

# **Trends in Flower Marketing and Postharvest Handling in the United States**

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## **Abstract**

**In the past four decades, the handling and marketing of cut flowers in the United States has undergone dramatic changes. The local production and specialized retailing of the 1950's has been replaced by a system where flowers produced almost anywhere in the world are largely sold by mass-market retailers. Despite a substantial increase in total sales of flowers during this period, and a considerable reduction in real dollar retail prices, per capita consumption of cut flowers is low compared to that in other major markets. This may partly be explained by differences in lifestyle and culture, but a major component of the low sales of cut flowers in the U.S. is customer dissatisfaction with quality, particularly vase life, of the flowers that they purchase, whatever the price. Poor vase life is the result of long transportation times, excessive storage durations, and poor temperature management in the supply chain. Mass markets have a great opportunity to alter the cut flower consumption pattern in the U.S. by demanding better postharvest handling of the flowers that they sell, and thereby providing high quality flowers with long vase life.**

## **INTRODUCTION**

Although US particularly Californian growers are important producers of cut flowers, the North American cut flower market is a magnet for off-shore flower producers in Central America and elsewhere. High per-capita income in the U.S., the relative strength of the U.S. currency, and the size of the market all suggest a competitive advantage for producers with low production and labor costs and weak currencies. Despite the size of the market, statistics on consumption and prices suggest a market in the doldrums, especially when these statistics are compared with those for other items that compete for the consumer's discretionary dollar. In this presentation, I review the history and nature of the cut flower market in the U.S. including the different marketing chains, and discuss trends in market statistics. Finally, I focus on future opportunities for the sale of cut flowers in North America.

## **HISTORY**

Cut flowers have always had a place in the homes and culture of North America. Migrants from diverse backgrounds brought their traditional floral crops along with their fruits and vegetables to North America, and home and market gardens, from the earliest European settlement, included ornamentals as well as food crops. In the 19<sup>th</sup> and early 20<sup>th</sup> centuries, commercial flower production was on the outskirts of the cities and flowers and plants were sold locally. Although fruit and vegetable production moved West in the early 20<sup>th</sup> century, spurred by the near-perfect climate, fertile soils, and abundant water supplies in California and the availability of refrigerated railcars for transcontinental shipment, flowers didn't follow, because of their high perishability. It wasn't until after World War II, when the high lift capacity of the WWII bombers was converted to civilian use, that the flower industry moved west, first to Colorado, then to California. In the middle of the 20<sup>th</sup> century, flowers for the United States were primarily produced in California (and, for winter field crops, Florida), and air-freighted to the rest of the country.

During the 1970s and 1980s, export of flowers from Central America, particularly Colombia, expanded rapidly, and now imported flowers represent more than half the

flowers sold in North America. Although the imported flowers competed strongly with local production in terms of price, there was a substantial growth in the total volume of flowers sold, so that production in California and elsewhere continued to be an important part of the supply of floral products. In the 1990's and into the 21<sup>st</sup> century economic pressures, coupled with attractive real estate opportunities for growers located nearby the rapidly growing cities in California (especially San Jose, San Diego, Los Angeles) resulted in closure or re-location of many nurseries and a down-turn in production. In addition, the industry diversified rapidly, moving from staple but unprofitable crops, particularly chrysanthemums and carnations, to roses, and to a wide range of specialty flowers.

In the first half of the 20<sup>th</sup> century, flowers were sold directly to specialty florist shops in the cities, or marketed through local wholesale markets. The San Francisco Flower Market is a vestige of that market system that allowed small growers to present their products to wholesale and retail buyers. Unlike the European market, and despite a vigorous attempt in San Diego, auction sales of cut flowers never became popular in the U.S., presumably because the vast distances prevented the buyer from being physically present at the auction. Through the latter half of the 20<sup>th</sup> century, the majority of cut flowers grown in California were handled by California wholesalers who sold directly to retail outlets in cities across the country, or to wholesalers in those cities who would then re-sell to local retailers. There was strong resistance from the industry to the sale of flowers through supermarkets, and flowers continued to be sold primarily through dedicated florist shops, with street or 'barrow-boy' sales a very minor part of the market, and then only in major cities at times when the weather permitted.

