

# fc*i*

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MAY - JUNE 2019

GREENTECH

**Technological advances  
inspiring action**

DISRUPTIVE TECHNOLOGY

**Precision agriculture:  
more than a buzz phrase**

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VERSUS ECUADOR

**Giants of  
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**14**

Participants

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- 2 Van den Bos Flowerbulbs
- 3 BOT Flowerbulbs
- 4 De Jong Lelies Holland
- 5 Lily Company
- 6 Mak Breeding
- 7 Onings Holland Flowerbulbs
- 8 C. Steenvoorden
- 9 GAV's Lilies
- 10 Gebr. Vletter & Den Haan
- 11 VWS Flowerbulbs
- 12 World Breeding
- 13 Zabo Plant
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## DISRUPTIVE TECHNOLOGY

At Fleuroselect's Breeders & Young Plant Producers Conference, keynote speaker Deborah Nas, Professor of Strategic Design for Technology-based Innovation at the Technical University of Delft provided a look into the future and the impact of disruptive technology. She distinguished between first movers and fast followers with the latter fearing tech disruption because they, as most humans, are accustomed to the way the world is and find it hard to give up well-established, proven frameworks.

The first movers in tech disruption are the true pioneers, the daredevils who are ready to take risky challenges. In horticulture, think engineering company Jentjes which in 2007 partnered with Dutch rose grower Marjoland, Wageningen University and Dutch glasshouse sector body LTO to introduce the first robot in a greenhouse. First innovators in the market are often too early in the technology curve and this caused the premature death of Jentjes' rose harvesting robot.

By contrast, ISO Group wasn't the first mover in horticultural robotics, but now are a driving innovator in the young plant industry, just like Dümmen Orange and Visser with their Autostix system.

Whether your company leads or follows, transformational developments are set to disrupt practically every industry and horticulture is no different. Embrace disruptive innovation to stay abreast of the dazzling number of initiatives around the world. In the Netherlands, for example, Enza Seeds is gaining experience with PhenoBot – a robot system for phenotyping vegetable plants in a greenhouse environment using a 3D light field camera.

In the USA, Trace Genomics is a machine learning platform used to identify the factors responsible for driving crop outcomes powered by state-of-the-art techniques and the most comprehensive agricultural soil database in the United States. Utilising robot technology – the new autonomous driving tractors from Japanese manufacturer Yanmar are designed to enhance farm management efficiency, while realising significant labour-savings.

A sizeable number of disruptive technologies hail from Israel, a country with over 700 active agricultural tech start ups. Masters in making the desert bloom, Israeli farmers stand out for their innovative mindset. In this issue, Ziv Kohav, MBA Precision Agriculture at Israeli fertiliser company ICL explains that disruptive technology such as precision agriculture is more than a buzz phrase. Page 12.

Bruce Harnett, managing director of UK-based plant nursery Kernock Plants, also touches on disruptive technology. He says there are compelling reasons for growers to invest in new high tech kit. But, as he found out during his studies for a Nuffield farming scholarship, there are just as many barriers to splashing out on technology. Page 14.

Ron van der Ploeg





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AUSTRALIA

## Nursery industry flourishes with record-breaking year

Increased grower confidence and consumer demand for greenlife resulted in the sale of around 1.9 billion plants last year, according to Australia's latest Nursery Industry Statistics 2017-18 survey report.



The report assesses data from more than 290 nursery growers across Australia. NGIA Chief Executive Officer Peter Vaughan said the total value of the nursery industry grew by approximately five per cent to \$2.4 billion from 2015-16 to 2017-18. "This is a very positive result for the industry and reflects wide-

spread sentiment that interest in, and demand for, greenlife continues to grow here in Australia." Vaughan added, "Importantly, more than 80 per cent of growers surveyed said they were optimistic about the future of their industry and anticipated that product demand would increase over the next five years."

Business investment in Australia's nursery industry was also up this year, with six out of ten growers investing in infrastructure, new technology or education and training.

Vaughan said the survey found that the nursery industry employed approximately 25,000 people across 1,651 production businesses. "Similar to the previous survey, businesses with a turnover greater than \$2 million represented 21 per cent of the industry, but accounted for 72 per cent of total national turnover," he said.

However, it also found that a number of micro businesses had experienced increased growth in the past year, enabling them to move into the next turnover bracket. "While a large percentage of national turnover is generated by larger businesses, it's great to see smaller family owned and operated businesses

diversifying their operations and expanding," Vaughan said. The decision to incorporate key greenlife customers such as landscape businesses and independent retailers in the 2017-18 survey had helped to validate the findings. "Now in its second year, the survey continues to go from strength to strength. Grower participation was up 32 per cent providing a more accurate snapshot of the supply chain. The results confirm the important role that the nursery industry plays in greening and cooling our communities, as well as its contribution to the nation's broader food, fibre and foliage industries," Vaughan said. He concluded by saying that the next step of the project is to release a new and improved business benchmarking tool, which enables growers to measure their financial performance and inform future decision-making.

SPAIN

## Spanish court denies request to eradicate Xylella trees

In Spain, the Alicante-based Court of Justice has for the first time denied local authorities' request to access two parcels of land in Beniarda and Alcalali. The autonomous region of Valencia asked for permission to enter the properties to uproot trees affected by the plant bacteria *Xylella fastidiosa* as sanctioned in the official Eradication Plan.

Deliberating the case, the Court clearly took into consideration the arguments of trade bodies Asja and Axfa which called eradication a totally disproportionate measure. The Court also gave weight to the fact that in both in the Balearic Islands and Italy, *Xylella fastidiosa* has been wreaking havoc for six years and authorities there are currently adopting a programme to demarcate areas, separated into an infected zone, containment



zone and a buffer zone. In these demarcated areas, only affected trees are eradicated whilst leaving healthy specimens untouched.

INDIA

## HortiPro India announces second edition

PUNE, India: After the successful completion of its 1<sup>st</sup> edition, HortiPro India is now proud to announce the 2nd edition of India's biggest International Exhibition and Conference on Plants, nurseries, landscape, floriculture, green & poly houses, arboriculture and everything in between, scheduled from November 14-17, 2019 in Pune, Maharashtra, India.

Organised by India's Nurserymen Association and endorsed by the Maharashtra Nurserymen Association, HortiPro India is an international exhibition and conference designed to encompass contemporary agriculture, horticulture, floriculture, arboriculture, agri-entrepreneurship and its processing using high-end technologies, along with best practices that can profoundly help countless farmers and platform owners. The event is set to take place at the

Hindustan Antibiotics Ltd. Ground, Pimpri in Pune, India. Probably one of the most well-known companies in the Pune region is Rise n' Shine. This is s an ISO 9001-2015 certified supplier of tissue culture plants sold to breeders and young plant producers around the world. They grow 40 million plants annually and have forged relationships with Dümme Orange, Montiplanta (Portugal), Darwin Plants, Kultana Orchid (Thailand), Corn Bak and Bock Bioscience.



## Jardiland offloads 11 stores to satisfy French competition watchdog

French agricultural cooperative InVivo Group, which in 2017 revealed its plans to acquire the French garden centre chain Jardiland, will sell off eleven stores over the next 12 months to satisfy the Autorité de la concurrence, the French competition and markets authority.

The French competition watchdog expressed concerns about the proposed deal, warning InVivo Retail Group (selling under the Delbard and Gamm Vert brands) that the acquisition could lessen competition, increase prices and reduce quality. To recreate the competitive rivalry which may be lost through the acquisition Jardiland will offload 11 stores (selling off five and terminating franchise contracts on six) over the next 12 months. Recently, the first three Jardiland stores changed ownership with outlets in Poitiers, Limoges et Montélimar being taken over by French garden centre chain Truffaut. According to InVivo the acquisition of Jardiland will see three complementary chains capitalising on their synergies while each is maintaining its brand identity. InVivo Retail's objective is to develop its network of garden centres in Europe with Jardiland, Gamm vert and Delbard.

### Jardiland

The leading garden lifestyle brand: well established in major cities and in Ile-de-France,

Jardiland provides an affordable offer focused on easy garden lifestyle, decoration and pets. In mid-2018, the Jardiland brand generated €750m in sales with 2,800 employees in its branches.

### Gamm vert

The local brand that promotes growing your own: with more than 1,000 points of sale, Gamm vert is the #1 local garden centre company in France. While consolidating its promise "Growing your own changes everything!" Gamm vert's ambition is to reinforce proximity, meeting needs at a truly local level, especially in rural areas. Sales under the Gamm vert brand totalled €1.24 billion in 2018.

### Delbard

The plant expert: always popular with nurseries and professional gardeners, Delbard will enhance its position as the brand of choice for all those who are looking for exceptional plants. At the end of 2018, Delbard & Affiliés had 43 franchised stores and 143 affiliated garden centres. The turnover of the Delbard & Affiliés network was €265m.



## DISRUPTIVE TECHNOLOGIES IN HORTICULTURE

Fourth generation **Jan-Dieter Bruns** is CEO of one of Germany's leading plant nurseries Bruns Pflanzen.

Disruptive technologies change everything, be it the steam train, the car or, in today's world, the smartphone. New technologies will also bring about significant change in our industry.

Nursery stock business is the long term variant of ornamental horticulture. While bedding and balcony plants are produced on a weekly basis, tree nurseries count in years and decades. In this context, disruptive technologies are more likely to be expected in other segments of horticulture than nursery stock trade. However, there have also been impactful changes in the nursery stock sector.

Take containerised production that has allowed for 'industrial' production. Beyond qualitative questions, this type of cultivation has brought with it an intensification of the growing area. Also, it enabled a supply of plants throughout the year, decoupled from the seasons.

Today, modern techniques are designed to reorganise our horticultural activities. Glasshouse production allows fully automated on-schedule control of crop flowering time, leaf colour, etc. Due to digitalisation, the production parameters are now more targeted. By accurately locating crops, GPS enables greater automation of plant cultivation in the production fields. Just a few years ago we would not have even thought about this. The same applies to the dosage of pesticides which can be applied with the help of modern technology that is more targeted than ever. Therefore, health and safety at work have also entered a new phase now.

Disruptive innovations have also had an impact on "gene-editing" with the so-called CRISPR/CAS method. It is currently illegal, although this could be a mistake especially in the context of climate change and the associated invasion of quarantine pests. If it were possible to modify the plants in such a way that they would be immune to pests, a real revolution in terms of plant protection, plant health and plant suitability could be initiated.

Further disruptive technologies are waiting in the wings. The idea to develop a plant app that analyses the health and nutritional status of plants with only the help of a photograph can bring immense benefits and efficiency gains in our operations. There will surely be further revolutions in the cultivation of plants. What will always remain is our customers' changing taste, the special characteristic that our product lives and the fact that it is indispensable for a healthy environment. In addition, even in 100 years, a tree will only be able to be produced according to its normal vegetation cycle. So, hopefully, despite climate change, we will have four growing seasons.







# 'Sometimes there is better value when the events are separate'

With GreenTech taking place in June this year, growers have only had to wait 12 months since the three-day horticultural exhibition was last staged at the RAI in Amsterdam. FCI talks to RAI director of horticulture Mariska Dreschler about what's in store.

AUTHOR: SPENCE GUNN PHOTOS: DIMITRIOS FOS

## **What was the reason for moving Greentech from a biennial to an annual format five years after the show was first held?**

"It's because of the speed with which horticultural technology is advancing. The pace of development has really become much faster in the last few years. Technology is the main focus for GreenTech, so we wanted to be able to keep visitors as up to date as possible. We work hard to present advances in technology in ways that will inspire the industry about the future and enable our visitors to learn and understand what the future holds – how to future-proof their businesses."

## **How has the show grown since the first event in 2014?**

"Exhibitor numbers have increased steadily, by over 50% to more than 470 this year, with the most innovative companies from around the world taking part. Being able to meet them all under one roof makes it easy for growers to find answers to the latest challenges in crop production, to find the new technologies that will enable them to produce more efficiently and effectively. We also have a comprehensive knowledge exchange programme through our 'Summit' on GreenTech's second day, and through our daily 'theatres' which are a series of short technical presentations on some of the current key challenges for growers."

## **What was the thinking behind the theme of autonomous technology for the 2019 Summit?**

"Autonomous technologies and the ability to connect sensors and equipment using the internet, the so-called 'internet of things', is fast becoming the normal way to work and this is reflected across GreenTech – it's what many of our exhibitors will be talking about to the show's visitors. It follows up on last year's Summit, which looked at where artificial intelligence (AI) and internet

## QUICK FACTS

**Exhibitors:** 470+

**Visitors:** In 2018, 15,000 industry professionals from 112 countries.

**Dates:** June 11-13 2019

### **Opening hours:**

Tuesday 11 June 2019	10:00 - 18:00 hours
Wednesday 12 June 2019	10:00 - 18:00 hours
Thursday 13 June 2019	10:00 - 17:00 hours

**Venue:** RAI Amsterdam, the Netherlands.

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connectivity is taking us and where horticulture will be in 10 years' time. Growers are, for example, already routinely using root-zone sensors to monitor and control nutrient levels, and by then we'll be able to measure every aspect of crop production. Speakers will also highlight the technologies that horticulture could borrow from other sectors, such as shipping, and discuss the threats or benefits that AI presents to different cultures around the world in countries where horticulture is a significant industry."

## **You have used the phrase 'beyond the green thumb' to describe the theme but does that mean growers' skills will no longer be important?**

"What won't change is the human factor and we will be talking at the Summit about how that and automation will fit together. We will always need the grower's skill, and growers will need new skills. 'We know a lot of growers are looking at the opportunities medical cannabis offers'



**Four themed pavilions will see companies grouped together which specialise in kit and equipment for: vertical and indoor growing organic production precision agriculture; and medical cannabis. Why is it the time right to feature this crop?**

“The market for medical cannabis is beginning to develop more in Europe as well as in other regions due to changes in government policies and we know a lot of growers are looking at the opportunities it offers. The role for GreenTech is to bring growers and equipment suppliers together to ensure the crop can be grown using the best available technology and materials. The companies who supply growers in the protected vegetables and flowers sectors already have the expertise required for cannabis-growing facilities.”

## GREENTECH SUMMIT

Autonomous technology will be the focus of attention at GreenTech's Summit 2019, which will be held on the second day of the ALPH-approved trade fair in Amsterdam. Announced as keynote speaker is corporate anthropologist Jitske Kramer who travels the world searching for ways to build strong tribes and reinforce the relationships between people. Kramer will give attendees great insight from an outsider's perspective.

