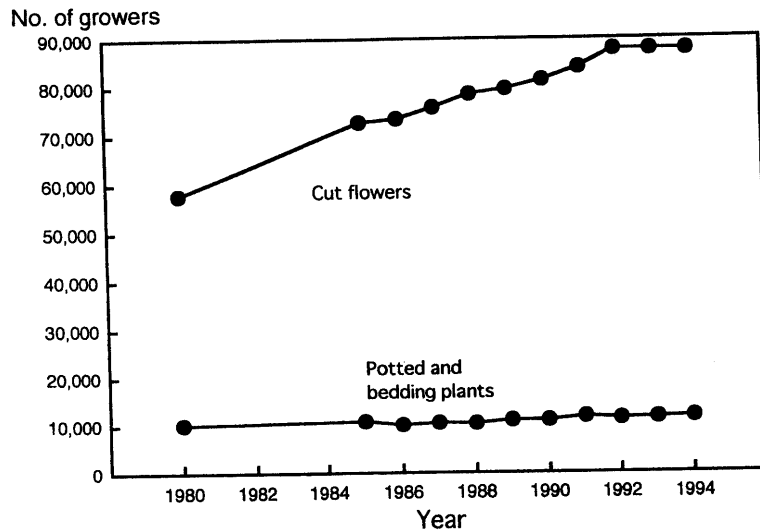


Fig.4: Number of Growers in Japan, 1980-1994.

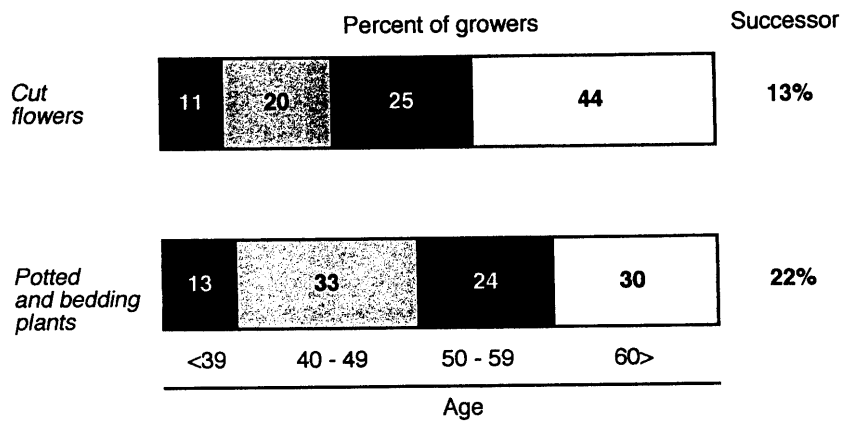


Fig.5: Aging Population of Growers.

(3) Characteristics of Japanese Production System

Japan is mainly located between latitude 25° and 45° north and has a marine climate. This geographical condition enables the growing of many kinds of ornamentals throughout the country all year round. Different area has different climate, as shown in Fig. 6. Naha in southern Okinawa Islands has subtropical climate, while Sapporo in the northern part has cold climate. In the south of Japan, Naha or Tokyo, rainy season lasts from June to mid-July and sultry, humid summer continues from late July to mid-September. Under these conditions, the quality of flowers becomes poor. On the contrary, in the north such as Sapporo or in mountainous regions, it is cool and dry during the summer season and so flowers with high quality are easily produced, but much higher heating cost is necessary during the winter season. As a result, flowers are produced in the appropriate regions and seasons to obtain high quality. Generally speaking, warm areas produce flowers from late autumn to early summer and cool areas produce from summer to autumn.

For example, Fig.7 shows the seasonal pattern of rose production in different areas of Japan. In the warm area such as Shizuoka, rose cut flowers are mainly produced from late

autumn to early summer, while in the cool area such as Yamagata, they are mainly produced from summer to autumn. Recently, the year round production of roses at the same place has become popular using rock wool culture as shown in Ehime in the warm region. In Ehime,

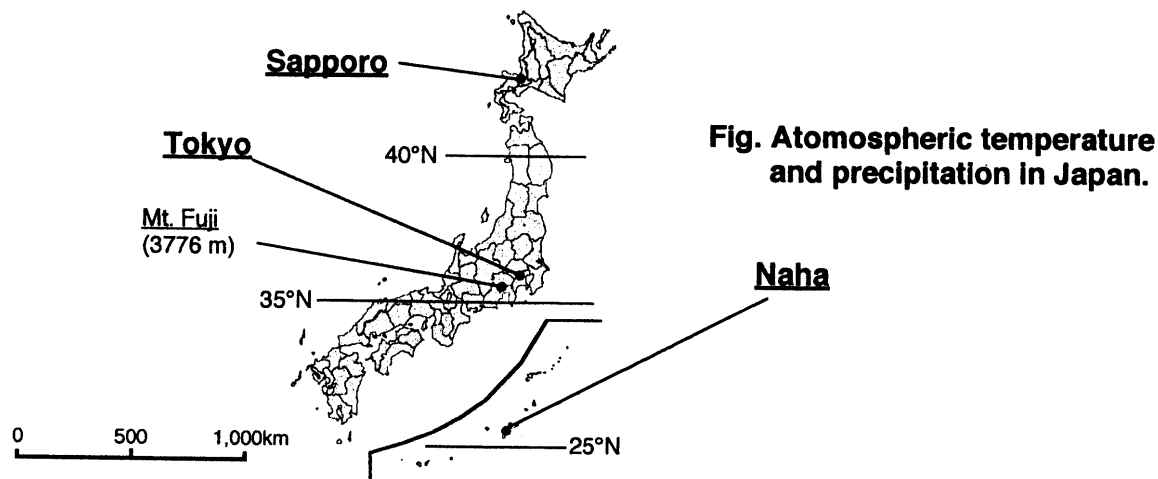


Fig. Atmospheric temperature and precipitation in Japan.