### **CONSUMPTION OF FLOWERS IN THE U.S.**

The recent status of the floral industry in the U.S. is well illustrated by the statistics shown in Figure. 1. In 1971, the consumption of cut flowers was 1.5 million stems (a meager 7 stems per capita), and mostly produced in the U.S. Over the next two decades, there was a steady increase in consumption, with most of the increase coming from imported production, and the domestic production remaining steady. From 1990 onwards domestic production fell so that by 2000 it was only a third of that in the 1980s. This fall paralleled a substantial fall in consumption (during a time of continuing population growth) so that from a high of 12 stems per capita per year in 1993, consumption in 2000 had fallen to only 9 stems per capita.

### **PRODUCTION**

Although the major flower production is still in California, it is clear from the declining market share for domestic flowers illustrated above, that there has been a dramatic reduction in the floriculture industry in our State. This has largely been the effect of the strong competition from offshore product which sells at prices below the costs of production in California. Many small and mid-sized producers have closed down, resulting in a trend towards increased size of individual operations, so that the industry has changed from one of small family farms to an industry of larger corporate-style operations, some with hundreds of hectares of field crops, others with more than 50 hectares of greenhouses.

### **PRICES**

One of the intriguing characteristics of the floral market in the US is the substantial reduction in 'constant dollar' retail prices during the last century. An advertisement in the May 4 edition of the San Francisco chronicle offers one dozen roses for \$2. A dozen roses in the Davis Safeway today costs \$9.99. The buying power of the 1936 \$2 is the equivalent today of \$26. Thus, in 1936, when the country was just recovering from the Great Depression floral products sold for higher real dollar prices than today when US incomes and disposable income are still near the record high of the mid-1990's.

## **MARKETING SYSTEMS**

The marketing of cut flowers has evolved substantially from the early days of the 20<sup>th</sup> century. While the California- or Miami-based wholesalers are still important in the distribution of cut flowers, the mass-market sale of flowers has increased dramatically in the last two decades, primarily marketing lower-cost product from Central America. Floral merchandisers for the major chains exert tremendous influence on source, variety, and quality of the flowers available to the US consumer. Typically, flowers and potted plants are purchased, brought to distribution warehouses, and then distributed to the many stores in a chain together with other perishable produce. Because this system exposes the flowers to additional handling and the likelihood of exposure to ethylene in the warehouse and the truck, some chains arrange for flowers from producers, wholesalers, or bouquet manufacturers to be delivered directly to their stores.

The retail florist retains an important market share, particularly as a vendor for wire services and computer-based floral delivery services, and for providing the design element in flowers for weddings, funerals, and special occasions. A large number of companies have been formed to conduct direct marketing of flowers to the consumer, using overnight delivery services such as Federal Express and United Parcel Service. The success of this approach has been limited by the vagaries of the postharvest environment for the flowers. Given the rigors of the US climate, flowers often suffer temperature exposure during the 24 hour guaranteed delivery time that greatly reduce their potential vase life.

Central American flowers, from Colombia, Ecuador, Costa Rica, and Guatemala are almost entirely imported by air, and largely through Miami, where wholesalers or agents close to the airport arrange customs and agriculture formalities, then re-cool the flowers and ship them to their destination. Although the flowers are often of very high quality, the extended transportation time and lack of adequate temperature control in the aircraft means that many are of marginal quality by the time that they arrive at the retail florist, and usually perform poorly in the consumer's vase.

Bouquet manufacture, which also has become important with the rising strength of the mass market segment is located throughout the country, but is predominant in Florida where imported product is used to prepare mass market bouquets. Here too, quality issues are an issue – imported flowers used for bouquet manufacture may already be compromised, and mass market bouquets seldom give adequate display life for the consumer.