The summit will also include a presentation on autonomous ship technology (two weeks after GreenTech RAI hosts its Autonomous Ship Technology conference).

One session will be focused on talking about autonomous greenhouses, based on research from the Netherlands' prestigious Wageningen University.

**‘WE KNOW A LOT OF GROWERS ARE LOOKING AT THE OPPORTUNITIES MEDICAL CANNABIS OFFERS’**

**Are GreenTech's organisers exploring ways to offer more sources of information besides the three-day event in future?**

“We'll be expanding the physical exhibition further but have also started to see how the website could offer more information and matchmaking between growers and suppliers all year round. In the meantime, we're encouraging visitors who register in advance for tickets to GreenTech this year to use the 'matchmaking app' which, by entering details of the topics they're interested in, will point them to the exhibitors and exhibition features that are likely to be of most relevance. It will even help visitors to set up appointments in advance so that they can really plan their visit to get the most out of it.”

**What else is there to look forward to?**

“There will be a few other ways we are planning to surprise our visitors this year but you'll have to attend to find out!”

**Are you ever likely to team up at some point with the International Floriculture Trade Fair (held close to Amsterdam in November)?**

“We are always open to joining forces with other exhibitions if it adds value for the exhibitor and visitor, but sometimes there is better value when the events are separate and focus on different aspects.”



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# Drivers of a revolution

Precision agriculture is more than a buzz phrase. It is a multi-faceted advancement, made by vastly different players, with very different objectives.

BY ZIV KOHAV, MBA PRECISION AGRICULTURE ICL\*

**P**recision agriculture is developing at an accelerate pace. Researchers expect a compact annual growth rate (CAGR) of more than 20% between 2018 and 2025. This estimate is based on known megatrends: population growth, tightening of agricultural regulations, deeper agronomical understanding, expansion of agricultural knowledge and technological advancement. Improved artificial intelligence and new deep learning algorithms are ushering in new services. It is easier to think of disruptive innovation-driven change as a coherent process, a coalesced, one-front wave of technological breakthroughs and market responses. However, I would like to offer a different perspective, showing this change process is, in fact, a multi-faceted advancement made by vastly different players with very different objectives.

## VARIOUS STAKEHOLDERS, DIFFERENT MOTIVES

The motives of various stakeholders in digital/precision farming are quite different. Economic



considerations, from which most decisions in modern agriculture are derived, demonstrate this: while commercial companies seek to maximise profits, growers also seek to maximise their revenues. Distribution of profits from precision agriculture among stakeholders is not expected to be equal.

Input companies are expected to lose a considerable portion of their profits due to the selective and differential use of chemicals and water where precision agriculture is practiced. The new digital agriculture services offered by input companies are not expected to cover the difference. Farmers, on the other hand, are expected to benefit in two ways from the reduction in agricultural inputs and increase in crop yield and quality, which may support higher prices. Technology companies are expected to benefit from the move to precision agriculture: some will end up being acquired by bigger players and some will exist independently serving a new market. Agriculture regulatory bodies, representing public and ecological interests, are expected to benefit from increased sustainability and

this can be presented in economic terms. If there is no increase in revenues for input companies, then logically, they should shy away from entering precision agriculture altogether. But they do the opposite; they charge full speed into this new field, invest in start-ups, purchase technology and offer new digital services. The grower, who stands to gain the most from these new technologies, often stalls, taking a conservative, cautious approach to adopting these new services.

## CONSERVATISM

This conservatism on the growers' side can be explained by the high risks involved. Many precision agriculture tools offer support for agricultural decisions: what to sow and when, how much to fertilize, how much to water, what to spray and when, where to do soil/leaf tissue sampling and how to interpret the data. But the decisions that growers make impact their livelihood and mistakes carry a high cost for growers and their families. Growers will not put pivotal decisions in the hands of technology alone any time soon. Trusting a computer stands in

\*'Drivers of a revolution' by Ziv Kohav was first published in the May 2018 edition of IsraelAgri's digital magazine entitled Precision Agriculture. FloraCulture International has obtained the publisher's permission to reproduce the content. To read IsraelAgri's entire magazine please visit: [www.studio-appel.com/ebooks/nobel/precision\\_agri/mobile/](http://www.studio-appel.com/ebooks/nobel/precision_agri/mobile/)

PHOTO: NATALY COHEN KADOSH







## A RECORD LABEL FOR PLANTS

**Kim van Rijssen** works for Plantipp BV, a Dutch company specialising in royalty management. Kim spent eight years in Beijing.

It's like a record label for plants. This is the ending of my elevator pitch when people ask me what I do for a living. Plant royalty management is not exactly a term that sticks.

A record label should enable musicians to earn money from their songs and protect against illegal copying. Labels also manage logistics and marketing so that the artist can focus on their creative work.

Our business does pretty much the same and aims to generate long-term royalty income for breeders from plant cultivars they create. We protect their plant by Plant Breeder's Rights and Plant Patent and manage the licensing. Promoting their plants internationally is also part of our job.

There is a constant need for innovation with plants. Not just for the ornamental aspects such as new flower colours. It's also about creating cultivars that can meet the needs of our time. Take, for example, drought-tolerant plants. With summers getting hotter and drier, plants for 'water-wise landscaping' are much in demand. Two breeders we work with from South Africa, Quinton Bean and Andy de Wet, develop plants that not only can resist heat and drought but are equally aesthetically pleasing. Their cultivars Aloe Safari Sunrise ('X5') and Agapanthus Twister ('AMBIC001'), are now sold worldwide.

Innovative plant introductions are more than welcome now that boxwood blight is wreaking havoc across Europe. Boxwood has been widely used in gardens but now landscapers are looking for alternatives. For a decade, André van Nijnatten from the Netherlands worked on developing his *Ilex crenata* Globe ('Annys5'). His variety was launched right before the outbreak of boxwood blight. Now *Ilex* Globe is a popular variety to replace boxwood.

Innovation needs to be stimulated. Whether it's music or plants, intellectual property contributes to innovation. And I'm proud to be part of that industry.

stark contrast with the way they have managed their businesses all their lives and the people they have trusted with the major decisions throughout the years. By comparison, technology companies stand to lose very little. In the worst-case scenario technology companies will abandon this particular technology and move on to the next one. For food companies, the risk lies in not adopting new technologies in sufficient time. Traceability along the food supply chain, to achieve better food quality and better food safety, to meet customer demand, can only be achieved with use of technological tools. So, food companies risk losing future business to competitors able to adopt the new tools more quickly. Getting experts and stakeholders from disparate fields to talk to one another and find solutions to challenges faced by the industry is, for the most part, conducive to innovation. In this respect, precision agriculture is prime for innovation.

### CHALLENGES

However, this heterogeneity is a challenge when it comes to application. Technocrats view data as valuable on its own. Growers, however, do not necessarily share this view and only see actionable data as valuable if it leads to measurable results. Technology companies believe innovation is a sufficient reason for adoption. However, growers will only adopt new tools if their profits grow and - if this can be achieved without innovation - so be it. Claims of future benefits do not usually convince growers, especially if these claims are made by startups which may not exist in a year's time. Regulators face other challenges: stricter regulation calling for fewer inputs are good as long as there is no food shortage. However, food shortages may flip any such

decision. Even before that happens, stricter regulation raises costs. With low margin crops, this may lead to unprofitable business which could lead, in turn, to less local supply and higher consumer prices. Any country facing food shortages will forego previously imposed regulations to avert risk. Stricter regulation in agriculture is the right move today but time will tell whether it is sustainable.

### CHANGE IS HERE

Dissemination of agronomic knowledge has played a major role in raising agricultural productivity worldwide. It stands to reason that the next stage in the evolution of the sector comes from data, as witnessed in other sectors. However, not every new technology necessarily heralds a fundamental change in our lives. The Internet brought about a multi-dimensional change, but arguably not every gadget has brought about change, even if based on novel technology. The same holds true for agriculture: colourful satellite maps may not change much in agricultural practices. Auto-steering, deep learning algorithms and artificial intelligence may, however, herald a new era in agriculture. ICL (Israel Chemicals Ltd.) has played a major role in providing precision agricultural solutions for the industry over the years. As a leader in specialty fertilisers with well-known brands such as Osmocote, ICL is committed to providing growers with plant nutrition solutions across the board. Adding analytical tools, sensors and data analysis which reveal actionable insights is a natural move for ICL. Digital agriculture is a revolution which will affect us and our children. From where we stand at the beginning of this change, it is difficult to predict its impact. All we know is that change is here and it will affect us all.

# What to consider before adopting new technology

Few can fail to be tempted by the call of shiny new high-tech kit. And there are compelling reasons for growers to invest, says Bruce Harnett, managing director of Kernock Park Plants, a British producer of young ornamental plants. But, as he found out during his studies for a Nuffield farming scholarship, there are just as many barriers to splashing out on technology.

AUTHOR: SPENCE GUNN

**D**uring the course of 2014/15, he visited different businesses of varying sizes in five countries. He concluded that the main reasons why growers were spending on automation were to overcome issues with labour availability and costs and to improve labour efficiency.

## BARRIERS

The barriers Harnett identified include economics and availability of finance; site logistics; current scale of production; and the perception that the benefits would only be limited. The diversity in batches of ornamental crops in terms of varieties and pot sizes was also a common reason why automation was often considered unviable. "I was impressed by some nurseries not just by the technology itself but the way they had considered how to use it or, just as importantly, where and why not to use it," he says.

He continues, "My study confirmed there are no quick fixes; nurseries are mostly adopting small incremental changes. At the end of the day it's still ultimately about return on investment – understanding when, and when not, to adopt is key to that."

Some growers Harnett visited had found that their investment had not proved to be as helpful as they had initially hoped because other aspects of their set-up had needed modifying. That's why he says it's better to analyse where in your business you want the benefit, and then seek out the technology that would do the job, rather than buy the kit and adapt everything else to it.

## CROP TRIMMER

Kernock Park Plants produces more than 13 million young plants and liners each year from 4.5ha (11 acres) of glasshouses and employs up to 90 workers at peak season. One machine he did come back and buy after seeing it on his travels was a crop trimmer. "We'd seen several over the years that move over the crop but we



went for a model that the trays pass through," he says. "I saw it working on a nursery and realised it would pay for itself in under two years. It doesn't work for everything but will do 30-40% of our crops."

## ROBOTICS

Harnett is involved as an industry representative in grower-funded research on developing robotics targeted at some of the more difficult-to-automate horticultural tasks such as taking cuttings and grading liners. "The kinds of technologies being investigated in this and other projects should help to make robotics more flexible because they are about robots learning to do several tasks," he says.

"It's a long way from being commercial but when it comes off it will offer something for smaller nurseries, freeing up labour for other work."

## NOT NECESSARILY FEWER PEOPLE

The introduction of technology means greater output per person, not necessarily fewer people. "We now have people in jobs that we didn't have time for before, for example we have been able to free some people from routine automated tasks and assign them to extra quality control or better liaison between production, sales and customers so that we can react more quickly to changing situations."

Harnett says he hopes his study has helped growers think about the decisions to take before adopting technology. "Most growers are too caught up in the day-to-day running of the business to be able to step back and look at things in this way so hopefully that is one of the report's benefits," he adds.

## MORE INFORMATION

[www.nuffieldscholar.org/our-scholars/bruce-harnett](http://www.nuffieldscholar.org/our-scholars/bruce-harnett)



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# Breeding the future

## Guzmania

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# ANDANTE BUT PLEASE, NOT TOO MUCH ALLEGRO

An upbeat mood, extremely mild winter weather, busy aisles and a grand opening. Hard not to be caught up in pre spring market euphoria following a visit to Italy's rapidly expanding horticultural trade exhibition MyPlant & Garden (Milan, February 20–22, 2019). There are, however, some signs of weakness that upset the delicate balance in Italy's horticultural industry.

AUTHOR: RON VAN DER PLOEG PHOTO CREDITS: MYPLANT AND RON VAN DER PLOEG

If wood and a mixed bouquet are the traditional gift for a fifth anniversary, then MyPlant&Garden organisers Valeria Randazzo (V Group SRL) and Gianpietro D'Adda, a tree grower from Pognano and head of Myplant's founding board of growers, were spoilt for choice with over 773 exhibitors (+12% compared to 2018) showcasing trees, shrubs, cut foliage and fresh cut flowers on a 45,000m<sup>2</sup> exhibit space. Not to mention the many indoor plant and young plant growers present. Visitors experienced a much expanded exhibition, conference and workshop programme, which focused on key issues affecting the ornamental horticulture and gardening industry.

## EXCEEDING EXPECTATIONS

The event surpassed everyone's expectations with over 20,000 trade visitors (+16.5% compared to 2018). "We have been doing some truly incredible things," said Myplant's trade advisor Marco Orlandelli at the show's banquet dinner, adding that the Italian flower and plant exporters realised a significantly higher export value in 2017, with the value of exports 17 to 20% up, exceeding €832 million (of which ¾ account for nursery stock exports). "I believe that Myplant has contributed to the rise in exports and brought good old Italian decorum to the industry, perfectly understanding that we occupy an important place in the world horticultural market. We have always believed in the benefits of a new horticultural trade show."

By 'we' Orlandelli was referencing seven horticultural industry leaders from Italy: Floricoltura Pisapia, Florpagano, Florsistemi, Nicoli, Organizzazione Orlandelli, Vigo Gerolamo and Vivai d'Adda Gianpietro, who in the early summer of 2014 were tired and disappointed with the iconic Flormart show in Padua, which at that time was quickly losing its lustre. Only a few months later, in February 2015 the group of Flormart *dissidents* held their inaugural show, promising a



'radical change to the Italian horticultural trade show industry' and a brand new home: Milan. And yet, it was not the first time Milan played host to a major horticultural event. From 1988 until 1999 the international horticultural trade exhibition Miflor was held annually in Italy's second largest city.

## GARDEN CENTRES

Commenting on Myplant's visitor profile, Marco Orlandelli (in daily life Chief Executive of Orlandelli Group, a supplier of garden centre benching and display stands) said attendees include commercial plant and flower growers / grower retailers, garden centres, DIY stores, landscapers and architects, garden designers, local authorities and florists. But a pre spring event such as Myplant automatically brings in more garden centre owners (Flover, Olbi, Viridea), managers and buyers. "Italy's garden centre industry is successfully bringing about change. I am pretty confident that in the coming years Italian garden centres will further improve their





quality by, among other things, adopting the range of European standards as used in Northern European garden centres.”