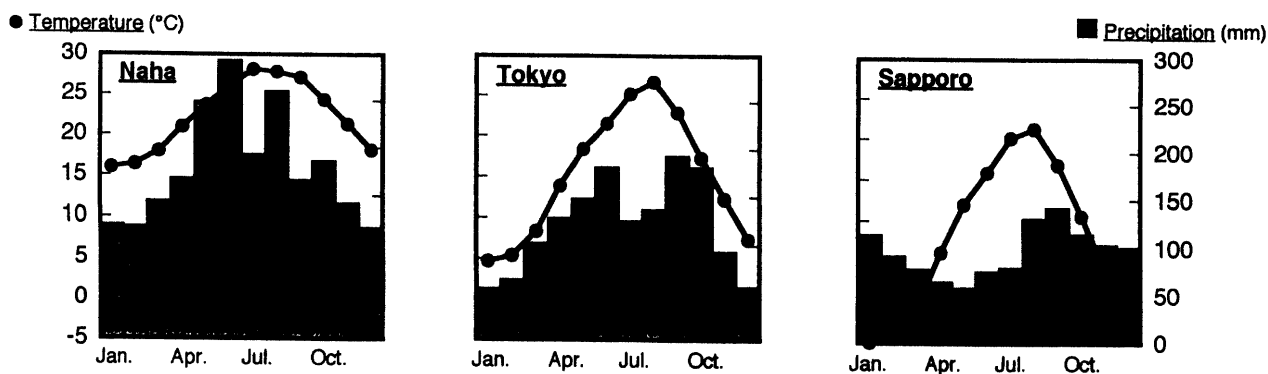
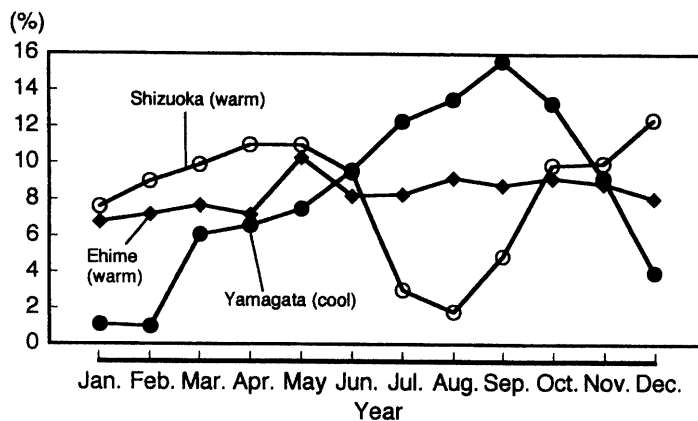


Fig.6: Atmospheric Temperature and Precipitation in Japan.



Area	Percent of rockwool culture	Auction price (yen/stem)	Labor (hrs/10a)	Productivity (stems/m ²)
Yamagata	51	82	1,874	88
Shizuoka	35	80	1,810	64
Ehime	100	104	2,964	109

Fig.7: Seasonal Pattern of Rose Production and Productivity in Different Area of Japan.

the new production system called arching system is entirely used. This system starts from young cutting plants and special green pruning practice "bending" is applied. Only thick and long stems are allowed to elongate and to be harvested.

The auction price of roses is quite high compared with that of Holland (Table.1). Since the market price of flowers is mainly decided by their quality, flowers of high quality get high price: however the price for flowers of a slightly lower grade is far lower. In Japan, the difference in price between high quality and lower quality is much larger compared with Holland. Cut flowers with short stem or worn-eaten leaves are not shipped to auctions. Thus, productivity (number of shipped stems/unit area) is very low and less than one-half of Holland. However, by producing high quality flowers with high price, enough compensation for household labor is achieved from a small intensive flower nursery.

(4) Rapid Increase of Imported Cut Flowers and Flower Bulbs

Imported cut flowers and foliage have increased every year, but in 1992, dropped by the sudden decrease from Taiwan (Fig.8). In 1995, it amounted to ¥22.6 billion (\$205), which accounted for 6.5% of the wholesale values for cut flowers. Import of bulbs from Holland has also markedly expanded since 1988, when the quarantine regulations were relaxed between Holland and Japan.

In Japan, growers harvest cut flowers every day, even on Sundays. Cut flowers graded by growers are checked again in Agricultural Cooperative. Accordingly, cut flowers shipped to auctions are fresh and have high quality. Two days after harvest, they are sold at flower shops. However, for imported flowers it takes 4 to 7 days and flowers are not so fresh and their quality is not so good as Japanese ones.

Rare and exotic flowers are sold at high price. However, as soon as the flowers lose their rarity, the price will go down and sometimes even the consumption may decrease, as shown in Nerine imported from Holland.

Those are the reasons why the import of cut flowers to Japan has not expanded as expected.

	Japan	Holland
Growing area (ha)	615	926
Shipment (million)	477	2, 230
Productivity (stems/m ²)	78	241
Value (billion yen)	31	49
Auction price (yen)	69	22

1Dfl. = 60yen

Table 1: Comparison of Rose Production between Japan and Holland (1994).

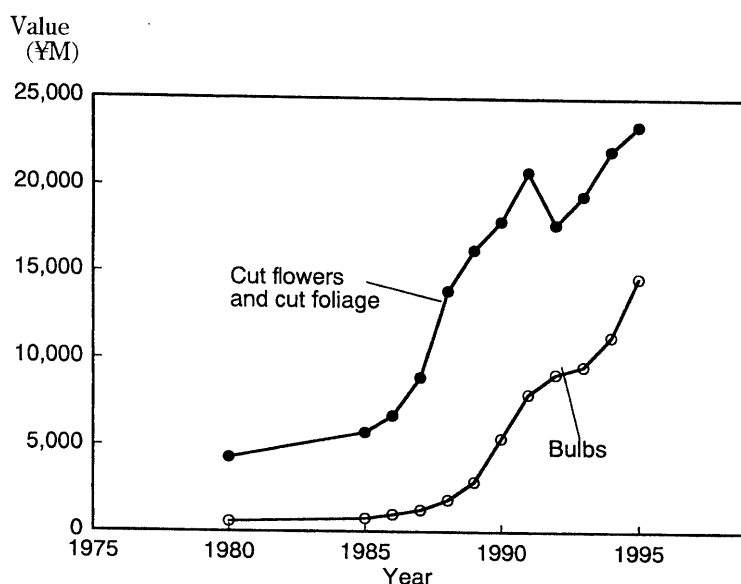


Fig.8: Cut Flowers, Cut Foliage and Flower Bulbs Imported into Japan, 1980-1995.

2. Demand Structure of Japanese Floriculture Market

(1) Per-Household Consumption of Cut Flowers and Pot Plants

The cut flower consumption per household in Japan increased until 1991, but has been stagnant since 1992 (Fig.9). In 1994, it amounted to ¥12,580 (\$ 114). Although this is twice as much as that of 1980, it is still lower than the 2.5 fold increase in production over this period.

There is a seasonal pattern for cut flower consumption of household. Japanese purchase cut flowers mostly in December for New Year celebration and more in March, August and September. Higher consumption in these 3 months is related to the traditional visit to the cemetery. Originally only wild green plants were offered at tombs, but recently flowers are also popular.

