



THE LOADSTAR

LongRead

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The Flower Story



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The flower industry and logistics firms working in this space are used to volatility, but the rollercoaster that weather conditions created in the first half of 2018 has been hard to stomach

Inside

Flowers by numbers

Holland Flower Alliance

Flower growers in Kenya enjoyed record output in the first two months of the year, only to see production plumb new depths over the following months.

Thanks to the powerful momentum in January and February, Kenya's horticulture exports in the first four months were up 40.4% in terms of revenue to KSh56.83bn (\$564.63m), but the following months brought a sharp contraction.

"It's been a year full of turmoil for African growers," says Conrad Archer, regional head of perishables, MEAC region, at Panalpina.

Growers in South America were also affected by cold temperatures and rain over three months, notes Colin Wells, global head perishables, of Panalpina.

As in Africa, the year had started well in South America. In the run-up to Valentine's Day LATAM Cargo carried more than 9,500 tonnes of flowers, most of it on 163 freighter flights. Air France-KLM Cargo hauled some 7,000 tonnes of flowers out of Latin America in the first four months of the year.

Much of this was driven by Valentine's Day and women's days, which pushed up volumes 15% above last year's

levels, reports Enrique Falcon Deville, AF-KLM Cargo director South America.

Seasonal spikes are massive, especially Valentine's Day and Mother's Day. Miami-based forwarder Flora Logistics usually handles 3,000-5,000 boxes of flowers a day, but the seasonal highs generate 10,000-15,000 boxes a day, says Linda Nuñez, director of sales and marketing.

For most Kenyan rose growers, Valentine's Day accounts for 30% of their annual sales, according to the Kenya Flower Council.

After the problems of recent months, players are hoping for a better run for the remainder of the year. Conditions in Africa improved in August and strong volumes are predicted until October, and possibly beyond, believes Andy Leslie, group chairman of Network Airline Services (NAS).

Falcon notes that the industry has managed to curb the volatility in recent years. Better organised production, combined with a mild climate brought more stable volumes throughout the year, which in turn has helped stabilise demand for flowers, he says, adding that this has fostered more long-term relationships and helped airlines sustain capacity more evenly.

The traditional growing areas continue to dominate the market – notably Kenya in Africa, and Colombia and Ecuador in Latin America, but growers in some other countries are vying for a slice of the business.

Chile and Peru

In Latin America, Chile and Peru have come into the picture, says Waldo Fuentes, regional manager, cargo sales – Andean region, of American Airlines. Chile has been exporting flowers for a few years, while exports are just starting in Peru, he says.

In Africa, Ugandan growers are targeting the European market. NAS, which operates widebody freighters between Europe and Africa (including dedicated flights carrying perishables for Kuehne + Nagel), moves more than 500 tons of flowers and vegetables a week out of Kenya, and about 200 tons of produce, fish and flowers a week out of Entebbe. Flowers out of Uganda (chiefly roses) make up a small part of the lift out of Entebbe and are growing at a slower pace than flower traffic from Kenya, Leslie says.

Developments on the receiving end are more pronounced, although north-south trade patterns still dominate the picture. The lion's share of Kenya's output goes to Europe. The Kenya



Flower Council claims that one in three roses sold in Europe originates in the African country.

Likewise, exports from Latin America are primarily going to North America. However, China has emerged as a lucrative and rapidly growing market that flower exporters in Africa and

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Latin America are increasingly looking to serve. According to Archer, flower traffic from East Africa to China has been growing by 30% a year and looks set to continue on this trajectory.

On China's Valentine's Day (also known as Qixi Festival, which fell on August 17 this year) the Kunming International Flora Auction Trading Centre, which claims a share of 70% of the flowers traded on the day in the Middle Kingdom, sold about 48 million flowers, worth more than Rmb47m (\$6.9m).

"Demand in Asia, especially Japan and China, is growing rapidly," says Falcon.

The flow of African flowers to China reinforces a trend on the European scene that has seen a growing share of flowers bypass the giant flower auction at Aalsmeer in the Netherlands. Large retailers and groups of florist shops

increasingly buy directly from producers.

Even for Royal Flora Holland, which runs the Aalsmeer auction, direct sales now make up more than half of its revenues. In 2017 its auction sales generated €2.05bn (\$2.38bn), down 3.5% from the year before, while direct sales produced €2.6bn, up 5.1%. This shift has repercussions for flower logistics.

