

STABY

# The flower road is no primrose path

by Manuel Aragon



A wagon laden with Comodore™ greens makes its way from the production area in Vera Cruz, Mexico to a post-harvest facility which is located nearby. Photo courtesy of Continental Floral Greens, San Antonio, TX

Lately, it seems like flowers are for sale everywhere you turn. Flowers are being sold by almost everyone and from almost everywhere. Consumers can find them through street merchants, vending machines at airports, gas stations, florists, supermarkets, garden shops, on the Internet, 800-numbers and even tableside at a restaurant. The flowers offered are as varied as the places to find them. Iris, tulips, alstroemeria, hanging heliconias,

gingers, carnations, gerberas, roses, anthurium, poppies, mums, gypsophila and hundreds of other floral shapes and colors can be found popping up no matter where you look.

In 1999, the United States imported 160,000 tons of flowers from around the world. Flowers could be found coming from Thailand, Costa Rica, Madagascar, Colombia, Hawaii, Zimbabwe, Turkey, Italy, Holland, Guatemala, Ecuador, New

Zealand, Mexico, Jamaica and Israel. Of the 160,000 tons, 87 percent arrived into Miami on air freighters. Figure 1 shows the breakdown of imported flowers into Miami.

Colombia and Ecuador are the main sources for Miami's imports. These two countries shipped 86 percent of the flowers imported into Miami in 1999 and supplied 62.4 percent of all flowers sold in the United States.

How do these flowers get from Bogotá and Quito and Cuenca to a vendor near you? The long and winding road begins at the flower farm. Flower growers prepare the flowers for their difficult trip by grading for quality, sorting by stem length, packaging, hydrating and cooling the flowers to the best condition possible.

## From farm to airport

Flower growers in the Sabana of Bogotá send their flowers to the airport in trucks. Very few of the trucks that transport flowers to the airport are refrigerated. In fact many are canvas covered trucks that look much like the Conestoga wagons except for the engine. The trip to the airport plus the waiting time until the flowers can be delivered to the airline can consume six to 10 hours.

Flower growers in Cuenca, in the southern part of Ecuador, send their flowers to Guayaquil Airport, five to six driving hours away. Cuenca's growers have provided refrigerated truck transport for their flowers to the airport.

Quito's flower growers use a variety of

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Figure 1	1995 tons	1996 tons	1997 tons	1998 tons	1999 tons
Total US	168,000	182,000	190,000	179,000	160,000
Miami	146,000 87%	162,000 89%	169,000 89%	156,000 87%	139,000 87%

Five-Year History of Miami Flower Importers from Central and South America

Figure 2	1995 tons	1996 tons	1997 tons	1998 tons	1999 tons
Colombia	113,000	121,000	124,000	110,000	93,000
Ecuador	16,600	21,700	26,700	27,800	26,300
Costa Rica	9,800	11,200	11,800	11,000	12,300
Guatemala	2,500	2,700	2,300	2,600	1,900
Totals	141,900	156,600	164,800	151,400	133,500
% of total	97%	97%	97%	97%	96%
Other	4,400	5,200	4,900	5,000	5,000
Total Miami	146,300	162,000	169,400	156,000	138,900





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vehicles for transporting the flowers from the farm to the airport. Refrigerated trucking is more prevalent in Bogota, but it is not yet the norm.

## *Airport to airport*

Most flowers travel in air cargo freighters rather than as belly freight on passenger

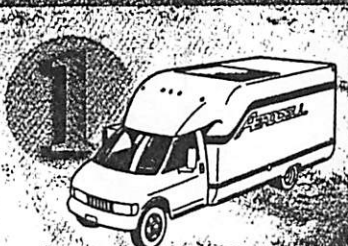
flights. DC-8, DC-10, MD-11, and 747 freighters comprise the fleet. Cargo freighters need freight flying to a destination as well as freight flying out. In the case of Colombia, the economic crises there have reduced air imports by 35-40 percent in the past 24 months. Ecuador has a small internal market for imports. For both countries, there is less demand for southbound freight services than for northbound freight services. This limits the amount of air

cargo capacity available for flower growers to export their product.