Fig.10 shows the results of our survey by questionnaire technique. Most of Japanese people know that flowers are indispensable to their daily life and influence the human feelings strongly more than any words or other gifts. People also prefer wild-type flowers to the improved or showy ones. What they want from flowers are not gorgeousness or luxury, but rather the delicate beauty of the nature that brings them the flavors of each season. These results are related to so-called "ikebana", Japanese style flower arrangement. In Japan, climatic differences of the four seasons are quite distinct and many kinds of wild flowers are available all over the country. People used to pick them from their garden or nearby fields and placed them in vases or bottles. This is the prototype of "ikebana".

Therefore, it is not surprising that more than half of Japanese households never purchase cut flowers (Fig. 11).

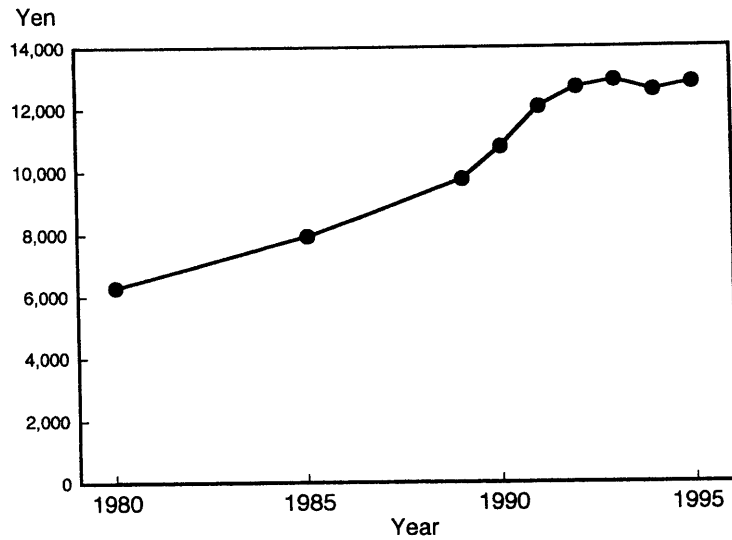


Fig.9: How much Japanese family pay for purchasing cut flowers (yen / year / household) ?

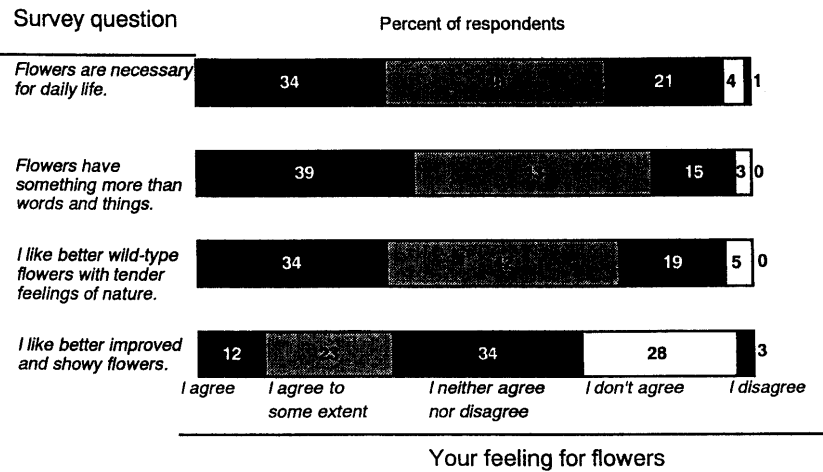


Fig.10: What do you usually feel about flowers ?

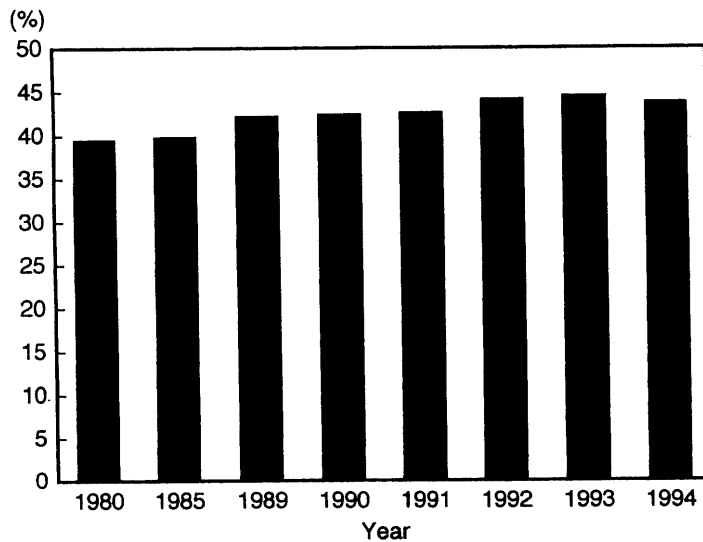


Fig.11: How many Japanese families purchase cut flowers (percent of total households)?

(2) Present and Future Trends in Consumption

In the consumption of cut flowers, the gift is still dominant and accounted for 39%, followed by home use (28%), commercial sectors (used for parties, funerals and so forth, 22%), "ikebana" and flower arrangement (11%) in that order (Fig.12). In potted plants, the ratio of the gift increases to 52% and the ratio for home use also becomes higher(39%). This low consumption for home use markedly contrasts with Holland. However, as shown in our survey, most of Japanese people know that flowers are indispensable to their daily life and thus, households consumption is considered to have high potential for growth.

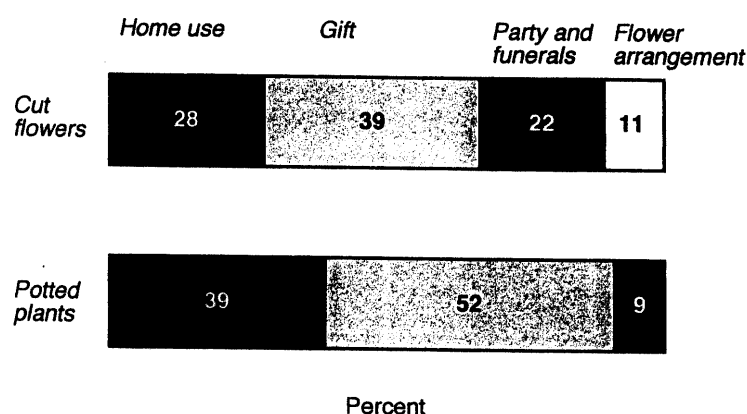


Fig.12: Percentage of Sold Flowers for Usage.