"A trend we see is that slowly direct connections between flower exporting countries and the rest of the world are starting to develop," reports Bart Pouwels, head of cargo of Amsterdam Airport Schiphol. Flowers are now not always flown over Amsterdam, but directly to China, for example. Within Europe, flowers are trucked from Amsterdam to other parts of the continent

Apart from new routings, logistics providers have to deal with different approaches from large importers. Some mass market retailers consolidate at origin, others at destination, Archer says. If they mix flower shipments with other perishables, this can cause ethylene build-up in transit.

Challenges

For flower exporters the weather and shifts in markets have not been the only challenge this year. Rising airfreight costs have been an issue, particularly for Kenyan growers, where rate increases have been compounded by a change in airlines' pricing strategy.

During the global economic downturn freighter operators stopped volumetric charges out of Kenya. Now they are reverting to the old approach, which

Valentine's Day and Mothers' Day 2018 pushed up flower volumes 15% above last year for AF-KLM Cargo



translates into a rise of 10-15% in costs for shipping large-headed roses, the most popular type. This is on top of a 10% rate hike earlier on, Archer notes.

Some maindeck capacity has left the market in pursuit of greener pastures, but finding capacity has not been a problem.

"We had excess capacity since March, due to record low production of perishables," Panalpina's Archer says, adding that he is not expecting to see a shortage of lift in the foreseeable future.

However, direct capacity is more problematic when it comes to serving new markets directly. Neither Kenya nor Latin America's flower-producing regions have direct links to China, but this has not stopped Ecuador from overtaking Thailand last year to become the top supplier of cut flowers to China, in terms of value.

Transits and interline arrangements are on the rise. To supplement its freighter lift out of Quito and Bogota, Air France-KLM is using interline partnerships to feed perishables to its widebody flights serving holiday destinations in the Caribbean, which operate on a daily basis for the most part. This accounted

for 1,000 of the 7,000 tons of flowers the carrier moved out of Latin America in the first four months of this year, Falcon explains.

The airline has also carried flowers to Australia in tandem with China Southern Airlines, he says. He believes the use of interline partnerships will increase.

Raising the bar

The additional transits and the longer distances raise the bar for cool chain efficiency. American Airlines has invested in coolers in a number of transit stations, including Philadelphia, Dallas/Fort Worth and Miami, Fuentes reveals. The Florida gateway is far and away the most important one for flowers, though. Between 80% and 90% of the carrier's haul of flowers out of Latin America is routed through Miami.

The airport handled 230,249 tonnes of flowers in 2017, 89% of the total flower imports into the US. It has 41,910sq metres of refrigerated warehouse space. Flora Logistics operates a warehouse at the airport with 38,000 sq metres of refrigerated space with six temperature zones. The company supplies clients across the nation, but the bulk of the imports are for Florida.

"We are continuing to grow and get new customers all the time," says Nuñez.

Amsterdam remains Europe's chief gateway for flowers – not only supplying the Aalsmeer auction but also for air and trucking connections to other markets. Last year it handled 216,450 tonnes of flower imports.

For NAS's freighter operations, Liege is the operating base, but growing congestion there has been an issue, Leslie says, adding that the handling infrastructure is not geared to large volumes of flowers. The company's flights from Kenya are routed primarily to London Stansted, but Doncaster has taken on a growing share of flights, owing to slot restrictions at Stansted and handling capacity being close to the limit.

"Doncaster is cargo-friendly. If we have more flights, we will go there," Leslie says.

Cool technology

Cool chain technology must be applied at origin as well as at transit and destination airports. To make sure flowers start their journey at the right temperature level, Panalpina has deployed vacuum cooling technology in

The Holland Flower Alliance



[Click here to watch Video interview with Bart Pouwels, Head of Cargo at Schiphol](#)

Schiphol

Shaping Europe's smartest cargo hub at Amsterdam Airport

Schiphol

Shaping Europe's smartest cargo hub at Amsterdam Airport

Kenya. This has resulted in a drop of three degrees in temperature when the flowers arrive in Amsterdam.

Flora Logistics has invested in ammonia coolers, which work better than units using freon, Nuñez finds. This keeps ethylene out of coolers and lowers the electricity costs, she explains. And data loggers, to keep tabs on temperature in transit, are widely used.

"We put temperature readers in a lot of

shipments," she says.

