



# Flower power

**Airports play a critical role in the transportation of fresh cut flowers across the globe, writes Dan McCue.**

**F**or many airports and their cargo hauling tenants the chance to secure a slice of the \$40 billion per annum cut flower market still smells as sweet as ever.

With more than €2.5 billion worth of blooms moving through its facilities each year, Amsterdam Schiphol remains the world's premiere cut flower hub, but the competition is hotting up.

For both Dubai International Airport — largely due to the opening of its \$300 million Dubai Flower Centre — and Miami International Airport in the United States have in recent years become critically important to a trade that encompasses six continents and 24 time zones.

And serving those hubs has in turn bolstered local construction industries and created new logistics partnerships.

In Colombia and Ecuador, which together provide 90% of the cut flowers sold in the US market, new refrigeration units or other infrastructure-related improvements are underway at four different airports. Meanwhile in Kenya, an important flower producer in its own right and a conduit for growers throughout the African continent, Kenya Airways, and the Dutch Stamina Group have signed an agreement to establish a state-of-the-art handling facility at Nairobi-Jomo Kenyatta International Airport.

But shoring up one's place in the global cut flower supply chain isn't the only motivation at work, as can be witnessed by the California-based Mercury Air Group's decision to open a 12,700-square-foot refrigeration facility at Los Angeles International Airport (LAX) in a bid to challenge Miami International Airport's market dominance.

"What we are doing, essentially, is no less than trying to shift the market," admits David Herbst, Mercury's executive vice president, explaining a \$1.1 million investment at an airport that currently accounts for only 6.4% on the US's cut flower imports.

"We want to take a bigger chunk out of Miami, which currently handles around 86% of all the cut flowers imported into the US right now," says Herbst. "What we're hoping is this investment will lead us to more airlines and more partners that want a direct west coast connection as well as a more direct route to Japan and the Far East."

The new LAX facility, the largest of its kind on the US west coast, can simultaneously handle two B767 freighters full of flowers, according to Herbst. As a result, LAN Airlines is committed to operating six weekly freighters into LAX from South America — three from Colombia and three from Ecuador.

An industry of diverse players and even more diverse climates, all involved in the cut flower supply chain share two core attributes.

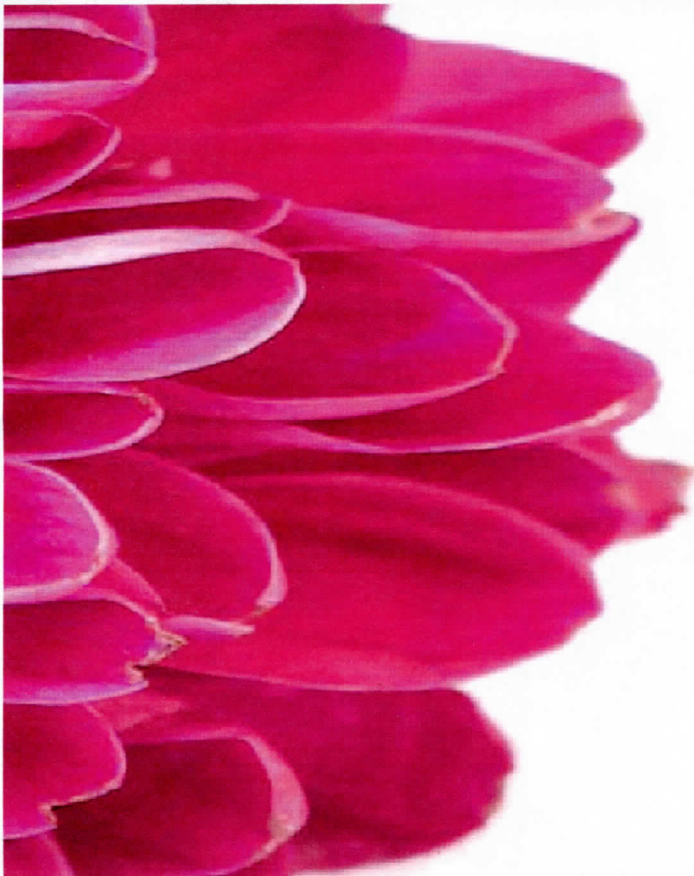
The first is a sense of urgency that swells the moment a flower and stem are cut from their roots. "Everything starts at that moment. Once the day's flowers have been harvested, the hourglass of sorts has started," explains Christopher Connell, president of Los Angeles-based Commodity Forwarder, which transports perishable products worldwide.