3. Marketing System of Ornamental Crops in Japan

(1) Traditional Marketing System

Typical marketing flows are shown in Fig. 13. Auction system is very popular in Japan for distribution of cut flowers and potted plants. Approximately 95 % of ornamental crops go through auction markets. The rest of them are delivered from growers, often packed in an assorted box of agricultural coops, directly to retail shops or consumers.

Imported cut flowers account for 6 to 7 % of domestic consumption. About 80 % of imports are also distributed through auction markets. In contrast to the flower distribution system in the US, Japanese supermarkets heavily depend on auction markets when they purchase cut flowers and potted plants. Imports are still used for complementary supply for demand in peak seasons, e.g., for mother's day.

(2) Major Players in the Channels of Distribution

There are three major players in the channels of distribution of Japanese flower industry, i.e., auction market (\$5.3 billion), wholesale company (\$1.4 billion), and flower shop (\$8.2 billion).

*1: NET=\$4.4B (+\$0.9B Transfer)

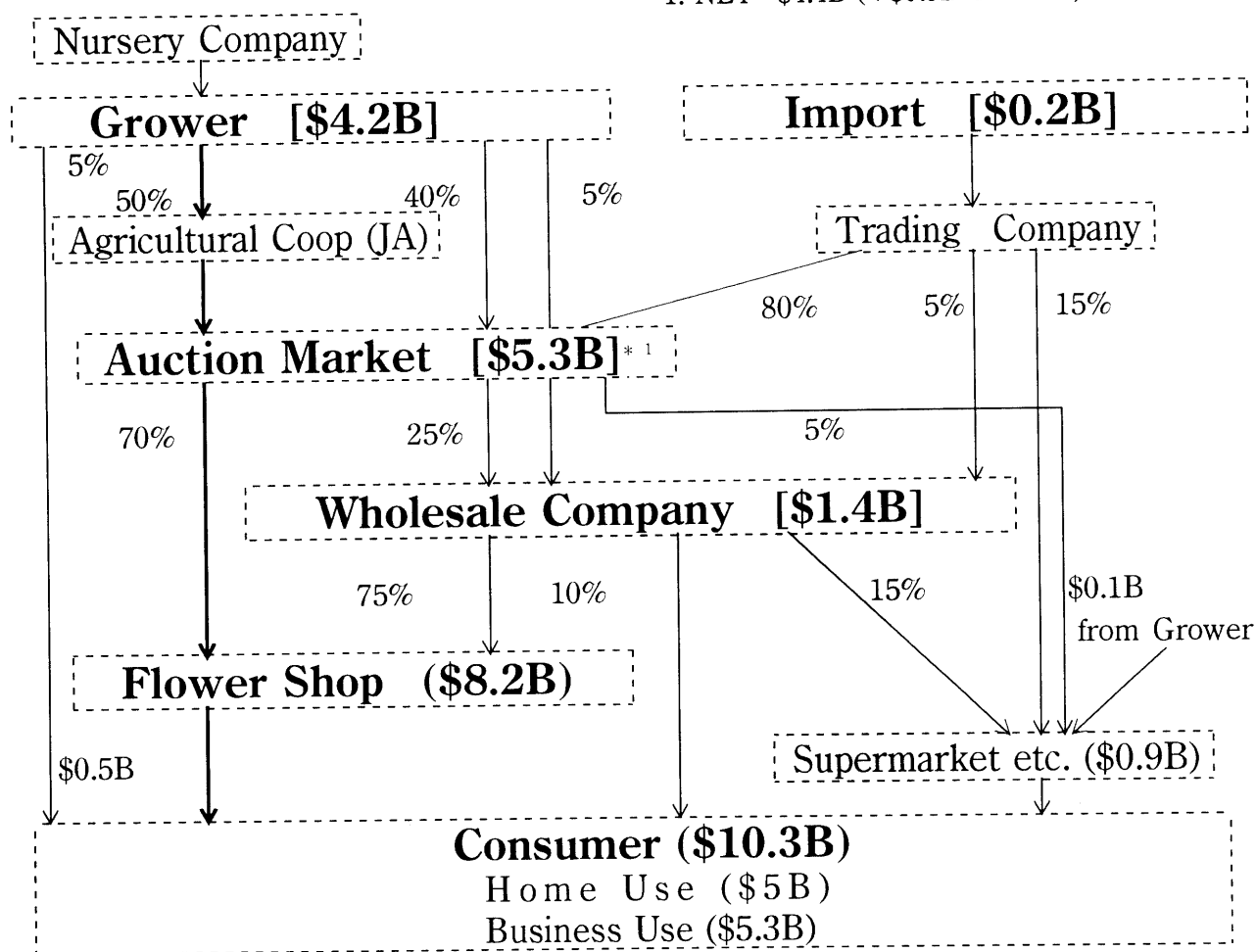


Fig.13: Typical Marketing Flows of Ornamental Crops in Japan

[]: sales volume at wholesale in 1994
 (): sales volume at retail in 1994

Slightly less than 300 privately-owned companies are operating auction markets. Frequency distribution of annual turnover is shown in Fig. 14. Average annual turnover is \$26 million. About 20 auction markets are categorized into central auction with a turnover of more than \$50 million.

About 500 wholesale companies are running their sales offices in the central auction markets. Wholesalers sell cut flowers and potted plants to florists (75%), consumers (10%), and supermarkets (15%). They have a marketing function of assortment, packaging, and delivery. Their average turnover is \$7.2 million per year mostly with 10 to 20 employees (Fig. 15).

In Japan, 26,000 florists are running their own flower shops. A typical flower shop has 2.5 workers (including the owner) with selling floor space of about 40 square meters. Of interest is that the number of start-ups is still growing despite the serious recession in Japan. Fig. 16 shows a sales distribution with an average sales volume of \$0.3 million.