Over the past two years Panalpina has worked with an active logging system that keeps tabs on temperature and humidity levels. It uses wi-fi technology for real-time data flow, which requires network points at key transits like export, transfer and arrival stations.

"We are beginning to use it regularly," Archer says. The system can detect deviations from pre-set conditions and

allow the logistics firm to take corrective action as soon as possible, such as cooling down a shipment in question.

Wells adds that the technology also improves transparency, giving shippers better visibility of their cargo.

For the information to flow in real-time to all involved parties, all the relevant data have to be available in digital format and accessible to all parties. Pouwels stresses that

Holland Flower Alliance blazes multiple trails

Flower shippers and importers have unprecedented visibility of their traffic flows between Nairobi and Amsterdam, after a platform created for the Dutch flower auction Royal Flora Holland was linked to the Cargonaut system of Amsterdam Airport Schiphol earlier this year. This allows tracking of every shipment at the piece level, using either the order number or the air waybill number.

Shippers and importers normally do not know the air waybill number, as this is created at the airport, explains Bart Pouwels, head of cargo of the Dutch airport. The link bridges the gap between the two sides.

"The focus here lies on both data integration and digitisation. Our next step is to actively monitor temperature control on these flower shipments, as well as expanding the range to other important flower routes," he said.

Work is also in progress on the creation of an app that will allow users to track flower shipments from mobile devices.

These solutions are among the first accomplishments of the Holland Flower Alliance (HFA), which was established in the summer of 2016 with the goal of optimising the flower supply chain into the Netherlands and consolidate Schiphol's role as Europe's premier gateway for flower traffic.

The HFA was formed by Royal Flora Holland, Schiphol and Air France-KLM Cargo, with the backing of the Dutch government. Among the participants in the initiative are two Dutch universities to provide the academic firepower to model solutions.

The data logging effort ties into performance measurement and process improvement, which is one of the key objectives of the HFA. A better cool chain extends the shelf life of the flower and also strengthens the standing of the Dutch corridor in global flower logistics.

"We are now working towards a KPI framework on handover



moments in the cool chain of fresh cut flowers. We believe there should be protocols that are agreed upon by all partners in the chain," says Pouwels.

Packaging plays a fundamental part in the flower cold chain and offers significant scope for improvement, as a large array of different boxes are currently in use.

"We are working hard on creating the 'ideal flowerbox,'" Pouwels reports. "The challenge here lies in the acceptance of the users of the box. Therefore it is paramount that we include all stakeholders in this discussion. Over the last year we have organised multiple workshops, both in the Schiphol area and in Nairobi, to get input from multiple stakeholders. This has led to a prototype box which we plan to pilot very soon. Moreover, for the second year in a row we will be hosting a packaging related panel at Flower Logistics Africa in Nairobi in November."

The HFA project is part of an overarching 'Smart Cargo Mainport Programme' (SCMP) to improve cargo flow through Amsterdam, alongside other drives like the 'Pharma Gateway Amsterdam' undertaking. The data sharing concept was developed under the umbrella of SCMP, Pouwels notes.

"The need for data integration and digitisation is not solely profitable for the perishables industry, and the learnings and successes we try to copy to other verticals as well," he says.

digitisation is critical.

“The Holland Flower Alliance is in full swing to digitise the flower chain and integrate data as much as we can. This can only be done if all parties in the chain are able to acquire the information they need to operate their part of the business as seamlessly as possible. It’s about getting the right piece of information at the right time.

“This may sound easy, but is actually quite complicated, as each partner needs to open up information resources in order to completely optimise the logistics chain. It really is an end-to-end chain effort, and we need each and every party if we want to succeed,” he says.

However, Fuentes still sees some reluctance to invest on the growers’ side. “They see it more as a cost than an investment,” he says.

Wells notes that digital platforms for perishables are emerging and that customers in Europe have expressed an interest in having a single platform for all relevant documents. Panalpina wants to take digitisation to another level.

Blockchain

“We’re looking at the application of

blockchain technology within the flower sector,” he says.

Aligning systems and physical processes to improve the cool chain requires protocols, standards and key performance indicators, which is a huge task for a rather fragmented industry.

‘Each partner needs to open up information resources in order to completely optimise the logistics chain’

Bart Pouwels, head of cargo, Amsterdam Airport Schiphol

Some companies look to multinational logistics firms like Panalpina and Kuehne + Nagel, which have muscled into the market through strategic acquisitions of perishables specialists in recent years.