## **FUTURE PROSPECTS**

The grim statistics illustrated in Figure 1 provide a substantial challenge to the U.S. cut flower industry. During the 1990s, a decade of unprecedented growth in personal income and economic prosperity in the U.S., the overall sales and per capita consumption of cut flowers fell substantially. This fall was in contrast to the sales of other luxury items, and even of other products of the 'green' industry (Table 1). In 2001, for example, although the per household expenditure on cut flowers was a trivial \$9, \$42 was spent on other floricultural crops (primarily potted flowering and foliage plants), and \$81 on nursery crops (bedding plants and perennials). These figures suggest that the U.S. is a good market for ornamentals, but that cut flowers have lost their appeal. Consumer studies indicate the appeal of fresh flowers, and their emotional and psychological effect, but other surveys highlight the lack of freshness and poor performance in the vase as primary reasons for consumer dissatisfaction.

It is my hypothesis that the historic changes in the US flower market outlined above are the cause, at the same time, of the reduced consumption of cut flowers. Flowers are a unique product in terms of their postharvest performance. They are very sensitive to temperature, with the rate of deterioration in some cut flower crops increasing as much as 7-fold with an increase in temperature from 0°C to 10°C. In addition, it is extremely difficult to discern the likely future life of a flower when it arrives at the wholesaler or retailer after transport from the grower. Flowers that have been held at proper

temperatures, and will have almost the same vase-life as freshly-harvested flowers cannot be distinguished from flowers that have been poorly handled and may last as little as one to two days in the vase.

When flowers were produced in peri-urban market gardens, they were frequently sold within hours of cutting, and reached the consumer within a day or two. Consumers purchased a product that provided excellent performance vase life, and value of the considerable money paid. With the exception of flowers purchased at the increasingly-popular farmers' markets, today's cut flowers are commonly 5 to 7 days old on arrival at the retail store. When this extended marketing chain is coupled with poor temperature management (inevitable in the case of imported flowers transported by air), vase life suffers.

The US cut flower industry is trapped in a downward spiral. Low per-capita consumption in a situation of global over-supply results in an intense pressure on prices that limits the industry's ability to institute essential reforms to increase flower quality and freshness. Without instituting such reforms, however, there is no way to increase consumer confidence in cut flowers, which is essential to increasing per-capita consumption. That US consumers will purchase more cut flowers is evident in the overall ornamental consumption statistics shown in the table. Potted flowers and foliage are a surrogate for cut flowers with superior performance in the home, and per capita consumption of these products is more than five times that of cut flowers.

So what can be done to restore the confidence of US consumers in cut flowers that they purchase? The following opportunities seem especially appropriate to the mass market retailers:

1. Purchase only species and cultivars with superior vase-life characteristics
2. Date code all flowers at the farm
3. Include inexpensive time/temperature indicators with all flowers, providing assurance that the flowers have not been subjected to adverse temperatures
4. Make vase life tests part of routine quality-control procedures
5. Include sell-by dates on all bouquets and bunches and mandate a rigorous rotation

Each of these recommendations can easily be justified, and could be implemented within the present marketing system. Restoring consumer confidence in the performance of cut flowers, coupled with effective advertising, could change the culture of cut flower consumption in the U.S. and make it a market with almost unlimited potential.

## **Table**

Table 1. Per capita consumption of ornamental crops in the U.S. in 2001.

<i><b>Crop</b></i>		<i><b>Billion dollars*</b></i>	<i><b>Per household</b></i>	<i><b>Per capita</b></i>	<i><b>Import share</b></i>
<i><b>Floriculture</b></i>					
	Cuts	1.0	\$9	\$3	60%
	Other	4.5	\$42	\$16	8%
	Subtotal	5.5	\$51	\$20	17%
	<i><b>Nursery</b></i>	8.7	\$81	\$30	3%
	<i><b>Total</b></i>	14.2	\$133	\$50	8%
<i>Source: Floriculture &amp; Nursery Crops, USDA May 2002</i>					

\*Based on wholesale value of sales and net imports.