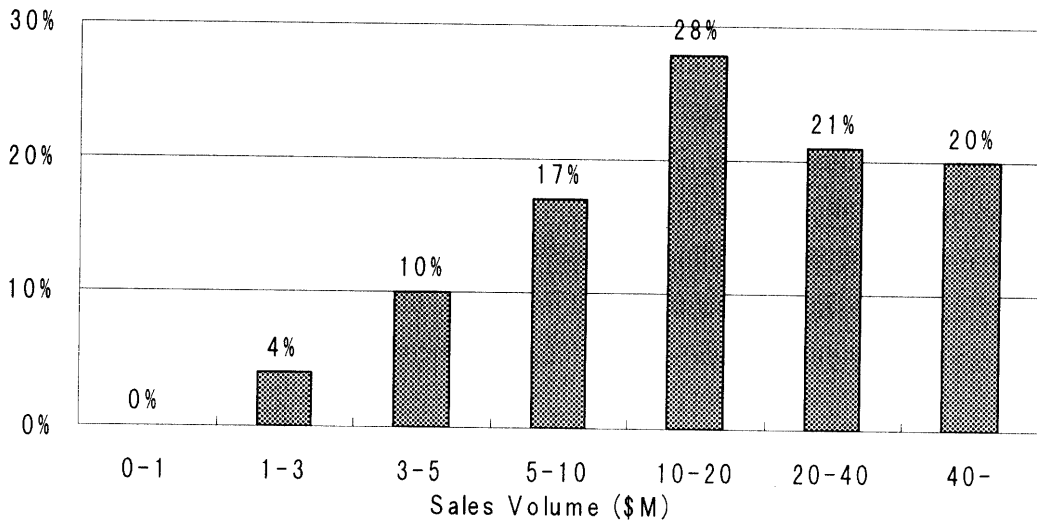


Fig.14: Frequency Distribution of Turnover (Auction Market)
Ave. Turnover=\$26M

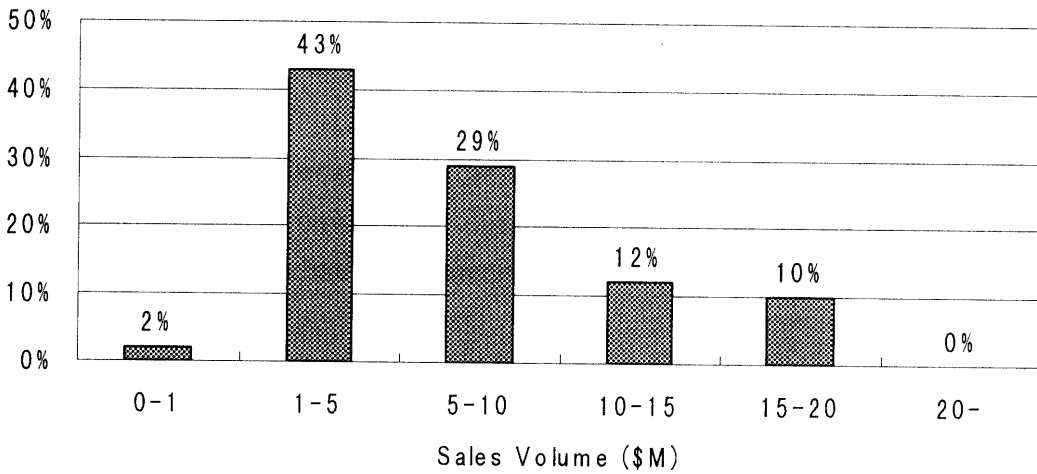


Fig.15: Frequency Distribution of Turnover (Wholesaler)
Ave. Turnover=\$7.2M

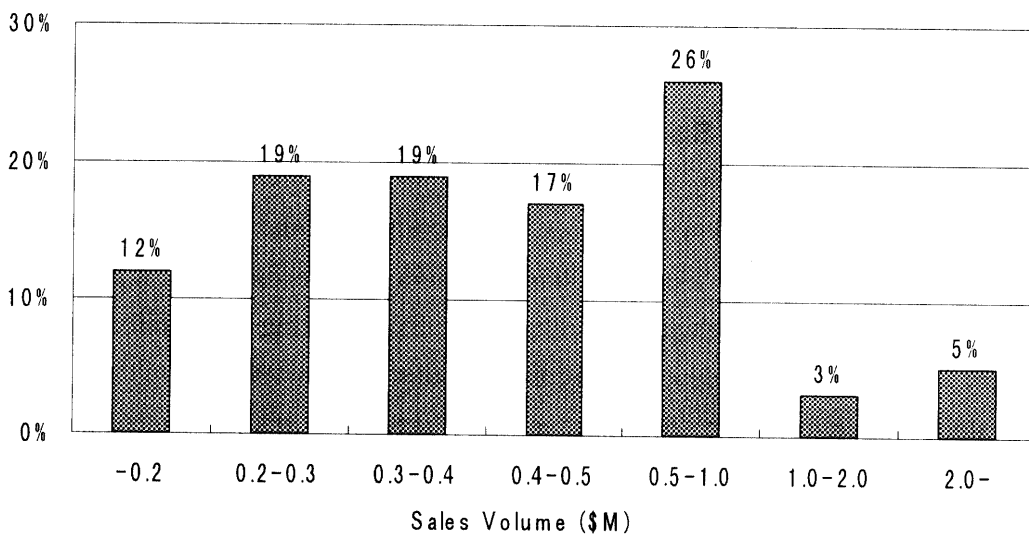


Fig.16: Frequency Distribution of Sales Volume (Florist)

There are two minor players in the marketing channels, i.e., supermarkets (\$0.9 billion) and importers (\$0.2 billion). Supermarkets including home centers account for less than 10% of final consumption of ornamentals. Self-service format of selling flowers has been expected to grow more rapidly during the 1990s, but so far resulted in poor performance of sales growth as well as profitability.

There are more than 20 trading companies to import floriculture crops overseas. Half of them are specialized in import business of fresh cut flowers. The other half are diversified institutions from the other industries, e.g., retail business, food business, and so on.

(3) Changes in Auction System in the 1990s

Led by central and local governments' initiatives, small and medium-sized auctions have been integrated into larger-scale auction markets since the end of 1980. This has been accompanied by a modernization of auction system. Most of the renovated auction markets adopted a clock system of Dutch style with advanced logistics technology.

The first computerized flower auction system was designed and constructed at Tokyo's Ota Market in 1990. The challenge by Ota Auction Co. was so successful that Ota's case becomes a reference model in unifying local auction markets.

In 1995, Ota Auction Co. drastically changed its organizational structure as a second step to adapt to requests by retail buyers in large retail firms (Fig. 17). Basic premises for change are that any auction market should be organized around customer need rather than by product type.

The other reason for the change is that Ota auction market sells more than 40% of the flowers before the auction starts, half of them by contract sales (at a fixed price) and the other half by pre-auction sales (at an applied highest price of the day). As such, an auction company needs a special division to deal with specific demands.