Price competition in the air cargo industry continues to reduce the number of air freight carriers able to operate at a profit; several have gone out of business or curtailed their operations and two of them are recently in Chapter 11. For the moment, several daily cargo freighter flights bring flowers into Miami five days a week.

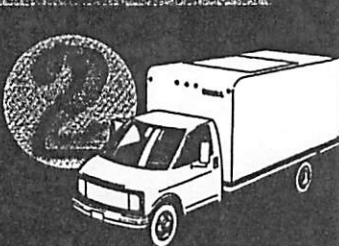
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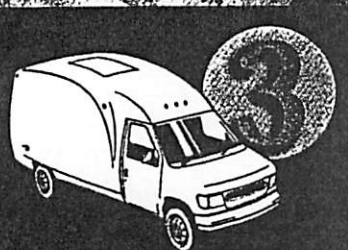
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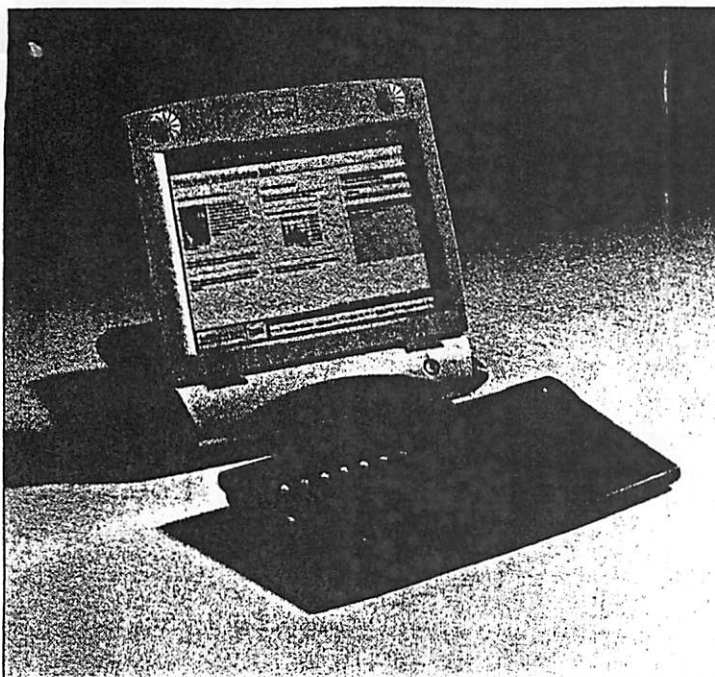
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and buyers together, widening the choice that buyers will have among prospective vendors. Here too, buyers can join together: Retailers can join together to issue RFPs and instead of one merchant buying a gross of a certain item, 10 non-competitive retailers can put out their request for pricing on 10 gross. Again, the shift in power will go to the buyer.

These marketplaces will recognize that to build success they will have to follow the adage of online commerce: "First content, then community and then commerce." Retailers will find that the best of these will be superior sources of information and knowledge on products, market conditions and business in general.

By being better informed, retailers will be able to make better buying decisions and be able to react to market conditions faster. Some of these marketplaces may actually cut deals with technology hardware providers to make available the latest in PCs or perhaps more probable, easy to use, intelligent Internet appliances, such as the iBrow from Merinta (www.Merinta.com), that will learn the user's interests and automatically start bringing certain appropriate information to the screen. The marketplaces that will ultimately succeed will be run by neither retailers nor vendors, but by neutral parties who will provide a community where both sellers and buyers can benefit. Undoubtedly however, the scales are tipped in the buyers' favor.

The speed at which new technologies are being introduced is breath taking. In the near future, a combination of wireless and satellite technologies will merge to allow marketing to gain a new approach to prospects. A Cranberry, NJ-based company, GeePS.com, (www.geeps.com) is utilizing

Wireless Access Protocol (WAP) and Global Positioning Satellites (GPS) to create personal marketing zones around individuals as they may be driving through neighborhoods. Merchants will be able to beam special promotional messages to appropriate consumers on their wireless phones as they drive by: "Hey, we have Roses on sales today; 40% off, just ahead on your right!" The company is already running tests in New York and San Francisco.