Orlandelli speaks on good authority as the Orlandelli Group runs its own Valle dei Fiori garden centre in Mantova allowing them to test their shopping carts, display benches, baskets and wire-mesh furniture in-house. “Even our garden centre can use some revamping. With this in mind we are currently expanding into a new building that will have a beautiful design. The next generation of Italian garden centres will be fashionable places strongly focused on shopping experience, accessible information and inspiration.” Orlandelli has its own US branch and is familiar with the American style garden centres. “I believe there is room for improvement in the American garden centre industry too. Stores such as Petitti Garden Centre or Bachaman received a major overhaul under our guidance and it’s impressive to see how business can grow by integrating beautiful and efficient layout and displays solutions,” he said explaining that the relatively low number of garden centre chains present in the Italian market is due to a way of thinking amongst conventional Italian entrepreneurs. However, in the past few years a wind of change has been blowing and there’s a new mentality especially among young entrepreneurs.” Things should also be seen in a historical context. Traditionally, independent garden centres or *vivai*, have deep roots in agriculture, are almost always far removed from a city centre and run by farmers, operating on agricultural farmland and struggling with regulation hurdles. The most important of these is the restriction of only being allowed to sell your own produce and not plants from elsewhere. While this provides important tax benefits it’s also a major obstacle to professionalising and expanding business.

#### **PULLING OUT ALL THE STOPS**

Milan is one of the most fashionable cities in the world. To be fashionable requires money. The same applies to being present at a trade show in Milan, having the questionable reputation for being the seventh most expensive city in the world. Nevertheless, exhibitors pulled out all the stops to showcase their product offers.

*Italian garden centre chain Viridea.*

*Inaugural wedding dress catwalk shows.*

For the occasion, three halls of the Fiera Milano Rho complex (12,16, 20) were transformed into one lush, giant garden with beautifully decorated booths vying for attention.

Inevitably, there was more of a buzz at the Garden Centre Experience Centre and the inaugural wedding dress catwalk shows organised by Italian wedding magazines The Real Wedding and Sposa White, held at Myplant’s Décor District area. In its immediate vicinity, the Dutch pavilion – a joint initiative of Charles Lansdorp (previously account manager Italy at the Flower Council of Holland) and the Dutch Consulate General in Milan – was the locale for a series of wedding-themed floral design shows by Dini Holthrop and Paul Dekkers.

#### **THE VANUCCI-METHOD**

Supported by a host of familiar names and new brands and faces the pre spring event featured a varied offer that catered to every taste.

Take Compagnia del Lago, a specialist grower of container-grown Camellia, Azalea and Rhododendron in all sizes and a variety of other acid-loving plants such as Pieris japonica, Kalmia, Daphne and Edgeworthia. From its 30ha site in Verbania Fondotoce, benefiting from Lake Maggiore’s mild micro climate, Compagnia del Lago serves its customers in northern and central Italy. Company owner Paolo Zacchera defines his clients as garden centres, landscape companies and garden services. Exports to nearby Switzerland, Germany, the UK, Netherlands, France and Belgium make up 75% of the turnover. Zacchera, recipient of the 2008 Fabio Rizzi Award\*, explained that annual production currently stands in excess of 120,000 units, including 20,000 Camellia japonica and 10,000 Camellia sansanqua, the latter being a species which is generally smaller with less leathery and smaller leaves and earlier blooms than japonicas. Sales of outdoor Azaleas are currently on the up with a variety of choice in low, ball-shaped, spherical or tree shaped habits.

2012 marked a turning point for Camellia sales when hard frost in Germany, the largest Camellia customer, killed large numbers of plants. A disappointing experi-





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ence for many a German gardener eventually caused a significant drop in demand. Back in 1979, Zacchera, following extensive language courses and travelling around the world, decided to look for a job involving outdoor activity. As he was less attracted to work on his own he decided to found a grower's cooperative -Verbena Fiori which later merged with FlorCoop. Eventually FlorCoop and Zacchera split with Zacchera continuing to operate in the nursery stock business with his own, independent company Compagnia del Lago. Adopting what Zacchera calls 'the Vannucci method' or contract farming, meaning that the company does not grow all plants by itself but works closely with a group of growers who supply a range of different plants, Compagnia del Lago is set on the scenic shores of Lake Maggiore where the local nursery stock industry is rooted in the Renaissance. Wealthy people built large villas with even larger gardens such as Villa Taranto, Villa Bozzolo and Palazzo Pallancino. Zacchera: "Our tall specimen Camellias can be found in most of the region's finest gardens."



Compagnia del Lago.

Commenting on the current state of the industry he says that business "is going andante", but please, "not too much allegro", he is quick to add. "2017 and 2018 brought some recovery following seven years of declining demand. But when the market sees a pick-up in activity we all have our moments of uncertainty. However, I am convinced that we hit rock bottom with Xylella fastidiosa wreaking havoc in the industry. But I believe we can now count on a period of moderate positivism."

Reflecting on the sector's rise in export sales Zacchera says, "That's the rule: if the domestic market is slowing down, growers try to find new and better markets outside their country.

However, it takes time to develop foreign markets, domestic business is far simpler than international business. When exporting you really should rank among the best."

'IT TAKES TIME TO DEVELOP FOREIGN MARKETS, DOMESTIC BUSINESS IS FAR SIMPLER THAN INTERNATIONAL BUSINESS.'

**GREEN BONUS**

The domestic market being in the doldrums, with per capita spending on ornamentals dropping from €70

in the 1990s to €42 in 2017, the Italian government launched the Bonus Verde or Green Bonus, offering a 36% tax deduction for up to €5,000 of the costs incurred in taking care of private gardens and terraces.

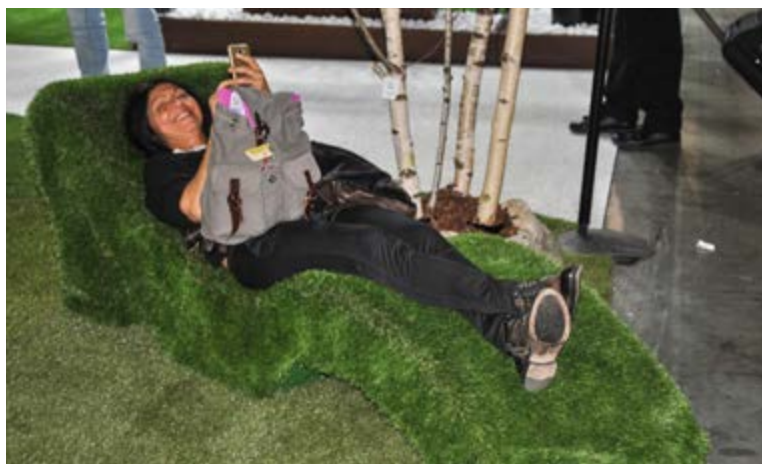
"When someone is ill an emotional touch can bring comfort," says Zacchera. He continues, "Bonus Verde's positive impact is not the financial or economic benefits. It is a matter of psychology. The Bonus suggests that by spending on greenery we can help mitigate the effects of climate change and improve the quality of life

in cities. Where there is no public garden maintenance, privately owned green spaces are not only good for the individual but for all citizens. The Bonus as such is a small step but in the right direction for promoting greenery."

Arturo Croci, founder of Italy's horticultural business magazine Flortonica and seasoned industry expert, believes that so far very few have made use of the Green its Bonus programme as people do not really understand mechanisms (anyone brave enough to dive into the complexity of the Italian tax code will understand) while only a handful of horticultural companies have been active in promoting it. "But Green Bonus definitely does some positive things so such initiatives deserve continuation while on the other hand growers needs to engage with consumers as there's a lack of education about plant care requirements. In its campaign, Italy's National Grandparents' Day for example, has, from the outset joined forces with schools to create awareness about plants and flowers among the new generation and successfully educate them."

**CROSS POLLINATION**

Next to taking a more active role in plant education, Italy's ornamental horticulture sector could also use



more cross pollination between the different players in the value chain. “The mind set of Italian growers still values personal interest over that of the group leaving the sector with a fundamental weakness,” says Croci. The pertinent question is whether the small to medium sized companies that form the backbone of the nation’s horticultural industry can be blamed for living in a country where the government is traditionally remote from the people. Italy’s political scene is in a general state of disorder, whilst the country’s mediocre economic performance, since the introduction of the euro in 1999–2002, and inefficient public administration hinder economic growth and hold back investment. Eventually economic crisis took its toll and iconic plant nurseries such as Lombardy based Antologia, Vivai Sabbionera di Travagliato (Brescia), Vivai Saldini di Novate Milanese, Vivai Gilardelli di Agrate and plant wholesalers such as Flormercati were forced to close their doors. In the country’s epicentre of nursery stock production, Pistoia, Bruschi filed for bankruptcy after which it was taken over by Giorgio Tesi, plant nursery Romiti acquired Tesi Ubaldo whilst Innocenti & Mangoni took over young plant producer Baldacci. Plant grower Zacchera adds, “Each region features its typical produce making it difficult to create synergy. Being a specialist grower of Camellias and Azaleas, I have little in common with the talented and entrepreneurial ornamental Citrus and Kentia growers in Milazzo and Marsala respectively.”

The Achilles’ heel of Italian nursery stock production is the relatively low productivity, Zacchera says. “Labour shortages have impeded efforts to significantly increase productivity. Many SME’s lack the credit score or cash flow that banks request when it comes to introducing automation of production processes. A lack of business profits and low incomes further impedes the introduction of more machinery and automated solutions for nursery stock operations. If we are unable to reach a higher level of innovation than our competitors, it is difficult to maintain business leadership,” explains Zacchera who says that in these times the country’s National Association of Nursery Stock Exporters (ANVE), chaired by Leonardo Capitanio, has emerged as an excellent resource for business support and advocacy, bringing different stakeholders together, fuelling growth and acting as a binding glue.

#### DISTANCES ARE LONG

Italy has 32,000 flower and plant nurseries and its production stretches across 1,500 km, from the Alps in the North to the Hyblean mountains in the extreme south. The country has a variety of climates and soils that allow cut flowers, potted foliage and flowering plants, alpine plants, acidophil plants, conifers and broad-leaved trees, potted herbs, cut foliage, evergreen and deciduous trees, shrubs, bedding plants, bulbs, orchids and indoor/outdoor tropics to grow. But its strength is also the source of its weakness. Milano-based floral wholesaler Alessandro Gambin puts it as follows: “Distances from one end of the country to the other are long. A large portion of plants and



flowers are sourced from auction-based companies in the Netherlands, the traditional floral hub. Their delivery network is unrivalled with flowers from the Netherlands being delivered much quicker than from southern Italy.”

The company name Gambin is a homage to Veneto-born Guido Gambin who in 1932 moved to the quickly industrialising city of Milan in search of work. Starting out as a street vendor in the area of the city’s historical *Verziere* flower and food wholesale market (operating between 1776–1965) Guido married the daughter of a San Remo flower grower and later they became official tenants of the wholesale market, first on Via Lombroso and later on Via Pestagalli. Under the leadership of their son Dino, named Cavaliere della Repubblica by President Pertini in 1982, Gambin Fiori continued to grow. Today the company is run by brothers Allesandro (cut flowers), Giorgio (sales) and their cousin Mario (houseplants) who operate from

*Pictured left to right brothers Allesandro and Giorgio Gambin. Giorgio models the new ‘Westminster’ rose, a breed of Schreurs and awarded Best in Show at Myplant. Named after Britain’s coronation church, Rosa ‘Westminster’ shares the same greige colour as the building’s exterior and is grown by brothers Marc and Ed Sassen who run their 3.5ha rose nursery in Ter Aar.*







## THE BEST SOLDIERS IN THE FIGHT FOR CLEAN AIR

**Maurizio Laponi** is a tree grower from Mantova, Italy and previously served as President of the European Nurserystock Association (ENA).

Spring has finally sprung! This is the best time of year for commercial tree and plant growers. After a seemingly endless winter they are now more than ready to get their load on the road as quickly and smoothly as possible. Nursery stock produce in all shapes and sizes are shipped to destinations throughout the world with nurserymen cheering up after the doom and gloom that is winter. Finally they find themselves busy again selling, packing and loading and are bursting with optimism. Discussions, market uncertainty, concerns, all the negatives have turned into positives. Nothing much has changed after all these years!

We, producers of what is the most vital part of the landscape, need to take some time to pause and reflect on the real data and facts instead of acting impulsively and being carried away by a massive spring frenzy. Nothing comes automatically: we have to work for it. With this I mean teaming up with the entire landscape value chain (gardeners, green builders, agronomists, landscape architects, public technicians in the cities) to make all our work more productive, providing top quality greenery with appropriate margins.

Trees are the best soldiers in the fight for clean air but those who grow them must continue to invest, along with the entire supply chain; in research, training and education while highlighting the many benefits of a green, urban landscape and environment.

We must leave our trenches to confront ourselves with daily reality, inform ourselves but also advise and teach others how to grow and use our plants. There is nothing better than showing customers around your company and explaining to them how sustainability is embedded in your company ethos with special attention to their needs.

The market can no longer absorb the product volumes of the past. Practically all markets are maturing, increasing their domestic production. To face the future with confidence we need to take a step back in time. We need to focus on more extensive production cycles to grow even stronger trees including varieties that withstand air pollution, pests and diseases that can help us to clean up the air in our cities and sanitise our polluted soils.

The question that naturally arises is: who will pay the costs?

a 1,000m<sup>2</sup> site in the Santa Giulia district, to the south east of Milan near Linate airport. However, airfreight pallets packed with flowers are seldom seen at Italian airports. Says Gambin, "When importing perishables such as fresh cut flowers from Africa or South America you find yourself always in a race against time with the cold chain being a crucial part of refrigerated transport. Over the decades, the Dutch have set up a highly efficient supply chain management system in perishable airfreight unlike Italian airports that continue to stick to traditional and inefficient working methods and procedures when it comes to transporting flowers by air. However, the market is on the move and I sincerely hope to see the first direct flower flights in Italy soon bringing about important cost and time saving."

### SILO MENTALITY

"Blasting through silo mentality to create a culture of innovation is key to success. Even if it forces you to make radical change within your own company", stresses Alessandro Gambin who is happy to see, albeit slow, a different mindset among Italian flower and plant buyers. "For decades fresh cut flowers have remained a luxury item with the average Italian end consumer who easily pulls back on floral spending in an economic downturn. Flowers can be enjoyed without spending a fortune simply by opting for less conventional and cheaper flowers. Also Italian florists are currently adapting to the economic crisis and selling plants and flowers of the same good quality but for lower prices and thus more accessible to all purses."