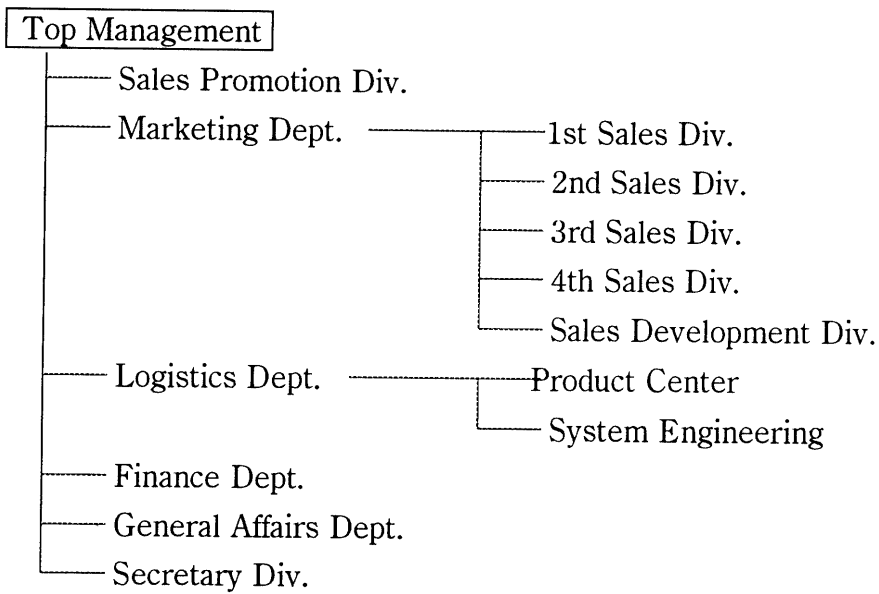
4. Emerging Forces in the Flower Industry

(1) New Entrants into Flower Business

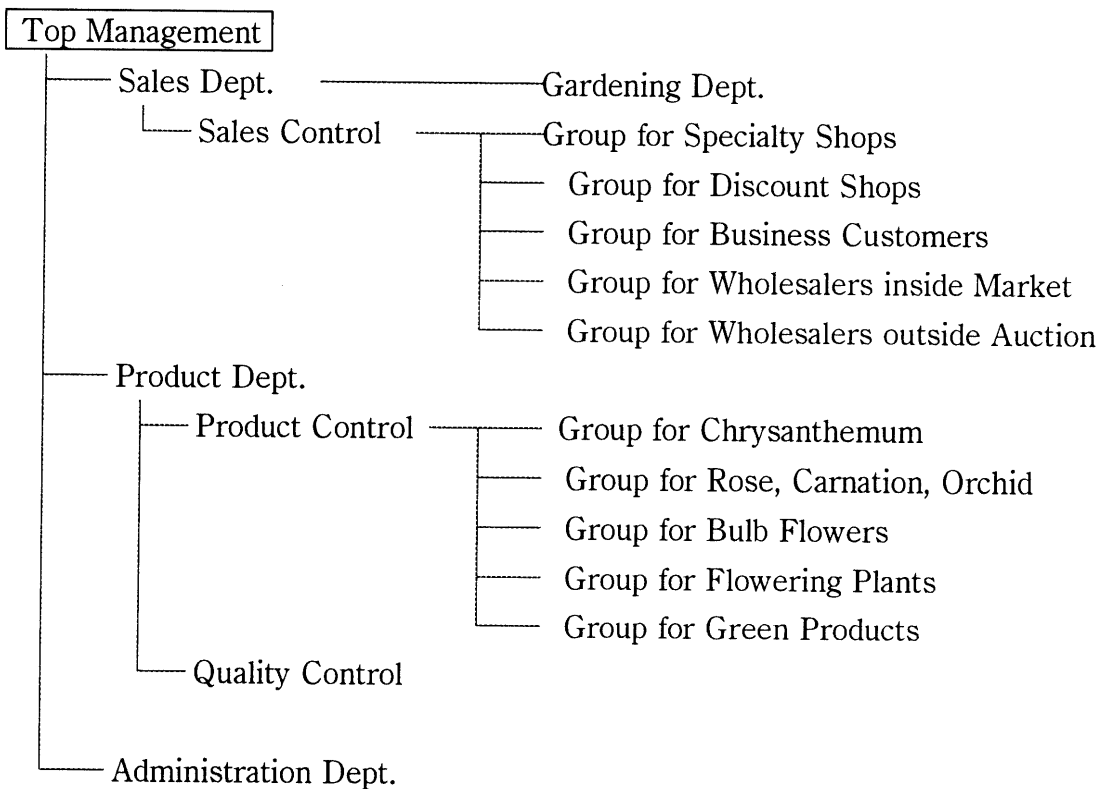
Any sort of business in this industry (from growers to flower shops) used to be small but relatively profitable. As the flower market was blooming in the middle of the 1980s, every Japanese major corporation has become, all of a sudden, interested in flower business. In search for a new frontier with high profitability, more than 200 big companies flocked into the flower industry until Japan's bubble economy finally burst out in 1991.

We could categorize these 200 new entries into five distinctive patterns by entry motivation. Identified factors are (1) resource utilization, (2) technology-driven, (3) biotechnology application, (4) expansion to or diversification into retail / wholesale business, and (5) direct marketing especially in mail order business (Table 2). Last one is listed as

(Before 1995)



(After 1995)



**Fig.17: Organization Chart of Ota Auction Co.
(Before and After 1995)**

Entry Pattern	Motivation	Company
I	Utilization of Company Resources	Nippon Beet Sugar Mfg
	Fuji Seito	
	Daiwabo	
	Renown	
	Nippon Steel	
	Mitsubishi Materials	
	Kokan Mining	
	Toyo Steel	
	Nippon Oil	
	Harima Chemicals	
	Onoda Cement	
	Jidosha Buhin Kogyo	
	Tsuneishi Zosen	
	Nippon Telegraph and Telephone	
	Osaka Gas	
		Tokyo Gas
II	Technology– Driven Entry	Nichirei
	Asahi Kogyosha	
	Sumitomo Forestry	
	Taisei	
	Mitsui Petrochemical Industries	
		Sumitomo Chemical
III	Applying Biotechnology	Kirin Brewery
	Suntry	
	Kyowa Hakko Kogyo	
	Sapporo Breweries	
	Kagome	
	Oji Paper	
		Japan Tobacco Industry
IV	Expansion or Diversification into	Morinaga Milk Industry
	Retail / Wholesale Business	Minebea
	Nissho Iwai	
	Toyo Menka Kaisha	
	Itochu	
	Sumitomo	
	Yanase	
	The Seiyu	
	Familymart	
	The Seibu Department Stores	
	Daiei	
	Seven– Eleven Japan	
		The Seiyu
V	Mail Order Business	FAJ
	World Flower	
		Wellness
VI	Networking Business	Aucnet
		Nippon Steel

**Table 2: Five Distinctive Patterns of Entry into Flower Business in the 1990s
Adopted from Ogawa (1991)**

quite a new entry motive in concept, i.e., networking businesses. It will be explained later in detail.