As if that isn't enough, an Oakland, CA-based company is working to bring the experience of smell to a PC near you. Digiscents (www.digiscents.com) is developing digital scents that will allow scents-enabled PC's to produce smells that match the onscreen experience. In other words, see a banana on the screen, smell a banana. Pull up an image of a bouquet of orchids and the smell of orchids will suddenly be apparent. Send an e-mail alerting a customer that her floral arrangement is ready to pick up and she will already be "smelling the roses." (an example of this product can be found on page 70.)

The company already has a software distribution partnership with RealNetworks (www.realnetworks.com), the source of the majority of audio and visual enabling software that tens of millions of Internet users already use. In addition, more than 3,000 software developers are working on a multitude of applications that will incorporate the Digiscents tool set. The company's PC device, the iSmell is scheduled to debut Spring of 2001.

Wow! It has been a busy year. What things will look like this time next year is anybody's guess. But the genie is out of the bottle. The new economy is cranking on and so will the empowered customer. Investigate these new tools and learn how to empower your business.

#### Author's Profile

Brad Boa is editor and publisher of "where it's @." Brad is an expert on and an advocate of "multi-channel retailing," the integration of traditional "bricks and mortar" channels with the new technology channels of the Internet.

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However the five-year history in Figure 2 shows a drop of 18 percent in the volume of flowers imported into Miami between 1997 and 1999. Reduced air cargo capacity could be one of the main causes for this drop.

The sheer volume of flowers being shipped from Colombia also creates the possibility that drugs and other contraband might be shipped to the United States with the flowers. Security measures against this have been instituted by most of the cargo airlines. In the strongest programs each box of flowers received by the airline goes through x-ray inspection before it is loaded onto the aircraft. When the flowers are off-loaded from the air freighter in Miami, each box is once again inspected by x-ray.

#### Airport to distributor

Miami flower handlers, distributors and brokers collect their flowers from the airline warehouse at Miami Airport. These flowers are then taken by truck to a nearby storage or distribution warehouse where they will wait for a few hours or possibly several days before going on to their next destination. Those flowers that have not pre-sold will be telemarketed for sale by Miami's brokers to customers all over the United States. Once the flowers have been sold they begin the next stage in their journey toward the consumer.

#### Long haul refrigerated trucking

Refrigerated trucking companies pick up flowers from Miami's distributors and transport them to their next destination. This is probably the safest part of the journey for the flowers as far as temperature control is concerned. Major refrigerated trucking companies do an excellent job of reliably transporting flowers from Miami to the continental United States and Canada. These truck lines deliver flowers to regional warehouses of the different supermarket chains or to local flower wholesalers. Rising costs, difficulty in recruiting drivers and price

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leaves on the stem, about a third of them. The object is to remove any leaves that will be below the water line in the storage container. Those leaves are breeding grounds for bacteria and mold that can shorten flower life. Next, being certain that all stem ends are even, cut about an inch from the bottom — underwater. The concept of under water cutting is that as the plant is shipped, it is often out of water as much as 10 days, the bottom of the stem crusts over, water exits the plant from the leaves, and there is probably a vacuum or air pocket at the bottom of the stem. Cutting under water ensures filling the stem with water and not having an air bubble preceding the water up the stem.

Let us talk for a moment about water. Temperature and quality are both important issues. At this time, it is thought that freshly cut flowers should be placed in water with a temperature ranging between 90 and 105 degrees Fahrenheit. A depth of about 8 inches is ideal. Water should be checked for quality, at least annually. Your own water authority may do it for you. The magic number for total dissolved solids (TDS) is 250. If it is much higher than that, you may need to take corrective measures. While water may be germ free, taste good and healthy, it may contain minerals and salts that may daunt our care and handling efforts. Water can hold only so much "stuff." If the water is already saturated when we add our preservatives or hydrating chemicals, they will simply sink to the bottom, where their concentration may be so high that they could actually harm the product.