Panalpina is moving in that direction, working on global standards for its perishables activities. One objective is to give customers a common

experience regardless of which stations they are dealing with, but it is also about rationalising KPIs, Wells says.

At the same time, the company is engaging with customers to discuss expectations and to work together on cool chain issues. A study of the Kenyan-Dutch horticulture supply chain, conducted a few years ago by Hortiwise, a horticultural training and consulting firm, diagnosed a fragmented scene marked by a patchwork of stop-gaps and work-arounds to cope with inefficiencies (such as re-cooling flowers at airports) and a lack of standards and protocols.




Pouwels wants to see a collaborative approach, carried by a joint sense of responsibility.

“Logistics parties should feel responsibility to take care of these flowers, meaning good temperature control, accurate and real-time data on both shipment and flower levels, creating a KPI framework for correctly monitoring performance and digitising and integrating data within the supply chain,” he says. “It’s important that all chain partners feel this responsibility. It’s only when the whole chain works together that we can really excel.”

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Collaboration

Fuentes also sees promise in collaborative efforts to develop solutions. So far most companies have tended to focus on their own processes, which has produced an array of solutions.

“If we work together, there will be a different perspective,” he says, adding that this should result in lower costs overall. American has been working with seafood shippers on boxes, which has been constructive and fostered better understanding on both sides, he reports.

Panalpina has been running workshops with growers. One positive outcome of this has been the increasing use of skids, which are more commonly employed with vegetables. This brings a lot of advantages in handling and pallet building, Archer says.

Thorny issue

The forwarder has also tackled the thorny issue of packaging, where differing type and size of boxes has made handling rather frustrating. In its workshops Panalpina has come across 32 different sizes, but some estimates are a lot higher than that. The workshops have brought the number in Kenya down to 18, Archer says.

Nuñez has not found too many challenges in the cool chain. The most challenging aspect for her is to get everything cleared in time by the Department of Agriculture and back into a cooler as quickly as possible.

Holiday times are particularly tricky, as the department may be short of staff, so it takes longer to break down pallets and get the shipments cleared, she says.

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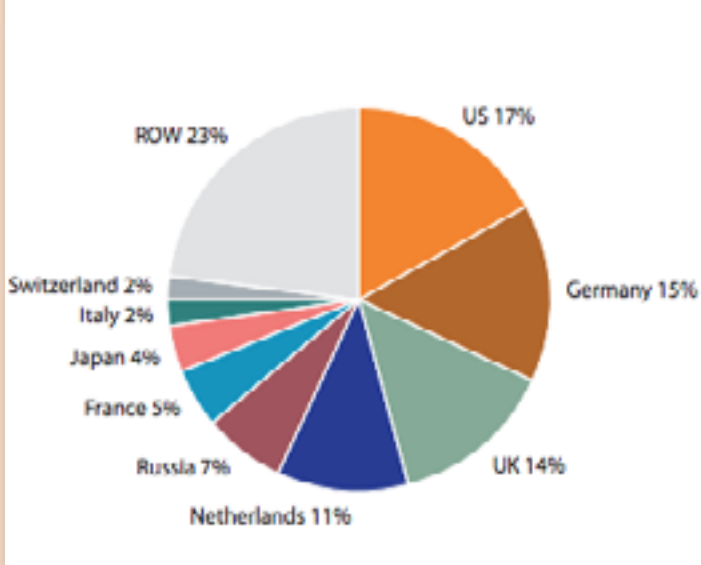
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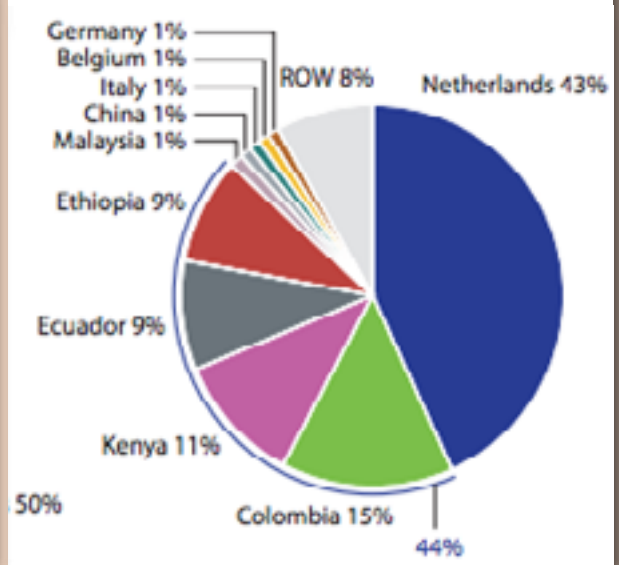
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More flower numbers