Gambin doesn't beat around the bushes when mentioning the cause of a drop in consumption per capita, calling it a 'paralysing mix of floriculture and bureaucracy'.

"Italian SME's don't drive growth as they used to in the past because of the high tax burden, bureaucracy and inefficiencies. Politicians seem incapable of addressing the people's needs. Meanwhile supermarket chains and discounters gain more and more bargaining power. The big retailers frequently leave no choice in the pricing of products supplied by many small to medium sized growers and poorly organised farmers. Unfortunately, only a few horticultural entrepreneurs are familiar with terms such as cooperation and networking. The average Italian grower is aging and transitioning a family business to the next generation is a lengthy and difficult process. It is no secret that older entrepreneurs find business change more difficult than the younger generation."

Gambin sources its plants and flowers from home and abroad. However, the percentage of Dutch sourced flowers is falling, mainly because of some Dutch wholesalers who have preferred to 'go direct', breaking the golden rule in wholesale – don't cut out the middle man. "What will follow is a fierce battle with Dutch wholesalers who will suffer from a drop in sales."

Alternative trade flows will emerge replacing Dutch sourced flowers with ornamentals of a quality and price strong enough to stop what Gambin calls 'a true Dutch invasion'. "Apparently, the primary goal of many a siege is to starve the enemy into submission!"

### LOVE - HATE RELATIONSHIP

Italy, being Europe's largest producer of ornamentals (operating on 30,000 ha of land) and Holland being the world's largest flower exporter of cut flowers, houseplants, bulbs and nursery stock produce (around 600 wholesale companies generating an export value of €9,2 billion in 2018) risk the onset of a love-hate relationship. When a few years ago Cooperativa del Golfo, a traditionally-structured floricultural cooperative with around 280 member growers, sent out a gentle warning to Dutch floral wholesalers not to use the protected brand name Aldo for their iconic line of Dianthus barbatus, the Italians were immediately summoned to talks and told to keep their nose out of Dutch business.

Marcel Steekelenburg, sales manager at Dianthus expert HilverdaKooij, doesn't know the exact details, but wants people to know that when it comes to carnations there are certainly no hard feelings between his company and Cooperativa del Golfo, one of their valued and long-time customers.

HilverdaKooij has built a household name in Dianthus and has its own unconventional Dianthus line which is sold under the Sparkz brand. Sparkz include green coloured Dianthus 'Green Blush', 'Green Magma', 'Green Trick' and 'Green Wicky' and, more recently a line of cutting/tissue culture raised Breanthus Dianthus barbatus, a creation of the legendary Italian breeder Ezio Brea, who was also visiting Myplant.

Both Aldo and Green Trick are beautiful products and grown side by side on the lower slopes of Mount Vesuvius each with their own characteristics and charm. Aldo features probably a more darker green while yields per m<sup>2</sup> of Green Trick may be higher.

Van Steekelenburg points out that around 20% of all carnation breeds are from Italian origin and that highly professional Italian growers in Liguria, Campania and Sicily still account for sizeable production numbers.

"I am frequently in contact with the growers of the Coop del Golfo who demonstrate clear commitment to quality. It is good to see that recently a number of young growers have joined the cooperative, securing the future of the Italian flower industry."



*Marcel Steekelenburg, sales manager at HilverdaKooij.*

### REVIVING THE FLORAMIATA BUSINESS

There were plants, tropical foliage plants to be more specific, galore at the Floramiata stand where Marco Cappellini says the market is picking up and seems to be gaining strength. Cappellini is Chief Executive of Pistoia-based Giorgio Tesi Group, the company that together with the real estate developer Findeco, Barile Flowers Service, energy company LMS and plant nursery Bisceglia, acquired the company in 2017. Two years earlier, the company had been declared bankrupt as it struggled under a mammoth debt burden. Over the years, the company has had more than its fair share of bad luck. Nearly ten years ago a terrible hail storm damaged more than half of its greenhouses and plants. But now that houseplants (especially tropical foliage) have surged back into popularity Floramiata has been successfully restructured with higher levels of automation it's time to look on the bright side. Cappellini pointed to the company's extensive product portfolio which includes 60 species of tropical indoor plants such as Spathiphyllum, Aglaonema, Anthurium, Croton, Calathea, Dracaena, Phalaenopsis and Dieffenbachia. Operating from a 127-ha site, including 27ha of geothermally heated greenhouses, Floramiata employs 100 staff and produces over three million plants a year which are marketed at home and abroad (Royal FloraHolland). The company, touted the country's largest tropical plant grower, emerged from circumstances people wouldn't expect. Following the shutdown of the mercury mines in the Mount Amiata (an extinguished volcano) area in the 1970s, local authorities launched a plan to revitalise the economy. The opening of Floramiata was part of a long-term project to rebalance the region's economy by creating new jobs. At that time, Floramiata ranked among the biggest employers of Val d'Orcia hiring over 250 people. Although long considered one of the most innovative plant nurseries, its geographic location was often dubbed 'a logistical nightmare' having no major highways in the direct vicinity.

### CICCOLELLA

Another Royal FloraHolland member, Puglia-based Eurosa comprises 90ha of Dutch style greenhouses where 12 million (Suntory) Dipladenias in hanging baskets, on a trellis, in pyramid shapes or large containers are grown per year. Additionally, the company grows 2 million cacti a year and now that a new generation has fallen in love with tropical houseplants Eurosa is expanding its Ficus business with Ficus





benjaminia 'Anastasia', 'Danielle' and 'Starlight' occupying pride of place. Paolo Ciccolella of the company's marketing and business development department told FCI the season is off to a good start with for example DIY stores more willing to run plant promos. Their eco-friendly potted plant carton, an intriguing blend of egg and plant tray, received a special mention at Myplant's *Vetrina delle Eccellenze Awards*. Ciccolella said the packaging is in a testing phase and is showing promising results. The cartons are only used when plants are in the delivery stage. The question that naturally arises is just how eco-friendly is this packaging when you use both plastic and carton trays?

#### ORCHIDS WITH A WOW EFFECT

Pushing the sustainability envelope is orchid grower Raffeiner from South Tyrol where the 6,000m<sup>2</sup> greenhouse is heated with wood and irrigation is solely from gathered rainwater. Situated over two sites in Bolzano (in house propagation) and Gargazon (cooling and finishing off saleable plants) Raffeiner enjoys a pleasant microclimate with mild temperatures and intense sunlight so that even during winter, inside the 1.7 ha of polytunnels that are filled with lower maintenance orchids (Cambria, Odontoglossum, Promenaea) the temperature never drops below 14 degrees. This local micro climate provides 300 hrs of sunlight a year. Barbara Raffeiner and Helene Spisser said that the Raffeiner family has spent their entire career on the specialty orchid market, growing around 1.3ha of Phalaenopsis (pot sizes 9, 12 and 14 cms) in Venlo style greenhouses. Raffeiner orchids target the high-end market with a minimum of 2 or 3 plants per pot to cater for the wow effect created by six to eight spikes.

#### HONOURING ANTONIO PAGANO

At Myplant's banquet dinner Antonio Pagano took to the stage to be honoured for his substantial contribution to the development of Italy's horticultural industry, for his professionalism, innovative approach and his overall support for the Myplant show.



*Left to right Ulrike Raffeiner (sister of the company's co-owner Barbara) and sales manager Helene Spisser.*

*Antonio Pagano.*

Antonio has been growing and serving Italy's horticultural industry since 1968 when he started Florpagano, growing plants on the terrace of his parent's roof terrace by replacing the shed's tiles with plastic sheeting. Two years later he built his first real 25m<sup>2</sup> greenhouse, heated with wood and home to a variety of tropical indoor plants such as Dieffenbacchia, Peperomia and Pothos. Back in 1982, following a business trip to Denmark, he created a stir in the business by being the first grower to introduce a climate computer in his Dutch style greenhouses. The ensuing decades saw a rapid expansion of his business which today operates from a 14ha site in Ruvo di Puglia including 7ha of greenhouse production, 7ha field production of garden plants and a cash and carry for local trade for which the company created its own *Daddò* (from here) brand. "Contrary to plants produced in northern Europe, with locally grown *Daddò* products it's not only about high inputs and advanced techniques to increase productivity. At the end of the day no one in the industry will benefit from producing plants in an industrial way, selling Phalaenopsis for less than €3. *Daddò* plants are given the time to grow and to receive intense sunlight which eventually results in stronger and more disease resistant plants", says Antonio.

Total production at Florpagano currently stands in excess of 2 million plants a year and Antonio is happy that his sons and second generation Alessandro and Gianluca take care of daily operations. The Pagano family has ornamental plant growing clearly in its genes as Antonio's brother Cosima is running his own Pagano Fiori and Camaflor businesses. Their cousins Raffaele, Carlo and Stefania have their own plant nursery, Pagano Piante.

*\* The Fabio Rizzi Award (Flormart, 1981-2013) recognised progressive growers who embraced technology and modern production practices, market innovation, strong customer service and demonstrated industry leadership.*





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# Improving water efficiency

BASF Vegetable Seeds' €50 million Greenex research facility for cucumber breeding is by far the largest investment project in the company's 100-year history. The new greenhouses, fitted with Codema water and electricity systems, were made to demonstrate the company's vision to be a breeding centre for environmental leadership.

AUTHOR: RON VAN DER PLOEG PHOTO CREDITS: CODEMA

**G**reenex was designed and built by Havecon to embody environmental technologies aimed at improving water efficiency. The idea to create a high tech development facility was conceived in 2009 when Dutch-based BASF Vegetable Seeds started with architectural renderings for what was to become a 2.5ha greenhouse and an additional 1.7ha of offices and storage facilities. The expansion project gives the company a powerful boost and follows a period of uncertainty with previous owner Bayer selling the iconic seed firm Nunhems to BASF to satisfy Germany's competition and markets authority when it acquired Monsanto in 2018.

## WATER EFFICIENT BUILDING

It will not come as a surprise that the development includes the latest water control technology. Horticultural engineering company Codema says it was a real challenge to set up 36 greenhouse compartments whilst improving water efficiency. Each section now has separate controls for either zero emissions or standard reuse of water. Everything was carefully calculated beforehand with important questions to answer such as: How much water will be supplied? What does the pipe capacity and the machine capacity need to be? Water that may contain pesticides residues is collected separately



and drained through a dedicated pipe system. This water is treated separately and then discharged.

Luc Swinkels, Global Project Manager at BASF Vegetable Seeds says, "The company has deep roots in greenhouse growing which definitely was of big help when designing and building the new greenhouse. However, there were a number of challenges to overcome. As we wanted Greenex to be a centre of environmental leadership we partnered with local water authorities to demonstrate how the greenhouse tackles many environmental issues. BASF Vegetable Seeds was truly delighted to share its knowledge as it attaches great importance to business transparency and innovation."

## CUSTOMISED PROJECT

Effective from 2027, a new Dutch law will impede farmers from discharging fertilisers into surface water or sewers. As such, BASF hired Codema to create an instant liquid fertiliser dosing system that uses a minimum amount of water in the system. Peter Keunen, Greenex project manager explains, "A customised project, the fertiliser dosing system allows the use of many different fertiliser recipes to be administered at any time. The system allows us to respond quickly and flexibly without the need to hold large stock inventories."

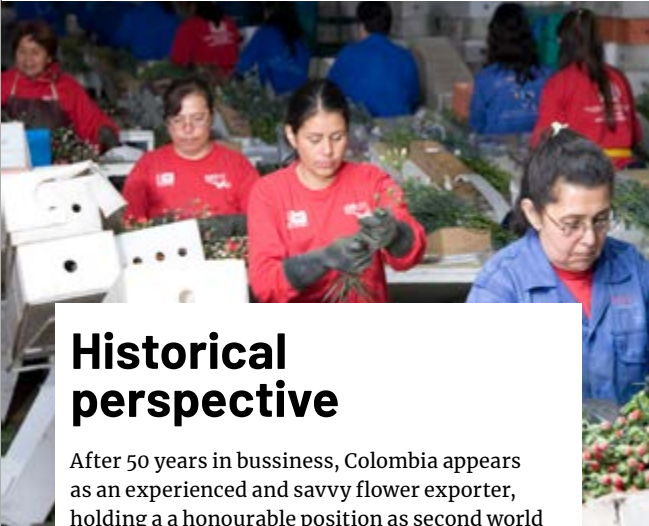
## PLANT HEALTH

With plant health being one of the company's top priorities, the research facility benefits by being in a rather isolated location with no other greenhouse operations in the vicinity and, thus, reducing the possibility of cross contamination.

Swinkels can look back on a very successful collaboration with Codema with whom they developed the water systems. Due to Greenex's size and complexity, Codema worked with Cogas to complete the project which is today fully operational.

## COLOMBIA

## Giants of South America



## Historical perspective

After 50 years in business, Colombia appears as an experienced and savvy flower exporter, holding a honourable position as second world exporter after the Netherlands since many years, with a global market share of 17%.

Commercial cut flower production in Colombia started in the mid 1960s, when visionary entrepreneurs identified clear advantages in the geographical location, climatic conditions, land availability and socio-economic factors including plentiful and affordable labour.

Colombia's geographical location is one factor influencing the success of flower exports: 3 1/2 hours by plane to Miami, with good access to Europe and even to more distant markets such as Japan. Colombia is served by a good number of airlines both passenger and cargo. Plus there are no clear seasons, so climatic conditions and light intensity - ideal for cut flower production - are available year round. No need to cool or heat greenhouses.

Floriculture developed as an export business from the beginning and initially grew at a dramatically fast pace: the first exports in 1965 amounted to US\$20,000; ten years later they were worth US\$20 million and twenty later US\$140 million. By 2003, they were at US\$ 680 million and in 2018 US\$1458 million.

Cropping areas grew accordingly, but soon it was apparent that a focus on improved efficiency was essential. The product mix initially focused on temperate flowers (carnations, roses, mums), and although these still are very relevant, over the past two decades a strong diversification trend has occurred and now more than 30 flower types are exported, including tropical species.

The Colombian flower sector presently spans over 7800 hectares, mostly under plastic but also shade and open field.

## Markets

Although the initial accelerated growth eventually slowed down and there have been struggles, Colombian flower exports have maintained a general upward trend.

The main market for Colombian flowers is by far the United States, where market penetration has been highly successful. Currently, about 75% of Colombian flowers reach the USA, 5% go to the UK, 3% to each Japan, Russia, the Netherlands and Canada, and the remaining 8% to a large number of countries including Spain, Chile, Panama, Poland and Brazil, even very distant destinations as Australia.