The other attribute is a constant search for cool, or more precisely, finding a way to eke out even a few more moments in the cold chain that in theory extends from the fields of Kenya, Israel or the Indian subcontinent to florist shop and ultimately, the dining room vase.

Of course, beyond rough parameters — a rose lasting a week, for instance; a carnation perhaps as much as three weeks — nobody can say with 100% certainty how long a flower will last at its final destination. Indeed, the lifespan of a flower varies within a species, according to experts.

What industry professionals like Connell, Herbst and others try to do is compensate for the uncertainty by governing the variables that they can control.





"Our role is about facilitating the cool chain and minimising the effects of the break in temperatures along the logistics chain," Connell says. "It's all about extending the shelf life of the product, and making sure the flowers are treated appropriately during transit."

Christine Boldt, executive vice president of the Association of Floral Importers of Florida, has been dealing with cold chain issues almost since her mother founded the first woman-owned flower forwarding company in Miami in the early 1970s.

She described the process, beginning at the moment flowers are picked from a field in Ecuador.

"They're packed, quickly you hope, and immediately placed in a refrigerated truck for transport to a cool warehouse at the airport," reveals Boldt. "Once there, they go through a process we call 'pre-cooling,' in which any warm air that might be trapped in the box is vacuumed out. That allows the flowers to cool faster than they would if we simply left warm air inside the package."

The optimal temperature is somewhere between 32 degrees and 38 degrees fahrenheit, she said. The problem is there are no refrigerated aircraft. Cut flowers must travel by freighter or in the cargo hold of passenger planes, which may be cool or may not, but in any event are nowhere near the optimal temperature.

The industry's solution is schedule flights so that 98% of the world's cut flowers fly to their destination airports between the hours of 10:00 and 06:00. The flight from Ecuador to Miami takes three and a half hours.

"That's why, in addition to having a relationship with your local airport, you have to be in constant contact with airports thousands of miles away, to ensure their facilities stand up to the cold chain as well," adds Boldt.

The relationships forged by frequent concern and contact over the cold chain led directly to Colombia's decision to build new refrigerated export facilities at both its Bogota and El Dorado airports, she said.

"We are their main customer," enthuses Boldt. "There's no question that one of the main drivers behind the decision to invest in the facilities was the importance of the cut flower industry."

Today, several air carriers bring cut flowers into Miami, including LAN, Tampa Cargo, Aero Air, Centurian, Ups Air Cargo, and DNL Cargo.

Once on the ground, the carriers pull directly up to their respective refrigerated warehouses, and await inspection by the US Customs Service. Thanks to early efforts by the Association of Floral Importers of Florida, inspections take place right inside the cooled warehouse and inspectors are available on a 24-hour-a-day, 365 days a year basis.

In addition, the association eliminated the need for individual brokers to pull a sample for inspection; instead the air carriers have agreed to act as the brokers' agent.

Those steps significantly streamlined the inspection process and allow the flowers to be cleared much faster. The next step in the cool chain is another pre-cooling and then release to warehouse, where shipments are broken down either for shipment to another international location or are placed on refrigerated trucks for domestic distribution.

"Around 20 or 30 years ago, people didn't understand the movement of this product and the need for speed and maintaining the coolness," admits Boldt. "They do now and, as a result, I think our flowers are a lot more long lasting today."

Amidst this backdrop, Amsterdam Schiphol is looking well beyond its own facilities, and now considers its primary role in the cut flower supply chain as that of 'facilitator', says Enno Osinga, the airport's senior vice president.

"We never touch the flowers ourselves. In fact the only time I touch flowers is when I buy them for my wife," smiles Osinga. "But what we can do and what we try to do is bring together the airlines and the expeditors and others who do handle the flowers, to work out bottlenecks in the system and see how we can expedite the process."

Located just a stone's throw from Holland's legendary floral auction houses, Osinga says cut flowers are flown into the airport from Latin America and Africa overnight and on sale in one of FloraHolland's six main auction houses by 05:00.

Three hours later, the daily auctions are over, and the flowers are either being driven back to the airport, or are headed out on refrigerated trucks to the rest of Europe.