How many florists actually use preservatives? How many use them properly? The numbers would probably amaze those of us who are into proper conditioning of flowers. Commercially prepared preservatives serve a number of purposes. They contain sugar, that will feed the flower, help it to open and keep its luster. They contain an acidifier that brings the acidity of the water down,

on the pH scale to about 3.5. Flowers take up water best when the water is in this range. They also contain a germicide that keeps bacteria and fungi under control. Preservatives are an important part of the process, but they must be measured and they must be used every time.

There are two parts to the refrigeration link. We are interested in temperature and humidity. Both are vital. Cold temperatures not only slow the aging process in the flower, but also help to control bacteria and fungi. In most cases, a cooler temperature of 34-38 degrees F. will be ideal. There are many exceptions to the rule and it is the job of the retailer to know orchids and gladioli like to be above 45 F and that tropicals must be above 55 F. An excellent manual, outlining the exceptions and, indeed, many of the care and handling rules is available from Society of American Florists'.

During the growth process, great amounts of water exit the plant via the stomata, those tiny pores on the underside of the leaf. Their job is to keep the humidity around the leaf as near to that inside the leaf as possible. In a very dry atmosphere, more water is often given off than the plant can replace from the bottom of its stem. The result is wilting. High humidity lessens the outflow and helps the plant to retain its turgidity.

One of the least expensive links to upgrade is that of sanitation. Containers must be regularly washed. Dead and dying flowers must be removed. The refrigerator, walls, ceiling and floor should be regularly scrubbed down. The coils should be vacuumed at least quarterly, to get rid of the lint and dust that has accumulated. This vacuuming will help the equipment run more efficiently and it will get rid of pathogens that might be constantly re-circulating. It is important, too, to keep lunches, fruits and vegetables out of the refrigerator where we store flowers. As those products age, they give off a gas, ethylene, which acts as a hormone that ages our flowers more rapidly.

Lastly, it is important that every employee in our store is a care and handling expert. Only then will each of the links be adhered to. Only then will our flowers perform best for the con-

sumer. And, speaking of the consumer, she is the last link in the process. It is important that we tell her, not only how to care for the flowers, but also how long they can be expected to last.

Care and handling are important. Proper care and handling at all levels along the Chain of Life will help flowers perform better. It is up to us, the flower handlers, to realize that adhering to the rules will help flowers last longer. It will not, however, make a bad flower better. It will just help it last longer.

## Author's Profile

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competition have pushed some Miami trucking companies out of business in the past two years. Some of the trucks carrying flowers are destined for supermarkets while others are on their way to wholesalers.

## Local business-to-business distribution

Supermarket warehouses receive the flowers from the long haul truckers and then store the flowers until they are sent to the store level for sale to consumers. The supermarket chains use their own trucks for transporting flowers and other goods to the store level. Very few trucks are refrigerated.

Wholesalers receive the flowers from the long haul truckers, process them and then sell them to retail florists and to some supermarkets. Wholesalers use their own trucks for distribution to florists though some florists prefer to travel to the wholesaler's warehouse to pick up their flowers.

## Delivery to consumer door

Florists receive most of their orders over the phone. One of the highly valued services a florist offers its customers is his or her ability to deliver the flowers directly to the recipient. Many florists have their own specialized vans for flower delivery while others use an outside provider. Very few supermarkets offer floral delivery services. Those who buy flowers online will probably

# FLORAL

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receive the flowers via an overnight delivery service.

## Trends

Several rose growers, mainly from Ecuador, are now shipping their roses to Miami in bulk packs. The Miami operation then contacts floral retailers directly, bypassing the wholesaler, and offers to custom pack an order of the exact varieties, quantities and stem lengths desired. The custom orders are packed in Miami and shipped to the florist by an overnight delivery service.

It is truly remarkable to see how well the flowers withstand the difficult and sometimes hostile conditions they encounter on their long journey from the farm to your home. One can only imagine how much more beautiful and enjoyable these flowers might be if they were to be delivered closer to their pristine state.

**Publisher's Note:** This article addresses the transportation of fresh flowers from the two largest exporting countries. We did not address the topic from a domestic production viewpoint only because the import and distribution process illustrates the longest logistical trail of transporting fresh cut flowers.

## Author's Profile

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