Unfortunately, most of new entries from other sectors failed with the exception of a few successful companies. Why? It was partly because of lack of knowledge and/or personnel in running flower business, partly because of low productivity and insufficient sales volume thus resulting in low profitability.

(2) Survivors in the middle of the 1990s after early entry

Kirin and Suntory are among big companies still enjoying a sizable profit margin in Japan. Kirin Agribio EC, a subsidiary of Kirin Brewery Co., is presently one of leading companies in floriculture industry. Kirin has engaged in active M&A's through the 1990s to become a vertically integrated agro-conglomerate world-wide with total sales of \$200 million at retail in 1995.

As is well-known, Fides, Barberet & Blanc, SGP, and Hiljo are now under control of Kirin's management team. In the domestic market, Kirin also bought a couple of companies, and at the same time set up joint ventures, for example, with a retail chain (Flower Gate), a wholesale business (Plant's Partner) and so forth.

In contrast, Suntory focuses on its operation in breeding or nursery sector. Its remarkable success resulted from long-lasting efforts in research and development of flowering bedding plants. "Surfinia" (a new variety of petunia) and "Tapien" (a new variety of verbena) are outstanding brand names which Suntory created in the late 1980s and marketed in the early 1990s. World-wide sales volume by plug amounts to 45.5 million units. It is estimated to be \$150 million. Since 1989, Suntory has been trying to breed "blue rose" in cooperation with the Australian agro-biotechnology company, Floregene.

Another contribution of Suntory to Japan's flower industry is that it pioneered direct channels of distribution of flowering potted plants to retail shops by using a transportation network for route delivery of small packages. Suntory is also the first company in Japan who promoted its flowers in TV advertising by its own expense.

(3) Challenges in the Down Stream

Since 1980, major chain stores in Japan have moved into retailing business of flowers and green plants. Among the most serious are the retail giants, Daiei and Jusco. However, their merchandising operations for "fresh" ornamentals had many problems unsolved. For instance, they are still struggling with poor quality of flowers, un-attractive assortments, long lead times, which together results in an enormous merchandise loss, sometimes of more than 20% of total retail sales.

Independent florists made efforts successfully to develop a regular chain system (by Namboen of Nagoya) and to organize conventional florists in a franchising system (Hanadai of Shinjyuku, Kirishima-Flower of Shibuya). An up-scale store format was developed by Gotoh Florist of Roppongi recently.

Direct marketing of flower gifts in Japan has been dominated by JFTD network. The joint TV advertising by JFTD members caused a massive sale increase at an annual rate of 20% in the 1980s, but stagnated after the recession (Fig. 18).

Thanks to Dutch people's wisdom, Japanese businessmen borrowed a processing technology of flowers from Holland. From 1984 to 1986, Impack and Shinwa introduced the automated bundling machines into grower's picking and sorting area and wholesaler's flower factories in Japan.

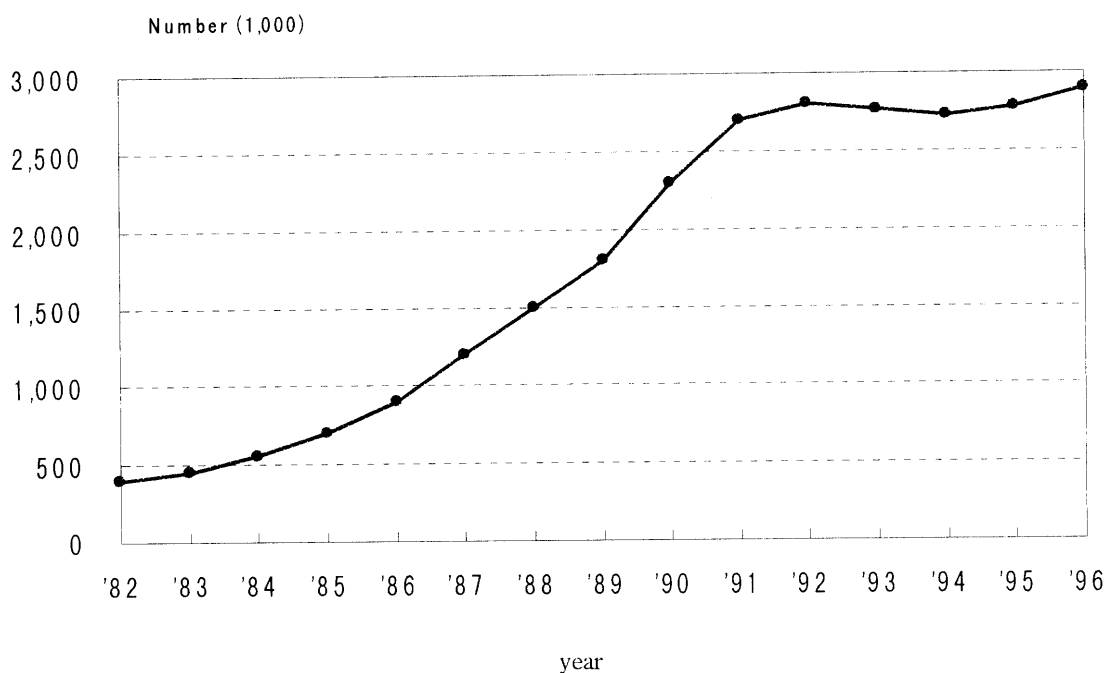


Fig.18: Recorded Number of Transactions by JFTD Network
(JFTD=Japan FTD)

(4) Network Auction Businesses in Progress

Of importance is that an information technology will enable us completely to get around the existing auction markets. In the near future, we could be dealing merchandise in a real-time video auction system, or we might be setting price and quantity in advance via Internet, and later obtaining fresh flowers of much better quality at a reasonable price.

In Holland, Tele Flower Auction set up such an auction system. Similarly in Japan, three companies are planning to establish such a virtual trading system as Tele Flower Auction's.

Last year, Aucnet, a leading satellite auction company in the used car business of Japan, announced the expansion their business into flower market. Aucnet is now recruiting participants of retailers and wholesalers in the auction network. At the first stage of introduction, only imported flowers from Holland will be traded in the auction network (Fig. 19). However, sooner or later, domestic growers and agricultural coops will join the auction network as suppliers of flowers.