## Product mix

For years Colombia was an exporter of carnations (standard and miniature), roses and chrysanthemums (standard and pompom). Although the bulk of the country's cut flower production consists of these flowers - 33% of exported flowers are roses, 12% carnations, 12% chrysanthemums and notably 20% hydrangeas. The remaining 23% of the product mix is composed of dozens of flower types such as alstroemerias, lilies, asters, limonium, gerberas, tropical flowers, gypsophyla, calla lilies and a series "summer flowers". Tropical flowers and foliage are also present.

Colombia has become a prime supplier of consumer ready bouquets to the US mass market



# American floriculture

# ECUADOR

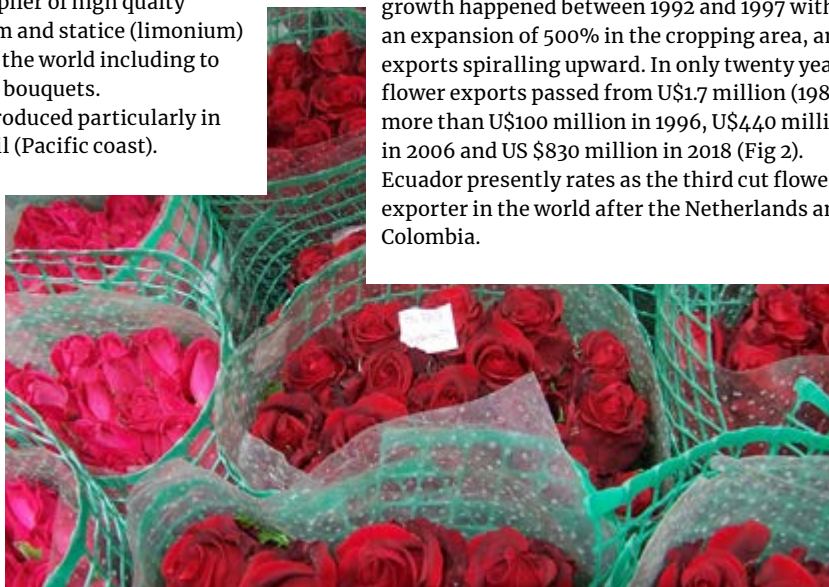
## Markets

Forty-eight percent of Ecuadorian flowers are sent to the USA (74% of these are cut roses), resulting in steep competition with Colombia. The remaining 52% is sent to European countries, mainly the Netherlands, Italy and Spain. Ecuador has of late recovered presence in the Russian market taking advantage of key celebrations such as Women's Day (March 8) when large, long stemmed Ecuadorian roses fetch high prices. New market destinations include Japan, Ukraine and recently China, where tinted roses are very popular.



## Product mix

Roses represent 75% of the product mix, followed by 18% of "summer flowers". Ecuador is a noted supplier of high quality gypsophyla, hypericum and statice (limonium) which are sent around the world including to Colombia to be used in bouquets. Tropical flowers are produced particularly in the region of Guayaquil (Pacific coast).



## Historical perspective

Even though the first flower exporting farms date back to 1979, the development of Ecuadorian floriculture was clearly encouraged by a crisis affecting Colombian floriculture between 1992 and 1997, caused by strong revaluation of the Colombian peso and a fall in flower prices resulting from increased competition and reduced competitiveness. Whilst floriculture struggled in Colombia, it developed rapidly in Ecuador, using Colombian experience and know-how for very similar locations and conditions; a good number of Colombian entrepreneurs participated in this development. International suppliers took advantage of this situation to recover dwindling sales in Colombia. Introduction of new rose varieties in Ecuadorian floriculture turned into a clear advantage for exporters, who during this period were able to sell the latest novelties, whilst their competitors in Colombia could not afford to renew. Roses of the highest quality expanded rapidly, becoming the staple of Ecuadorian flower exports. Ecuador enjoys exceptional, year-round conditions for rose production consisting of a combination of cold nights and warm days, very high light intensity and abundant water of excellent quality.

Ecuadorian floriculture also grew at a fast pace, from 300ha in 1990 to 2800 in 1999, 3440 in 2007 and about 4,200 at present. Maximum growth happened between 1992 and 1997 with an expansion of 500% in the cropping area, and exports spiralling upward. In only twenty years, flower exports passed from US\$1.7 million (1986) to more than US\$100 million in 1996, US\$440 million in 2006 and US \$830 million in 2018 (Fig 2). Ecuador presently rates as the third cut flower exporter in the world after the Netherlands and Colombia.

# COLOMBIA

## Challenges

Historically, Colombian flower exporters have had to face difficult hurdles:

- Anti-dumping demands raised by American flower growers for nearly 15 years, aimed at imposing tariffs on imported flowers.
- Periods of revaluation when a weak dollar poses difficult challenges for exporters who pay production costs in local currency and saw profits shrink to a minimum.
- Defending renewal and extension of the ATPADEA treaty (to maintain free-tariff status) for many years, until a Free Trade Agreement with the US was achieved.
- Climate hazards for example El Niño in 2015 which wiped out 20% of production. Frost has been known to severely impact prime holidays like Valentine's Day.

Presently, freight poses problems due to limited air cargo capacity and increasing prices. Sea transport has developed successfully but is not always an option. Political uncertainty – for example in relation to Brexit is also causing concern. Labour costs and reduced availability are impacting the sector. Weather extremes seem to be more common.



## Achievements

From a national perspective, floriculture is a very important sector, second only to coffee in agricultural exports, providing about 130,000 direct and indirect jobs.

Colombian flower growers successfully adapted flower production technology imported from the US and Europe to local conditions and developed others that were completely new. Colombia soon became a reference and example for other Latin American countries where commercial floriculture for export developed such as Ecuador, Costa Rica, Mexico and Peru.

A high proportion of Colombian flower exporters belong to ASOCOLFLORES – the Colombian Association of Flower Exporters, which was founded in 1973 and has been active in many fronts including international market defense and promotion, the creation of a virtual research centre (CENIFLORES), continued education and support of research, information diffusion, trade show organisation (PROFLORA) and in general, sector representation both domestically and abroad. In 1996 AOSCOLFLORES launched the FLORVERDE® Sustainable Flowers program, which enjoys international recognition.

## Future outlook

Aside from fierce competition coming from Ecuador, new players coming into the international floriculture scene, such as Kenya and Ethiopia, even China, are increasingly pressing for a piece of the market, often bringing prices down. Together with increasing production costs, this has slowed expansion of the production area. Present focus is thus on improving efficiency, reaching specialised market niches, expanding direct sales to mass marketers, improving production practices and renewing varieties.

Weather forecast and alarm systems are in place to help growers avert negative effects from frost and other climate hazards.

The new key words: innovation and resilience.







## Challenges

Difficult economic challenges have affected Ecuador at various times:

- Dolarisation, adopted in 2000 led to increases of up to 70% in labour costs, 60% in fuel and 40% in energy, mainly as a consequence of the loss of a profit margin due until then to devaluation of the sucre, the local currency.
- The Russian crisis strongly hit the Ecuadorian rose sector, forcing exporters to look for other markets. Rose exports to the US, which comprised 30% of the total in 1995, became 73% in 1999.
- Ecuador faced anti-dumping suits from the US.
- The government did not seek an extension of the ATPADEA treaty, nor did it pursue a free trade agreement with the USA; Ecuadorian flowers thus presently pay tariffs of 6.8% for roses, 3.2% for carnations and 6.4% for chrysanthemums and lilies.

Freight is also a current challenge, particularly airfreight, which has traditionally been costlier than in Colombia. The modern new airport in operation for several years has helped solve problems with cargo/ flight capacity.



## Future outlook

In the current economic climate, slim profits and high operation costs, plus scarcity of hand labour are challenging the flower business in Ecuador.

Ecuadorian president Lenin Moreno is seeking to obtain zero tariff for roses (current tariff is 6.8%) by including them under the US General Preference System.

Ecuadorian exporters are looking for new market niches such as tinted (dyed) or decorated (frosted) roses, exclusive presentations, specific celebrations and market niches.

## Achievements

Cut flowers are the main non traditional export product of Ecuador, providing over 45,000 direct jobs.

Ecuadorian roses enjoy an excellent reputation for their large flower size, stem length and overall quality. They reach demanding markets such as Russia and the UAE and are growing exponentially in new and sometimes distant markets like Australia, Japan and Chile.

In an effort to obtain better prices, Ecuadorian exporters also try to reduce the number of intermediate steps between the farm and the final consumer and have launched various schemes including e-commerce, bussines-to-bussiness programs and direct sales.

A large proportion of Ecuadorian exporters work together under EXPOFLORES, the Association of Ecuadorian Flower Exporters, of which about 80% of exporters are members. EXPOFLORES plays an active role in promoting Ecuadorian flowers, opening new markets, providing training (even on technical issues through its "floriculture schools") and developing necessary legislation to legally observe breeders rights on protected flower varieties.

Ecuador has launched its own sustainability certification program, FlorEcuador Certified®.





# SUPER SURFINIA®

The iconic Surfinia®, celebrating its 30<sup>th</sup> anniversary this year, is braced to become the most successful plant breeding campaign ever. Surfinia® has graced the gardens, window boxes and cityscapes across the world for three decades. It's an exceptional plant with an extraordinary story that like any good fairy tale will have a happy ever after ending because there are so many more chapters yet to be revealed.

**FOR MORE  
INFORMATION VISIT**

[www.surfinia.info](http://www.surfinia.info)  
[www.mnpflowers.com](http://www.mnpflowers.com)

**ONLINE CATALOGUE**

[www.issuu.com/  
suntoryflowers](http://www.issuu.com/suntoryflowers)

**FACEBOOK**

SurfiniaPetunia

**INSTAGRAM**

SurfiniaPetunia

**TWITTER**

Surfinia4

**PICTURE BOOK**

The Surfinia® is a horticultural icon. With its picture postcard looks, featuring large, fabulous, colourful flowers that last for weeks on end, it's been appearing on the front pages of glossy magazines, gardening journals and shaping the street views across the world for almost 30 years. And still it remains the best trailing petunia in the world. Nothing comes close to its unique attributes, exceptional qualities and remarkable longevity and looks, that sets it far above and beyond anything else on the market. The petunias in the Surfinia series really stand out: they push out plenty of new, large flowers all season and are pretty easy to grow for the professional grower and end-consumer alike. What's more Surfinia® tolerates extreme conditions of summer heat, heavy rain and strong winds and is a real attention grabber in combo baskets.

## BEHIND THE SUCCESS STORY

Suntory®, a Japanese multinational famous for its whiskies, beers and wines, launched its super Surfinia in 1987 and coincided with the foundation of its flower division: Suntory Flowers Ltd. Fuelled by a strong interest in their first vegetatively propagated petunias with exceptional growing and flowering characteristics, the company was off to a great start and soon attracted the attention of MNP flowers, which saw big market opportunities for Surfinia® on the European market. What followed was a unique partnership between MNP flowers and Suntory Flowers Ltd. MNP flowers acquired the European rights for all Suntory® genetics and the two companies paved the way for a successful launch of Surfinia®. The fruitful collaboration between MNP flowers and Suntory created one of the strongest portfolios in the ornamental plant industry (branded as The Champions of Tomorrow, Today) with a multitude of successful brands such as Surfinia® Petunia, Sundaville® Dipladenia, Senetti® Pericallis, Princettia® Poinsettia, Beedance® Bidens, Surdiva® Scaevola, Granvia® Xerochrysum, Sunpuma® Ipomoea and Million Bells® Calibrachoa.

## NEXT GENERATION

The breeding programme continues and just when you thought that the iconic Surfinia® couldn't get any better, MNP flowers has introduced the new, very early trailing Surfinia® that actually flowers a full two weeks earlier than the classic trailing Surfinia®, offering growers, nurseries, and retailers





a larger sales window and a real point of difference for consumers. The two new, stunning varieties; Surfinia® Trailing Red and Surfinia® Blue Ocean offer the exceptional strong quality and advantages you have come to expect from Surfinia® but they flower two weeks earlier. These trailblazers are the first of this next generation Surfinia® to be released and are already available for propagators and nurseries. An exciting range of further new varieties is in the pipeline to keep the amazing Surfinia® the top choice for growers, retailers and consumers.

#### CELEBRATING 30-YEARS

The iconic Surfinia® could not have reached the great heights that it has without the incredible support from the original network of license holders, not to mention the growers, retailers and exporters that have helped it to become the star of the show for nigh on thirty years. By building on its success the horticultural industry is well placed to pave the way to ensure that it keeps Surfinia® on the front page so that it stays the first choice for consumers worldwide.

Uniting these powers to create a powerful campaign that promotes and celebrates what is the best and most sold petunia in the world, would keep Surfinia® right in the limelight for the next 30 years. There's already a great story to be told, not just the new early trailing varieties but also the success of the tried and tested Surfinia® stars that have already shone for years.

It's time to spread the word, to ensure that consumers grow and enjoy the quality petunia plants that they deserve. Surfinia® is the number one petunia and by harnessing the full power of the horticultural industry it is possible to push it to new heights and raise its profile to enhance sales.

#### TAKING ACTION

The success of the Surfinia® brand is much more than the sum of its parts. Suntory Flowers Ltd., MNP flowers and the whole horticultural industry have made Surfinia® what it is today – an incredible



## FLOWERTRIALS®

This year's FlowerTrials® will host a Surfinia® Experience, celebrating 30 years of super Surfinia®. Surfinia® Experience will be a show on its own including a colourful Surfinia® garden planted with both the newest and classical Surfinia® varieties.

Visitors will be offered also a sneak preview at pre-commercial varieties while Surfinia® expert Paul Jackson will be at hand answer all your Surfinia® questions. Surfinia® Experience provides networking opportunities while sampling some delicious food. For the chance to talk, see and experience everything Surfinia® and help celebrate its 30 year anniversary, visit MNP flowers at the FlowerTrials® 11-14 June 2019 Leimuiderbrug, The Netherlands.

success story. But the story doesn't stop there. The new Surfinia® campaign shows it off from every angle and rewards each and every player in the storyline with bigger and better sales and a better understanding of the superstar in their midst. Taking action and creating an exceptional marketing concept for this beautiful and amazing group of plants creates an exciting and rewarding new chapter for Surfinia®.