**Figures**

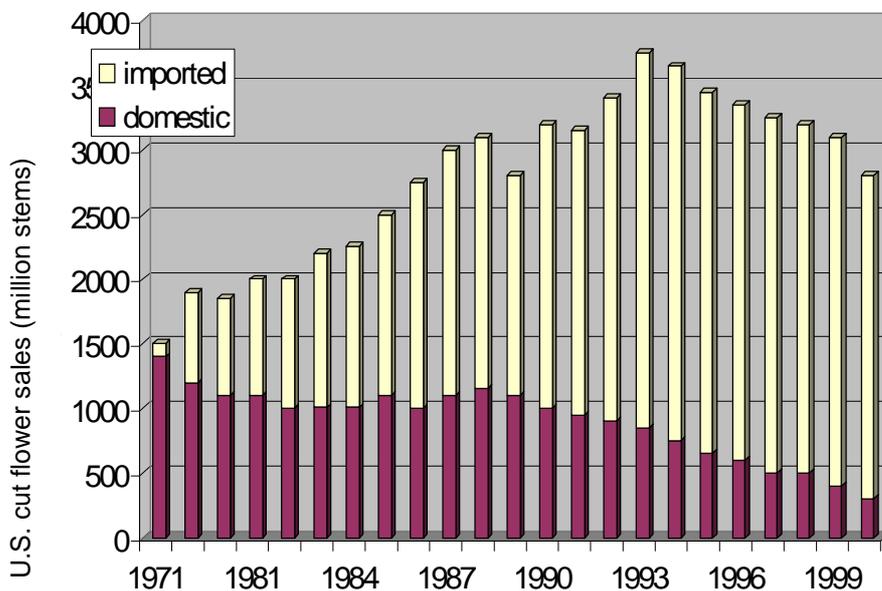


Fig. 1. Source and sales of cut flowers in the United States since 1971. (US Department of Agriculture Statistics).

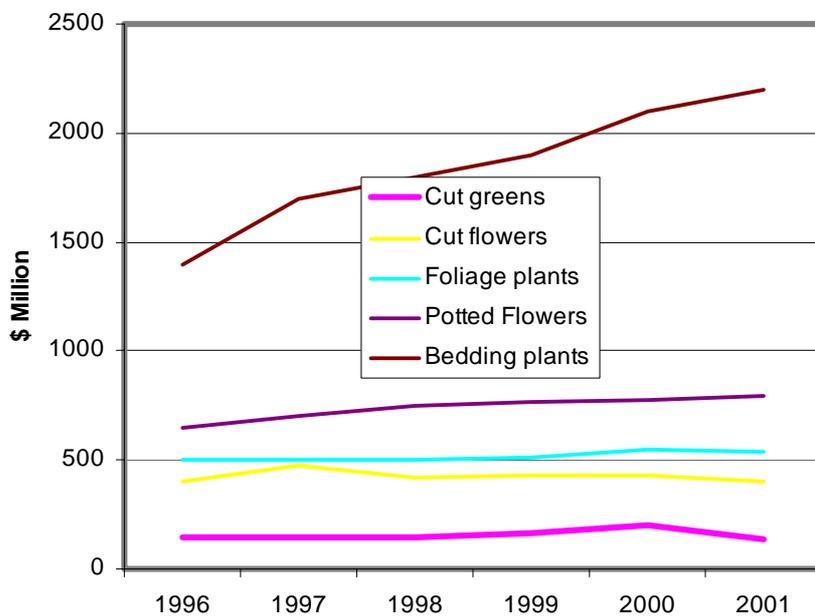


Fig. 2. Changes in the consumption of ornamentals in the United States since 1996.