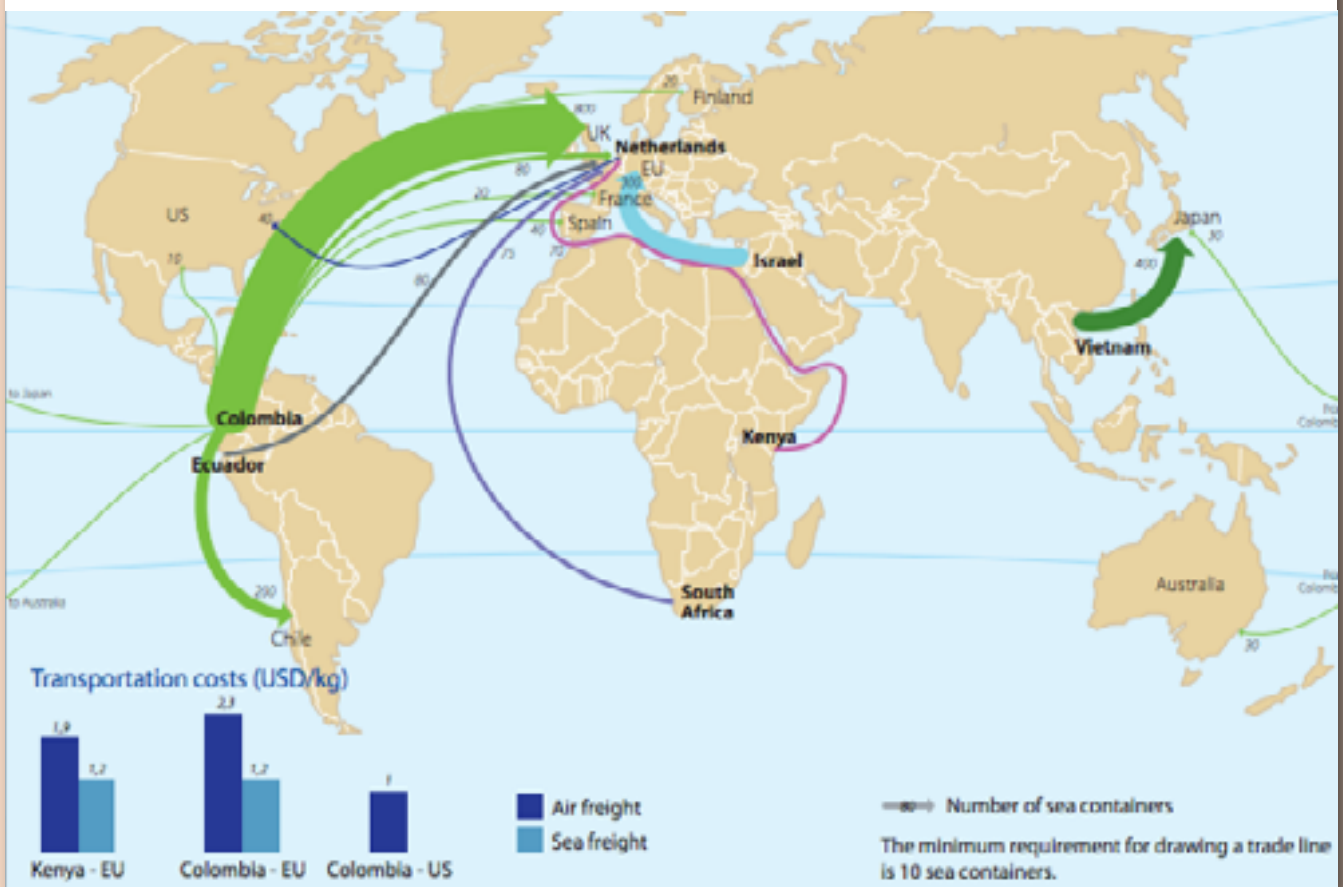
World's largest cut flower importers (2015)



Largest cut flower exporters (2015)



Cut flower trade by sea container (excluding cut foliage)



Source Rabobank 2016 World Floriculture Map / Royal Flora Holland