The creative heart of MNP flowers with their Suntory® genetics is their marketing support for the industry. They know that dynamic marketing concepts are extremely important to be unique in today's horticultural market. They are offering a range of merchandising materials, point of sale, posters, brochures, cultivation flyers, labels, banners and high resolution images, logos and artwork to support all of their clients, large and small and help celebrate the incredible Surfinia®, on its 30<sup>th</sup> anniversary.

**SURFINIA®**  
SIMPLY THE BEST



# Queen of climbers at Expo 2019 Beijing

Always putting his best foot forward, Raymond J Evison, the founder of Guernsey Clematis Nursery Ltd. and his eponymous blue-label brand plays more than his part in keeping the horticulture industry moving apace. From April 29–October 7, 2019 his Clematis will be climbing to prominence at Expo 2019 Beijing.

AUTHOR: PENELOPE TOMKINS

**L**ocated on the island of Guernsey, in the English Channel, the nursery breeds, propagates and sells Clematis young plants to wholesale producers and specialist nurseries to grow on for local distribution.

As one of the world's largest specialist nurseries, they produce almost 25 % of the global supply of Clematis. Two million plants per year are produced in 2.3ha of glasshouses on ebb and flood roller benches. Glasshouses are screened to prevent light pollution and harvested rainwater affords 3-4 months self sufficient water supply. Exports are shipped to 19 countries: 45% to the US, 35% to the UK and the rest to Europe and Asia.

## UNIQUE PRODUCT OFFERING

The nursery's unique and popular offering is its small, compact, free flowering varieties which are perfect for patios, baskets, window boxes, pots and containers and for small urban gardens. 'No-fuss pruning' also contributes to the plants' popularity.

Together with Poulsen Roser A/S, renowned Danish rose breeder, the partnership established a strong reputation for Clematis breeding. "Bringing new cultivars to the market takes 8-10 years and 75% of our stock comes from own breeding programme," says Raymond. The Poulsen Breeding Joint Venture finished in 2008 and in 2014 the nursery began its own breeding programme. "Of 2,000 seedlings this year we've kept 180 for further

evaluation. We're looking for short, compact varieties with strong colours similar to the award winning 30cm tall flowering C. Bijou® Evipo030 (n). We also aim to achieve more scent for larger flowers."

Asked if Clematis Wilt is still a concern Raymond replies: "In 35 years I've never seen it in our nursery. It appeared following intense propagation from the 1850s but with modern production methods it's no longer a problem." With equal certitude Raymond adds: "Our biggest challenge today is education. Teaching customers how to care for Clematis is the best promotion we can give these beautiful plants."



Raymond Evison.



*Clematis Bijou was the plant that won the Best New Plant competition at the Hongyue World Garden Show in China April 2018.*

## EXPO 2019 BEIJING

An opportunity to disseminate this knowledge is 'Expo 2019 Beijing' where Raymond has been invited by Beijing Florascape Co. Ltd. to build a Clematis show garden. The garden features: a central, winding stone path with a low wall and Clematis growing alongside a Georgian façade with window box displays; a large patio presenting potted cultivars and archways, obelisks and trees to support an array of Clematis, roses and other climbers. Some Clematis species are native such as Clematis heracleifolia.

"Our plants will also be on sale at the Expo" says Raymond. "140 native species of Clematis exist in China, but garden Clematis is unfamiliar to the market. This is a unique opportunity to introduce our varieties to millions of visitors."

This is not his only cause for excitement. "In April Clematis acerifolia, a 15cm tall Clematis species which grows on the rock face will be in flower so I can't wait to explore for a sighting."

## AIPH-APPROVED EXPO 2019 BEIJING

April 29–October, 2019

**Location:** Yanqing district, Beijing, China  
(close to the foot of the Great Wall in Badaling)  
100+ official international participants

**Area:** 500ha – the largest AIPH  
A1 Category Expo to date

**Expected visitors:** 15m  
[www.horti-expo2019.org](http://www.horti-expo2019.org)



THE NETHERLANDS

## Deforestation happening faster in Holland than the Amazon

To outsiders, the Netherlands may seem a lush green oasis, a country which is wonderful for hiking and biking through bird-rich polders and routes that travel through dense forests. But the green idyll is under threat of deforestation. The country's Wageningen University and Research Centre, specialising in life and social sciences, warns that Dutch deforestation is on an upward trend, jeopardising efforts to tackle climate change. Between 2013-2017 the Netherlands lost over 3,000ha of forest according to researchers. This means a decrease of 0.36% a year, a rate of deforestation higher than in Brazil's Amazon (0.24%). Dutch forests are being replaced by farmland, highways and sprawling cities. However the biggest expanse of forest clearance is ecologists who, caught up in a frenzy to create heather fields and sand dunes, are convinced that more plants and ecosystems live in the habitat created by such natural buffers than live in forests.



Queen Victoria Gardens and city backdrop.

AUTHOR: AUDREY GERBER, TECHNICAL ADVISOR TO AIPH

# From a forest in a city to a city in a forest

The City of Melbourne has made significant advances as a Green City over the past three decades and has been voted *The World's Most Livable City* for seven years in a row. FCI spoke with Ian Shears to find out how Melbourne has successfully balanced significant population growth and infrastructure developments with green initiatives.

Over a 20-year period beginning in the late 1980s the City of Melbourne's population doubled. To accommodate this rapid growth compromises were made and by 2009 more than 10% of the city's green cover had been lost to hard development. Turning this around has required some innovative thinking and visionary leadership. "While there are individuals that have been valuable champions for the city", says Ian, "enabling influences

have come from many sectors and it has been fascinating to watch how beliefs and efforts have aligned."

### BOLD AND VISIONARY STRATEGIES

The City of Melbourne's green strategies are bold and visionary, yet are driven by data. Evidence exists globally to show the benefits of greening to water management, air quality and urban heat build up. "When we assessed and analysed the components of our urban space" explains Ian, "we were







FRANCE

## TNOC Summit in Paris

Thought leaders from practice, policy and academia are meeting in Paris from 4-7 June 2019 to think, share, learn, and create solutions to the challenges of creating Green Cities that support people and nature alike. The Nature of Cities (TNOC) Summit intends to spark cross disciplinary conversations that cover five integrated thematic topics: justice, liveability, health, resilience, and sustainability. TNOC provides a forum for discussion and debate about cities as ecosystems of people, nature and infrastructure, engaging with 650 contributors across 27 countries. Attracting global speakers, the summit will focus on specific local challenges, asking how collaboration can inform dialogue and drive change.



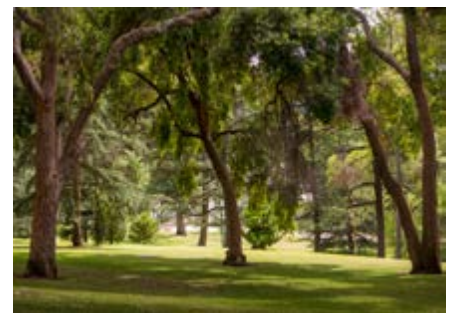
*Pictured is Paris's GreenWall of Musée du Quai Branley.*



*Image of the future city from Melbourne's Art and Design Competition.*

quite excited to recognise that the city has enormous potential for greening". Two current initiatives illustrate this well. The city centre is a regular grid of streets with many small interconnecting laneways. Some of these have become destinations for the impressive graffiti that has actively been encouraged as dramatic street art. For many laneways, though, function and access is all they offer. Mapping the city revealed that laneways offer 160ha of wall space and 70ha of ground plane – all with the potential for greening. When the city put out a call asking who would be interested in greening their laneway, 800 responses were received within the first two weeks. People are willing to get involved in improving their surrounding, and the city can leverage this desire.

Likewise, city buildings offer 240ha of possible green space on their roofs. If only one quarter of this was covered with green roof plantings, it would have the capacity to hold 30ML of water. This is an impressive volume, even more so, when we consider that modeling of catchment and flows



*Kings Domain mature tree landscape.*

indicates that only 6.8ML of storm water would cause flooding.

### RESPONSIVE AT ANY TIME OF CHANGE

An important part of the City of Melbourne's greening strategy has been to be responsive at times of change and to introduce a green component within the change. "The Urban Forest strategy," explains Ian, "came as a response to terrible drought, and by 2009 we were in danger of losing almost half of the city's trees. This really brought to the attention of the community how much Melbourne's





trees are valued and how vulnerable they are.”

The Urban Forest strategy that arose as a consequence considers the whole of the forest recognising that, as in a natural forest, the trees are only part of the green cover. People have always had a special connection to trees and the term Urban Forest resonates better than Green Infrastructure.

The most recent greening initiative responds to the active and empowering community engagement that the City of Melbourne has received. With a changed perspective on governance, the City of Melbourne considers community consultation as going beyond the point of conversation to recognition of shared capacity and responsibility. With almost 75% of the municipal area privately owned or managed, new initiatives must facilitate greater greening in this private realm. The Urban Forest Fund offers matched funding for privately owned areas that are committed to implementing new greening projects, such as green spaces, tree planting, vertical greening or green roofs.



Before and after Errol St Reserve – road dieting...

### RECOMMENDATIONS FOR TREES

With all this greening activity, how are plants selected for greening Melbourne? A comprehensive guide to green roofs includes lists of plants suitable for Victoria. For different aspects of laneway greening, recommendations are made for plants such as climbers and ramblers, plants for pots in the sun or shade and ground cover plants. Another impressive publication provides recommendations for trees for specific location types in the landscape, distinguishing between the characteristics of trees needed for parks, residential verges, verges with powerlines– a total of 16 different location types. For preparation of both of these lists ease of plant availability was a consideration. One of the longer term initiatives, however, allows for contract production of specific plant types, selections or varieties, with as much as a 10 year lead time. “It is at this point where horticultural producers and plant breeders can, and must, do more”, says Ian. “In the face of climate change we are looking for plants with a wide plasticity of tolerance to temperature – particularly trees, as these will see the greatest change in climate through their lifespan.”

The horticultural sector must do more than supply catalogue items that are easy to propagate and have been reliable in the past. We need to become actively involved in identifying, sourcing and supplying plants that have resilience beyond current tolerances.

An important area where horticulture is already engaged is in tolerance or resistance to pests and diseases. Ian Shears considers that increasing plant diversity – genetic and age diversity – can buffer against widespread devastation, but the threat of emerging pests and diseases is the most important future vulnerability of the city’s living green.



### IAN SHEARS

Ian Shears leads the City of Melbourne’s stewardship and advocacy, external liaison and strategic work regarding urban forestry, integrated water management and green infrastructure. The role connects the day-to-day management of Council’s green and blue assets to contemporary needs and opportunities in a time of changing climate and population.

# AIPH members report on growing number of Green City initiatives around the world

AUTHOR: DR AUDREY GERBER, TECHNICAL ADVISOR TO AIPH

On Monday 1<sup>st</sup> April Green City reports from ten AIPH country members were presented at the AIPH Spring Meeting, held in Noordwijk the Netherlands.

Twice a year, AIPH member organisations are invited to present a report on the Green City activities and initiatives in their country. These reports reveal widespread-growing interest in 'living green' in urban environments as a response to increasing evidence of the benefits it brings to human health and wellbeing and the impacts of climate change.

The message from the horticultural industry now goes beyond simply promoting and selling plants, to also selling fresh air, cool streets, solutions to water management and feeling good. To do this, it is important to clearly describe how plants can deliver such benefits, and to demonstrate where and how this has been put into practice. The AIPH Green City reports give an overview of global progress.

Green City projects range from small community initiatives to high profile ambitious projects. The 2020 programme of Australia celebrates each individual contribution to collectively achieve a goal of 20% more green space by 2020. The grand new design for the extension of Changi airport in Singapore uses plants and themed gardens to provide passengers in transit with a restorative experience. Seasonal displays of living green run parallel with other sustainable initiatives such as reduced energy use and recycling.

The urban forest and ambitious tree planting projects continue to inspire, particularly in densely populated cities. Japan is holding an international symposium on urban forests, with high-powered speakers in Tokyo, Fukuoka and Osaka in May 2019. In China, the Forest City programme will plant millions of trees to tackle the problem of air pollution. This ambitious project hopes to serve as an example of how to build sustainable cities that provide clean air and also support biodiversity.



Green City developments have an important role to play in celebrating cultural connections that are essential to providing a sense of place. The Hellenic Garden in Amaroussion, Greece, displays native plants, and showcases how they can be used in designed landscapes. The garden, which is part of a European Commission LIFE project, highlights the function of Hellenic Flora in delivering a self-sufficient, sustainable garden, that uses natural materials and incorporates water-wise principles, some elements of which were displayed in the Hellenic Garden at Taipei Flora Expo 2010.

The Euroflora Expo 2018 in Genoa, supported by ANVE, illustrated the Green City principles in display gardens of Mediterranean plants. Meeting broader concepts of environmental sustainability, it was only possible to arrive at the expo by public transport, with train being the easiest and preferred option.

Furthering the global AIPH Green City imperative requires strategies that focus on influencing the influencers. One of the goals of the Green Agenda programme in the Netherlands, a collaborative effort involving Royal FloraHolland, is to improve the awareness of the positive effects of greenery in different urban environments through publication of concise

information leaflets that present the science behind these benefits and their practical application. Informed decision makers have more confidence to implement change. In Canada, regular meetings are held between horticultural producers and government officials to negotiate changes in policy that increase living green in cities. Canadian Nursery Landscape Association, CNLA, held a summit with their members to identify key priority messages to take to ministers. In 2018 these priorities were: environment and climate change; health, heritage, public services, and infrastructure and communities.

The Green City report from France presented a number of public relations events and tools to bring attention to Green City innovations and developments. In the UK, collaboration with the Town and Country Planners Association, TCPA, enabled the Horticultural Trades Association to present a balanced perspective to parliament at an event planned to raise awareness about the benefits of green infrastructure and the positive impact it can have with regard to health and wellbeing.

The next AIPH Green City reports will be presented at the AIPH Green City Conference taking place in September as part of the AIPH Annual Congress in Beijing, China.







# Petchoa 'BeautiCal'

**Schneider**  
youngplants



Schneider youngplants is a professional Dutch young plant producing company specialized in both seed- and cutting-propagated high quality starting materials.

We produce a wide range of annual, biennial, perennial plants, as well as cyclamens and herbs. Beside our young plants, we offer seeds from a well sorted, high quality selection of the most popular varieties existing on the current market. Our full assortment encompasses more than 1800 varieties and thanks to our partners we are able to supply clients in more than 30 countries across Europe and Asia. Due to our unique system of trays and logistics we are able to supply you regardless of the country you are ordering from.