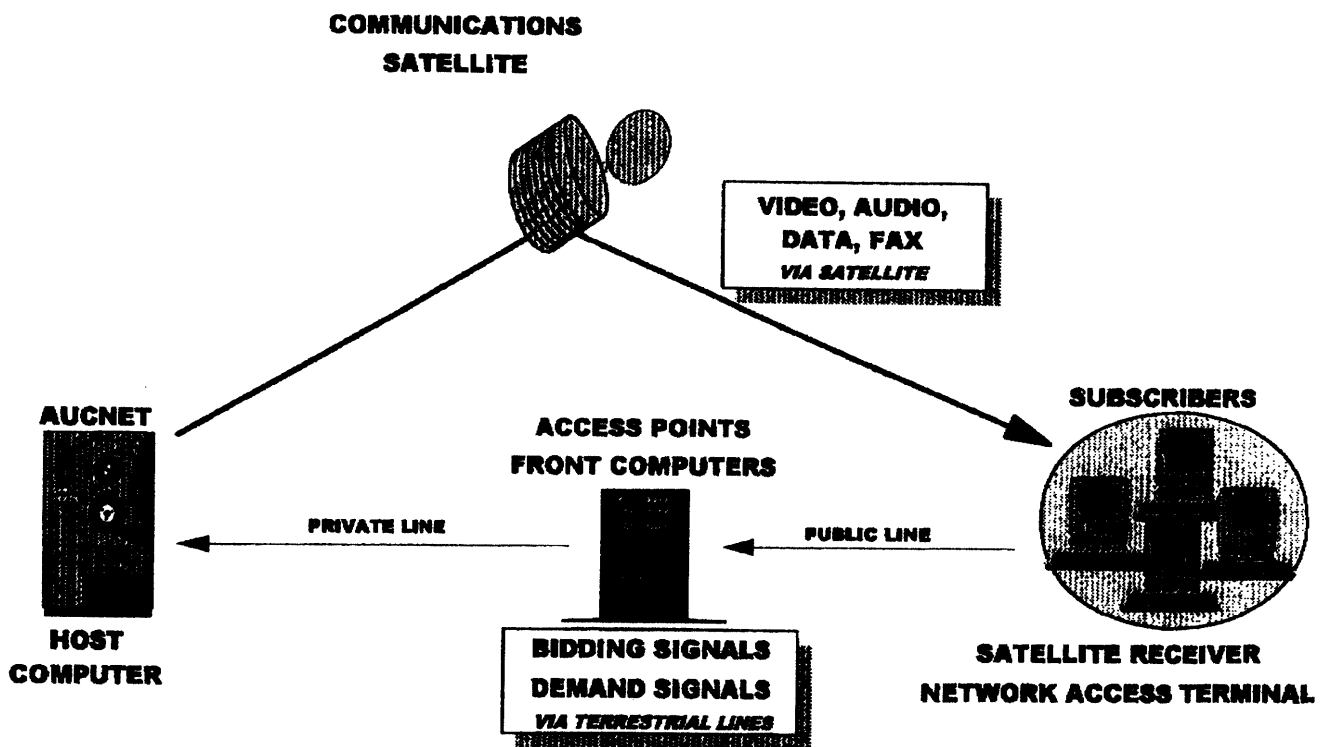


Fig.19: AUCNET SATELLITE AUCTION NETWORK

Nippon Steel Company is experimenting with Electronic Commerce by fresh flowers. The experiment will begin with a sales simulation by conditioning environmental factors. Backed up by the Ministry of International Trade and Industry, Nippon Steel is preparing for accumulating the basic knowledge of computer software's for virtual trading.

Flower Auction Japan (FAJ in short) is designing for a logistics network system with a full coverage of all the retail and business customers across the country. Since FAJ is essentially a group of affiliated local auctions, "virtual unification" of local auction markets through information networking will make it possible to establish a strong position in trading flowers. FAJ has an advantage of physical distribution.

5. Conclusions

(1) Cost Structure for Marketing Flowers

In Fig. 18, we can see the marketing cost structure of cut flowers in Japan. Roughly speaking, the retail price of a stem of cut flower (at \$1.50 on average) is sub-divided into three parts: grower's receipts (\$.54), distribution cost (\$.43) and retailer's overhead and margin (\$.53). (Fig. 20)

150 ¢ (Price at retail)	
57 ¢	Overhead and retail margin
18 ¢	Merchandise loss at retail
75 ¢ (Price at wholesale)	
6 ¢	Delivery cost to retailer
9 ¢	Overhead cost and margin of wholesaler
60 ¢ (Price at auction)	
6 ¢	Commission charged by auction
54 ¢	Grower's receipt
0 ¢	

Fig.20: Marketing Cost of Cut Flowers in Japan (Per stem)

We predict that Japanese, as a total industry, can easily squeeze the total marketing cost at least by 20% (or \$.30) to \$1.20 per stem. It will happen without making any efforts for cutting cost in production sector. Of \$.30 per stem for cost cutting, \$.10 accounts for merchandise loss; \$.10 for retail margin, and another \$.10 for distribution-related cost by improving logistics system.

If it can be done well, then they can expand the demand for cut flowers by 30–40 % probably to \$ 12 – 13 billion at retail.

(2) Still Undermarketing in Japan?

There are three possibilities for Japanese to do successfully marketing flowers. We understand the flower market in Japan is still undermarketing.

First of all, they can develop the untapped market of 60% of who never bought any flowers at all in a year.

Secondly, they can also develop "home use" market and personal gift market, since half of the total consumption of flowers are still for business use.

Thirdly, Japanese companies and institutions have never aggressively promoted flowers so far with two exceptions of JFTD (Japan FTD) and Suntory.

(3) Emerging Asian Markets at Hand

We expect that Asian countries such as Korea, Taiwan, Hong Kong, and Malaysia and so on will be promising for new markets for selling flowers. Their economies are growing and peoples there are getting more affluent with enjoying luxurious items in their life.

Our estimate is that, if Asian economies can keep going well into the next century, an approximately \$10 billion market will be newly created. There are about 2 billion people who will afford flowers in the near future.

Some Japanese growers and agriculture coops have already moved their operations into Asian countries such as Indonesia, Malaysia and Thailand. They will supply nursery stocks and final products for Japanese market as well as US and European markets.

(4) Final Comment: How Can We Overcome this Situation?

The situation that people in the flower industry are facing is very difficult to cope with. However, we are essentially optimistic about the future of Japanese flower business and industry.

Challenges by Kirin, Suntory, Aucnet, Nippon Steel, FAJ and other retail businesses will improve the cost efficiency and marketing performance of Japanese flower industry definitely.

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Fig.19: Presentation Material by Aucnet

Fig.20: First Author's estimate

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