Given the pace of the activity, Osinga says that Schiphol and its tenants (companies like KLM and Martinair) have worked hard to ensure that they have more than enough capacity to handle the constant flow of delicate cargo.

"It's something we're all always trying to improve upon," noted Osinga. "Martinair, for instance, has built a dedicated fast track facility where the first pallets are being loaded on a truck bound for the auction before the last pallet is even off the plane."

To make it work, Martinair has partners in South America who serve as "authorised economic operators" inspecting the cargo and completing all relevant paperwork before the flowers depart for Holland. Upon their arrival at Schiphol, customs officials review the documents and send the flowers on their way, with no further inspection necessary.

To help speed the flowers to and from the auction, Schiphol has also worked with Amsterdam authorities, freight forwarders and other industry stakeholders to facilitate road improvements around the airport.





"We've had a massive road programme underway, cutting the trip back and forth to the auction house from roughly 45 minutes to 20 to 30 minutes, depending on the time of day," Osinga adds. "For instance, we just doubled the width of the provincial road, which was very challenging because of all the tunnels we have around here, meaning we had to build bridges as well. We also currently have a tunnel project underway in the city that will help smooth the traffic even further."

Joe Reedy, vice president of cargo sales and marketing for American Airlines, which transports cut flowers from Holland, Colombia, Ecuador and Guatemala aboard its passenger aircraft to any market it services, described the activity as "an important piece of our business".

"That's why we've invested in our own cool perishable programme," says Reedy. "While we're a small player, because we don't fly freighters, we nevertheless see it as important to be part of a multi-billion business, and whether it's at Heathrow or another stop on our network, we're constantly trying to make improvement to our cooling and service operations."

As important as the Holland auction houses remain, the creation of new flower hubs, in Dubai and in Miami in the US, is bringing changes to the industry.

Today, it's just as likely that an importer of specific types of cut flowers — roses, for instance — will place an order directly with a grower. With large supermarket chains and even Wal-Mart selling an ever increasing number of flowers, the retail mix is changing.

"I think Europe will always have more of an auction house focus, but here in America, I think you're seeing more retailers reach out to wholesalers," says Connell.

"At the same time, I think we're also seeing a lot of small to mid-sized growers create groups or consolidations that then send a forwarding agent to the destination countries for their product, who establish a logistics chain and set a more direct flow of flowers in motion."

For his part, Osinga believes such developments make sense. "Clearly, if you're going from Latin America to the United States, and you're moving a perishable product, the more direct you can go, the better," he says.

"So that's changing distribution patterns, but at the same time I think that only works if you want one particular type of flower because individual growers are so specialised these days. If you're looking for a wide variety of flowers, the auctions are still the place to go because they have everything."

Sustainability and the drive for 'greening' the supply chain are also having an impact on international supply chain patterns.

Whereas once the industry was dominated by Dutch growers who grew their flowers in greenhouses, there has been a growing realisation that those methods are incredibly inefficient from an environmental point of view, due to the amount of energy needed to create hospitable growing conditions.

In fact, today many 'Dutch' roses are actually grown in Kenya, Tanzania, Ethiopia and Uganda.

"On balance, when you compare relying on greenhouses with growing the roses in natural circumstances and then flying them here, growing in Africa is far more sustainable," notes Osinga.

But the shift of production to Africa, among other factors, has also brought a new threat to the industry — the spectre of more flowers moving by sea, particularly between Ethiopia and the countries along the Mediterranean.

"It seems contradictory to me to use slower moving ships when everything in the industry has been about speeding the process up, but what I've heard it that [shipping lines] are trying to develop techniques to effectively put certain types of flowers to sleep," reveals Osinga.

"That could divert some flowers from Amsterdam, but in flowers, freshness is everything and we're all judged by how long something lasts in the vase. If you can cut one day from transit, I think you can safely assume it would result in the flower lasting one day longer at its destination."

And Schiphol's not simply standing by in the face of these shifts. In the guise of its role as supply chain facilitator, it regularly sends personnel to African airports to see what can be done to strengthen the cool chain at its African source, and bring their air cargo facilities up to speed, figuratively and literally.

"Mainly it's about making sure they have cool capacity," concludes Osinga. "Cool, cool, cool is everything when it comes to flowers."