Let's lead our businesses to success together!

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# AFRICA

The land of the Big Five. The African continent. The African flower industry has experienced significant growth over the past decades. Pioneers hailing from, for example, the Dutch floriculture sector, discovered the potential in the continent's different countries where growing conditions for cut flowers are ideal. Not only does Africa have sufficient land, water and, of course, plentiful sunlight, but altitude of the various locations makes Africa suitable for growing beautiful, quality products.

Over the years there have been many developments. The total production area increased steadily and due to improvement of varieties, crops became increasingly productive. More recently, flowers that were traditionally sent via the Netherlands are now being shipped directly to other destinations around the world. These developments are ongoing and will continue in the coming years, provided that sales remain above desired level.

The clock is still an important sales instrument for many growers, but direct trade has taken an important share of sales as well. This has also changed the desire for service. Royal FloraHolland has in response to these trends set up an international strategy based on the requested services. By establishing a digital marketplace and connecting logistics and financial services to it. We see it as our task to assist our growers in their production and help them in their sales to the various markets.

Through various pilots with growers and wholesalers, we have been able to gain experience and the necessary knowledge to scale up our services. We are working intensively to further develop these services and ensure that they become available to all parties in the marketplace. Additionally Royal FloraHolland has also set up a strong international organisation. The bundling of international knowledge helps us continue to respond to future international developments. At the IFTEX Expo soon to be held in Nairobi, Royal FloraHolland will be happy to inform its customers about these developments. I look forward to meeting you there.

**Fred van Tol**  
 Manager International Development  
 Royal FloraHolland



# Syngenta Flowers firmly back on path of growth

FCI sat down with Michael Kester, Head of Flowers at Syngenta Flowers, the company that has clearly found its path to reblooming. He discussed the company's past, presence and future while providing a sneak preview of Syngenta's upcoming FlowerTrials show.

AUTHOR: RON VAN DER PLOEG PHOTO CREDITS: SYNGENTA FLOWERS

**F**rom an early age Kester has possessed a creative ability and a fascination with how things work. The challenge of solving practical problems efficiently, with less resources and effort, appeals directly to these traits. In business he has developed a winning mind set but, as he is quick to add, always with a 'play-fair' attitude. Kester started working for Syngenta when he was only 24 years old carrying out field trials with agrochemicals and plant growth regulators in fresh produce. Back then the company introduced Bonzi™ to the market and he was involved in many Bonzi trials. Later, Kester moved to a commercial role becoming Head of Marketing in the Netherlands. The next 17 years he gained international work

experience by fulfilling general management roles in Egypt and Sudan, German-speaking countries, Latin America and Japan. When he moved back to the Netherlands, he was appointed Regional Head of Vegetable Seeds and Commercial Unit Head Benelux. Since March 2017 he has been Syngenta's Head of Flowers.

**Would you say that Syngenta Flowers (young plant producers and distributors) and Syngenta FloriPro Services (finished product growers) have allowed the company to best serve each of the distinct customer groups?**

"Back in 2009, it was a logical step to market our broad portfolio using a direct business model for the grower and via wholesale for growers that we couldn't service ourselves. Initially, we opened up the entire portfolio to our wholesale customers, who are eventually our competitors. I believe that Syngenta needs to bring its own innovative products onto the market through its own sales force. So this year we decided to change the offering for wholesale customers who now can source our products from Floranova, a company which sells only to wholesalers. This allows Floranova to entirely focus on wholesale as they have been granted the exclu-

sive right to sell the established Syngenta portfolio alongside with their own Floranova range. The name Floripro Services will disappear soon –making way for Syngenta Flowers with one single focus: offering innovative products and services directly to growers across Europe."

**2017 marked a milestone for the former Swiss company when it was taken over by ChemChina. How will Chinese ownership help Syngenta bolster its market presence when it comes to flower breeding and propagation?**

"We are delighted to be part of ChemChina. While they have full ownership of the company they allow us to remain Syngenta. ChemChina has shown full commitment to our business in seeds and flowers. Last year, for example, we made five acquisitions in seeds, including the acquisition of Floranova. Our owners understand the long term nature of our business and invest in future growth."

**Kester believes novelty plants are important for growers and industry partners alike as they create value in the market and result in more satisfied customers.**

"In Pelargoniums we have set a new standard with our Calliope™ series



Michael Kester.





with more resilience, more flowers and more intense colours – offering great customer satisfaction! Our Rio™ series of Mandevilla are very popular with new introductions like Rio Grande™ that retains its bold colours. This year marks the launch of Helianthus Sunfinity™, a breakthrough sunflower that continues to flower throughout the season along with the Begonia series Limitless™.”

**Great new plants not only solve the needs of today’s grower but also those of the end consumer. But exactly what these needs are, no one seems to know. What’s your stand on this?**

“Market intelligence is essential to target innovation towards creating new, exiting colours or shapes. Equally important is collaborating with retail partners and growers, each with different needs varying from good transportability and shelf life for the retailer to improved disease resistance and hassle-free crops for the grower. Offering the complete package is our new Mirage™ Poinsettia combing all the characteristics the grower is looking for and an excellent shelf life and consumer appeal. Mirage™ is a very versatile plant for the grower as it is suitable for growing from early to late and does well in

*Rio Mandevilla, originates from tropical South-America and is backed by a breeding programme that has brought forward new colours and different plant types.*

very small to very large pot sizes. One of Mirage’s major benefits is its low PGR requirements. Syngenta Flowers has sustainable production and supply clearly on its radar. Our production is Global GAP, Grasp and Fairtrade certified. We are a member of FSI 2020 and have teamed up with OptiFreeze, a revolutionary concept to develop a method to improve the shelf life and quality of cuttings. This technology holds a great promise to increase the efficiency in vegetative propagation and reduce waste caused by quality losses in transport or mismatch of production timing and grower demand.”

**Can you give us a sneak preview of the Syngenta’s upcoming FlowerTrials show in De Lier?**

“Launching at IPM 2019 and debuting at this year’s FlowerTrials is our distinctive Vegetalis™-assortment of patio vegetables developed and introduced by Floranova. Our awesome Rio® Dipladenia, also known as ‘Rio Mandevilla’, originates from tropical South-America and is backed by a breeding programme that has brought forward new colours and different plant types. Being one of the earliest series in the market,



**Brand new: Helianthus Sunfinity.**

**In Pelargoniums Syngenta Flowers has set a new standard with its Calliope™ series.**

Rio allows retailers to exploit first sales and continue those sales all season long. This, combined with a strong branding concept with point-of-sale material and a consumer website, makes Rio the perfect retailer’s plant. Gardeners will be delighted with how easy it is to care for Rio given its heatproof and drought-tolerant performance. Even in North European conditions Rio gives gardeners a great experience, coping with colder, humid and rainy conditions. Furthermore, Syngenta Flowers now owns Verwer’s Dahlias and breeding program. Verwer Dahlia BV is one of the leading Dahlia innovators with an assortment including over 140 registered varieties. Most well-known are the Gallery™ and the Dahlegria™ series. Verwer Dahlias enhance our own assortment where several series have had a permanent place for years: Seed-raised Dahlias such as Fresco and Harlequin and the cutting- raised, exclusive Goldalia series.”

**Speaking of exclusivity what piece of exclusive news would you like to share with FCI’s global readership?**

“We are clearly back as one of the companies leading the potted and bedding plants business in Europe. We are rebranding ourselves, starting at FlowerTrials, to Syngenta Flowers – a very logical and well-fitting brand. We are actively engaging with partners and companies for sale, but these discussions are confidential and the outcome uncertain. We’ll obviously share the news once we have signed our agreements.”



## NEW CLASSIFICATION

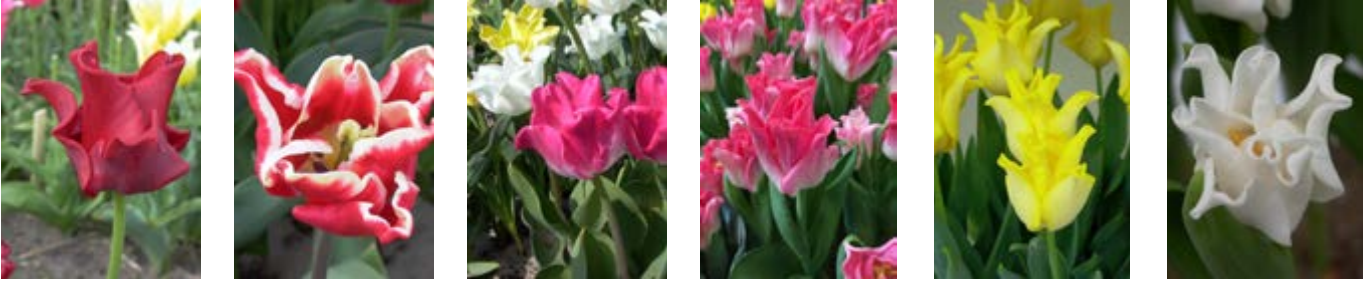
KAVB is updating its tulip classification system. The current classification is no longer sufficient to classify the modern range. For example, there are double fringed tulips but the description of the group refers to single tulips. Modern-type Darwin hybrids hardly distinguish themselves from Triumph tulips. Of course, there will always be tulips that cannot be classified properly and there is no point in creating a specific group for each different shape. Cultivars like 'Green

Mile 'actually fall into two cultivar groups: the Fringed Group and the Viridiflora Group. Further study is required.

The classification of tulips will require a great deal of attention in the coming years. It would be helpful if companies communicated which of their cultivars are no longer planted and the date they ceased production as this will make reclassification unnecessary.

Please email relevant information to: [vanscheepen@kavb.nl](mailto:vanscheepen@kavb.nl)





# New group for tulips: CORONET GROUP

KAVB (the Royal General Bulb Growers' Association) uses a system of groups for the classification of tulip cultivars. Due to recent developments in the assortment of tulips, a new cultivar group has been added to this system: the Coronet Group. This article explains the ins and outs of the newest tulip division.

BY JOHAN VAN SCHEEPEN AND SASKIA BODEGOM\* PHOTOS: KAVB, VISIONS

In 1949, the KAVB registered the tulip 'Picture' for G. Baltus. This cultivar was classified into the Single Late Group. It is a mutation of 'Princess Elizabeth', a creation of Krelage & Zn back in 1898. There is something special about 'Picture'. It's a tulip with an uncommon shape. All the petals are laterally compressed, creating a spout at the tip of the petal. The whole plant also has a much firmer texture than other tulips. When they unveil their beauty in the garden, these specialty tulips are easy to recognise by their sturdy upright leaves which are turned towards the stem and a slightly inward-turning edge. It is said that they look like sailing boats.

It wasn't until 1992 that another tulip with the same characteristics was registered: 'Witty Picture' from Th. Timmerman. This cultivar was followed by 'Liberstar' from G. Sneekes (1999), a mutation of 'Blenda', which, in turn, resulted in a white mutation called 'White Liberstar' from P.J. van Diepen / J.A. Borst (2010), suited for gardens and for forcing. As such, the particular Picture shape can also now be spotted in forced tulips.

## RAPID INCREASE

From that moment on, things accelerated: 'Confort', 'Yellow Crown', 'Elegant Crown', 'Arctic Picture', 'Red

Dress', 'Crown of Dynasty' and 'Dress Code' followed in quick succession for registration. Meanwhile, Tulipa 'Negrita' resulted in a purple mutation which completed the colour palette currently available: white, pink, red, yellow and purple. There were also two-toned cultivars. The presence of a growing number of unusual, 'picturesque' and oddly shaped tulips in the marketplace prompted KAVB to classify these as a new division (cultivar group). They are truly standalones within the Triumph group and the Single Late Group. So far, these tulips are only known as mutations, both by natural and artificial means of radiation. Until now, the new division was only comprised of single tulips, but KAVB would like the option of including double tulips in the future. The group will be called Coronet Group and refers to the flower shape that resembles a crown. Tulipa 'Picture' can be used as a reference cultivar for this group.

\* 'New group for tulips: Coronet Group' ('Nieuwe Groep bij tulpen: Coronet Groep' by Johan van Scheepen and Saskia Bodegom was first published in the April 26, 2018 issue of trade publication Greenity. FloraCulture International has obtained the publisher's permission to reproduce this in English. For more information please visit: [www.kavb.nl](http://www.kavb.nl) and [www.greenity.nl](http://www.greenity.nl)

11<sup>th</sup> to 14<sup>th</sup> June 2019



# FlowerTrials® a must-see for green professionals

From 11th to 14th June, 62 breeding companies in the Westland and Aalsmeer areas (The Netherlands) and Rheinland Westfalen area (Germany) will open their doors at 31 locations to show their latest assortment in pot and bedding plants to growers, exporters and buyers from across the world.

### THREE NEW PARTICIPANTS

Three new participants will join the FlowerTrials in 2019. Their varieties and locations will be included in the FlowerTrials promotional activities.

AllPlant Young Plants roots and grows young plants from tissue-culture for delivery to professional growers. This Dutch company is active in the product development of Echinacea, Heuchera and Phlox and its catalogue comprises over 500 innovative varieties from various breeders.

Belgium-based DeCock Plants is a well-known international



producer of young plants with a rooting station at their home base and mother plant facilities in Ethiopia. The company has its own breeding program in Lavandula, Osteospermum and Poinsettia. Ramm Botanicals/Kalantzis Plants is an Australian/Greek joint venture in the breeding and young plant production of Anigozanthos (Kangaroo Paw), Lomanda, Dianella and other Australian Native plants. Previous exhibitors Thompson & Morgan, Bock Bio Science and Cultivaris have announced they will not participate in 2019.



### FLOWERTRIALS® LANDSCAPE ANNO 2019

This year's FlowerTrials sees a new cluster at FN Kempen in Mijdrecht (area Aalsmeer) where new partic-





Participants DeCock and AllPlant will exhibit together with Kientzler, who in addition to their main location in Germany will also welcome visitors in The Netherlands. Ramm Botanicals/ Kalantzis Plants will join the

Royal van Zanten cooperation in Aalsmeer. Exhibitors at the World Horti Centre are meanwhile all changing location with Queen and Van den Bos sharing with Sakata at the Demokwekerij Westland Zwethlaan and Schoneveld partnering with Selecta one and VWS Flower Bulbs at Nursery P. van Geest. Prudac and DHMI will also join this cluster making 5 exhibitors. Dümme Orange has announced that they will be moving from Westland to Aalsmeer to their own location in De Kwakel.

#### NEW BOARD MEMBER

Frans-Peter Dechering, commercial director of Schoneveld Breeding, has joined the FlowerTrials® Board. An experienced marketing & sales expert within the horticultural sector, Frans-Peter will advise and support the Organisation in its promotional activities.

#### PREPARING A VISIT

Visitors are encouraged to consult the FlowerTrials website [www.flowertrials.com](http://www.flowertrials.com) for a detailed overview of each exhibitor's assortment, including photos and videos. By using the detailed route planner, calculating a route around the 31 locations could not be simpler. Floricultural professionals worldwide are invited to register online and make a date with FlowerTrials 2019.





# DÜMMEN ORANGE REDUCES CHEMICAL CONTROL BY 80%

*'Applying natural enemies instead of applying pesticides'*



'No chemicals' has been standard in vegetable horticulture for years. In the production of flowers and plants this demand is only now growing fast. Manuela van Leeuwen, Phytosanitary officer and Coordinator global sustainability with Dümmen Orange says: 'Think of the discussion of last year's summer on bee mortality. We fully accept that demand.'

## PREDATORY MITES AND NEMATODES

In 2015 Dümmen Orange had already started with the introduction of a GreenGuard protocol which reduces chemical inputs by 80%. Van Leeuwen: 'We started on our potted Chrysanthemum farm in Uganda. Together with Koppert, worldwide supplier of beneficial insects, we developed a protocol that made it possible to produce cuttings of good quality with minimal use of chemicals. We used predatory mites and parasitising nematodes

instead. This was not easy in Uganda... it took a year of discussion to import these beneficial insects into the country. Once permission was granted we started training our staff.'

## SCOUTS

'The "scouts", employees checking the crop daily for pests and diseases, had to change their way of working. Formerly only checking crops and monitoring traps for pests, they now had to monitor for natural enemies as well. Van Leeuwen: "The entire system depends on having good scouts. They are the critical eye. They have to recognise all possible pests and any problems with the natural enemies at a very early stage, enabling immediate corrective action.' From both Koppert and Dümmen Orange staff travelled regularly to Uganda to train staff. Van Leeuwen: 'It struck me that people considered working with insects rather ludicrous in the beginning. People preferred to be a "chemical

scout" rather than a "biological scout". That has now reversed completely. Everybody, all employees, retailers, and consumers, have understood that this is the only way forward. Growers stand very strong with these chemical-poor cuttings, making it possible to start with an IPM system themselves.'

## 100% GREENGUARD-PROOF

A few years have now passed and the Dümmen Orange GreenGuard policy continues to grow strong steadily. The potted Chrysanthemums from Uganda are now 100% GreenGuard proof, as are the Pelargonium Peltatum cuttings from Kenya. Van Leeuwen: 'Different rules apply for every country and every crop. But we have now gained the experience needed with Integrated Pest Management (IPM). For potted Chrysanthemums we have been the first one going for 100% IPM cuttings. And now we continue with vigour!'







DÜMMEN  
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# FLOWERTRIALS

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# INTERNATIONAL ORCHID SHOW TAINAN

AUTHOR: TIM BRIERCLIFFE

With around 200,000 visitors from the region and many from other countries the International Orchid Show in Tainan, Chinese Taipei (March 1–11, 2019), has become an important fixture in the calendar of those active in the world of orchids. TIOS has been running every year since 2005 and has proven to be an important showcase for the industry in Chinese Taipei.

Tainan is the home of TOGA, the association for orchid growers in the region, and is home to significant orchid production. With thirty plus exhibitors (those involved in foreign trade) it is clear that growers in the region take great pride in this annual festival for this beautiful range of plants. For growers in the region the export market is essential but in recent years this has presented challenges. There is still growth in the value of orchid exports, which are still dominated by Phalaenopsis, but the growth has slowed considerably to single percentage increases compared to six to eight years ago when export values were growing strongly. In fact between 2017 and 2018, while export value still rose a little export volumes actually went down. The USA and Japan have consistently been the main markets for orchid sales from the region and this continues; whilst the Netherlands has dropped down the ranking with Vietnam taking over. There are probably two reasons for this. Orchid production in Europe, especially the Netherlands has reached saturation point. According to Ed Moor, from Sion Orchids, who spoke at the TIOS Business Forum, there are 52 Phalaenopsis growers in the Netherlands, covering 285 hectares. Historically Dutch growers have bought in young plants from Chinese Taipei but, according to Ed, that is getting less as European expertise and competitiveness increases. Secondly, Vietnam is an increasingly interesting place for orchid production. Dr. Nguyen Van Tien from CEFORD in Vietnam described the huge growth in the Vietnamese industry. They are also expanding exports. Now 60%







### QUICK FACTS

In 2016 Chinese Taipei boasted 400 orchid growers cultivating 700ha under glass. It is estimated that the country grows 200ha of Phalaenopsis, 150 ha of Oncidium, 100 ha of Cymbidium, 130 ha of Cattleya and Dendrobium and 5.6 ha of Paphiopedilum. Opened in 2005, the Tainan Orchid Plantation (the venue of the annual TIOS show) is the country's epicentre of orchid production covering 160ha cultivated by 80 growers.



Only a few decades ago, growing orchids was an activity limited to a handful of dedicated hobbyists, attracting mostly rich professionals who could afford to collect the more expensive varieties and provide them with an ideal growing environment. Amateur growers have been cross pollinating species and creating unique hybrids which today are commercially grown. In the 1990s the government established a technical service team to help growers with problems with seedling propagation. The potted Phalaenopsis production has increased tremendously ever since, thanks to continuing R&D into tissue culture, better shipping techniques and the most ideal natural conditions.

Each year, the event attracts around 200,000 orchid aficionados which include almost 3,000 industry professionals from abroad. The grand opening of this year's show took place on March 1, 2019.





of Vietnamese orchid production is exported, mainly to Japan, Middle East, South East Asia and South Korea.

The Chinese Taipei orchid industry is clearly outstanding but it must face up to the challenges of an increasingly competitive marketplace for this product that is now grown much more widely. Growers will need to collaborate more to service new markets, they will need to do more to protect their new varieties and the whole global orchid industry is hungry for innovation. But, Chinese Taipei takes their industry seriously. In 2020 Taichung will host the World Orchid Conference, keeping this critical product right at the forefront. Equally promoting the country's orchid industry was the Blossom Pavilion in the AIPH-approved 2018 Taichung World Flora Expo which hosted amazing orchid displays. This is a vital industry for the region and if growers maintain the right focus then they can secure their position in the industry.

*TIOS is the ultimate showcase for the country's orchid industry featuring a large and colourful display of orchids varying from the more common varieties to exclusive 'must-have' orchids.*



*TIOS has gained worldwide recognition with the UK's Royal Horticulture Society (RHS) presenting their trophies to the best orchids in show.*



*The majority of orchid plants are destined for domestic sales whilst around 30 companies are entirely focused on export sales. According to 2016 data provided by TOGA, the association for orchid growers in the region, the total export value of flower and plant exports was US\$181 million of which orchid exports accounted for \$172 million, equivalent to 92% of total flower and plant exports. In 2017, the total value of Phalaenopsis exports was US\$128 million. Phalaenopsis makes up 68.5% of the country's total value of orchid exports.*





MAY 2019

**1-3 KOREA**

XIII International Symposium on Flower Bulbs and Herbaceous Perennials (ISFBHP) at the Grand Ambassador hotel in Seoul, Korea.  
[www.flowerbulb2019.org](http://www.flowerbulb2019.org)

**8-19. FRANCE**

Floralies, the 12<sup>th</sup> edition of the Floralies Nantes will take place at the Parc de la Beaujoire Convention Centre in Nantes.  
[www.comite-des-floralies.com](http://www.comite-des-floralies.com)

**13-14. NETHERLANDS**

Horticultural Lighting Conference at the Jaarbeurs convention centre in Utrecht, Netherlands.  
[www.horticulturelightingconference.com](http://www.horticulturelightingconference.com)

**19-24 BELGIUM**

V International Symposium on Postharvest Technology at the Academic Hall of the Liège Université.  
<https://events.uliege.be/postharvest2019/programme/>

**21-25. UNITED KINGDOM**

RHS Chelsea Flower Show  
[www.rhs.org.uk](http://www.rhs.org.uk)

JUNE 2019

**3-5. FRANCE**

ISF World Seed Congress in Nice.  
[www.worldseedcongress.com](http://www.worldseedcongress.com)

**4-7. THE NETHERLANDS**

Dutch Lily Days.  
[www.dutchlilydays.nl](http://www.dutchlilydays.nl)

**5-9. UNITED KINGDOM**

RHS Chatsworth Flower Show  
[www.rhs.org.uk](http://www.rhs.org.uk)

**5-7. KENYA**

IFTEX, International Floriculture Trade Expo at Nairobi's Oshwal Centre. Held in conjunction with Fresh Produce Africa.  
[www.hpp.nl](http://www.hpp.nl)

**11-13. THE NETHERLANDS**

Greentech, the world's leading horticultural technology show.  
[www.greentech.nl](http://www.greentech.nl)

**11-14. THE NETHERLANDS**

FlowerTrials®, open house event for the pot and bedding plant industry.  
[www.flowertrials.com](http://www.flowertrials.com)

**17-20. ITALY**

IX International Symposium on Irrigation of Horticultural Crops in Matera, Italy.  
[www.irrigationmaterato2019.com](http://www.irrigationmaterato2019.com)

**24-28. ITALY**

International Symposium on Growing Media, Composting and Substrate Analysis in Milan, Italy.  
[www.susgro2019.com](http://www.susgro2019.com)

JULY 2019

**2-7. UNITED KINGDOM**

RHS Hampton Court Palace Garden Festival  
[www.rhs.org.uk](http://www.rhs.org.uk)

**2-4. GERMANY**

Fleuroselect's 50<sup>th</sup> Annual Convention in Kassel.  
[www.fleuroselect.com](http://www.fleuroselect.com)

**13-16. UNITED STATES**

Cultivate'19 will be held in Columbus, Ohio.  
[www.cultivate19.org](http://www.cultivate19.org)

**15-18. GREECE**

12<sup>th</sup> Annual International Symposium on Agricultural Research in Athens, Greece  
[www.atiner.gr/agriculture](http://www.atiner.gr/agriculture)

**17-21. UNITED KINGDOM**

RHS Flower Show Tatton Park  
[www.rhs.org.uk](http://www.rhs.org.uk)

AUGUST 2019

**13-15. UNITED STATES**

Independent Garden Centre Show (IGC) at Lakeside/McCormick, Chicago.  
[www.igcshow.com](http://www.igcshow.com)

**21-23. NETHERLANDS**

Plantarium, international nursery trade fair.  
[www.plantarium.nl](http://www.plantarium.nl)

**21-23. UNITED STATES**

Farwest, the biggest green industry show in the West.  
[www.farwestshow.com](http://www.farwestshow.com)

SEPTEMBER 2019

**1-6. UNITED KINGDOM**

International Garden Centre Congress in Windsor, England.  
[www.igca2019.co.uk](http://www.igca2019.co.uk)

**3-4. UNITED KINGDOM**

Four Oaks Trade Show in Cheshire.  
[www.fouroaks-tradeshow.com](http://www.fouroaks-tradeshow.com)

**4-6. UNITED STATES**

AmericanHort Plug & Cutting Conference in Charlotte, North Carolina.  
[www.americanhort.org](http://www.americanhort.org)

**5-7. POLAND**

Green is Life. Poland's leading nursery trade fair in Warsaw.  
[www.greenislife.pl](http://www.greenislife.pl)

**8-11. CHINA**

71<sup>st</sup> AIPH Annual Congress, Beijing, China including the AIPH International Green City Conference to be held on the 10<sup>th</sup> September.  
[www.aiph.org](http://www.aiph.org)

**8-13 CHINA**

World Flower Summit Beijing, held alongside AIPH's Annual Congress.

**10-12. FRANCE**

Salon du Végétal, France's leading horticultural trade show will take place at the Beaujoire exhibition centre in Nantes. New dates!!  
[www.salonduvegetal.com](http://www.salonduvegetal.com)

**10-12. UNITED KINGDOM**

GLEE at NEC Birmingham  
[www.gleebirmingham.com](http://www.gleebirmingham.com)

**10-12. RUSSIA**

FlowersExpo at Crocus Expo.  
[www.flowers-expo.ru](http://www.flowers-expo.ru)

**16-18. ZIMBABWE**

Hortiflor Zimbabwe at Harare's HICC convention centre.  
[www.hpp.nl](http://www.hpp.nl)

**16-21. CHINA**

IPS Symposium Growing Media for Food and Quality of Life & 1<sup>st</sup> International Peat-based Products and Technology Expo in Qingdao.

**17-18. UNITED KINGDOM**

Landscape, the industry trade show at Battersea Park, London  
[www.landscapeshow.co.uk](http://www.landscapeshow.co.uk)

**24-28. SOUTH AFRICA**

8<sup>th</sup> World Conference on Ecological Restoration in Cape Town.  
[www.ser2019.org](http://www.ser2019.org)

**26-28. ITALY**

Flormart at the Fiera di Padova exhibition Centre.  
[www.flormart.it](http://www.flormart.it)

**28-29. UNITED KINGDOM**

RHS Malvern Autumn Show  
[www.rhs.org.uk](http://www.rhs.org.uk)

**30 SEPTEMBER- 2 OCTOBER. ECUADOR**

Agriflor Ecuador at the Centro de Exposiciones in Quito.  
[www.hpp.nl](http://www.hpp.nl)

OCTOBER 2019

**2-4. COLOMBIA**

Proflorea at the Corferias Convention Centre in Bogotá.  
[www.proflorea.org.co](http://www.proflorea.org.co)

**2-4. NETHERLANDS**

GrootGroen, the world's premier amenity plant show.  
[www.grootgroenplus.nl](http://www.grootgroenplus.nl)

**9-10. CANADA**

Canadian Greenhouse Conference at the Scotiabank Convention Centre, Niagara Falls, Ontario, Canada.  
[www.canadiangreenhouseconference.com](http://www.canadiangreenhouseconference.com)

NOVEMBER 2019

**6-8. NETHERLANDS**

International Floriculture Trade Fair (IFTF) in Vijfhuizen, Netherlands.  
[www.iftf.nl](http://www.iftf.nl)

**6-8. NETHERLANDS**

Trade Fair Aalsmeer.  
[www.royalfloraholland.com](http://www.royalfloraholland.com)

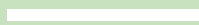
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