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# GREEN IS THE COLOUR OF THE FUTURE



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**70<sup>TH</sup>**  
EDITION



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## THE PROOF IS IN THE PLANTS

In what will be seen as a massive boost for the ornamental horticulture industry at large, the two Green-Air Operational Group reports and brochures from Flanders are full of stories reporting that both houseplants and garden plants can purify the air as long as one understands their limitations.

Scientists and environmentalists gathered at The Technology Platform for Ornamental Cultivation have been working together for the past two years to gather scientific knowledge about the air-purifying capabilities of plants.

Are a handful of ferns sufficient to purify the air in an 9 m<sup>2</sup> office space and does a green building façade have more effect on the amount of particulate matter (PM) in a narrow street than a wide-crowned tree? The study reveals that when defining the amount of volatile organic compounds (VOC), gases and PM that plants remove from the air, factors such as the amount of light, air movement, initial air pollution and leaf shape must be taken into consideration. The higher the concentration of pollutants, the faster the plants break them down and vice versa. The more light, the greater the purification, the more air displaced, the quicker the purification. What's more, the higher the density of stomas and the more texture present on the leaf, the better the purification.

Today, 55% of the world's population lives in urban areas, a proportion that is expected to increase to 68% by 2050. Plants provide important ecosystem services in such environments, including air purification. Trees, hedges, green roofs and green façades act as natural filters and provide a net decrease in concentrations of particulate matter (PM) and harmful gases in the air. But each situation is different. In a narrow street, for example, trees with a wide crown are often less advisable because they can prevent the natural ventilation and partly serve to contain the air pollutants. A green façade that allows more air flow can be a better alternative in this case. Studies of the effect of green on air pollution also indicate that local reductions can vary greatly, from 1% to 60%.

The publications will help ornamentals growers tailor their crops to this new societal need and create new niche markets. Landscape architects and green services, in turn, are given clarity about planting choices and plants. In addition, supply companies, environmental services and private or public procurers of green projects can now use scientific evidence when talking about the air-purifying effects of plants. These studies, which are making a valuable contribution to evidence-based green policies, can be downloaded at: [www.pcsierteelt.be](http://www.pcsierteelt.be)

Ron van der Ploeg



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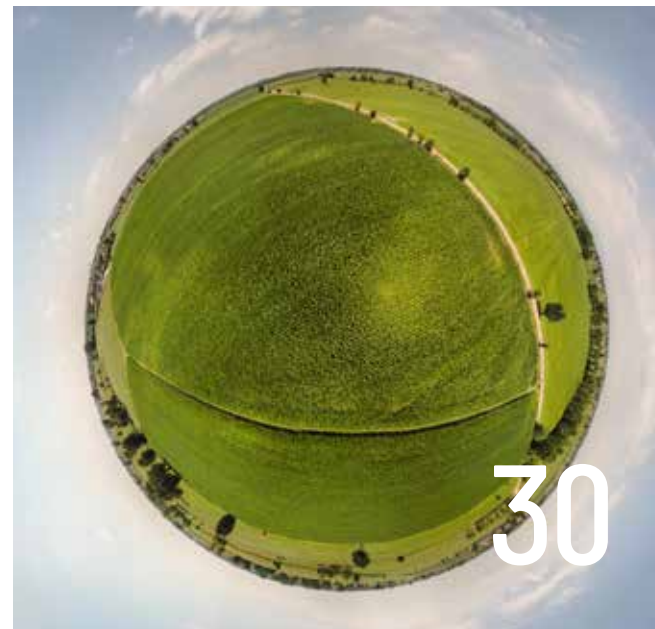
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CHINA



## Expo 2019 Beijing kicks off with grand opening ceremony

The AIPH-approved horticultural world exhibition EXPO 2019 Beijing is now two months underway after an awe-inspiring opening ceremony on Friday night April 26, 2019. Delivering a key speech was China's President Xi Jinping who emphasised that we should pursue harmony between humankind and nature, and achieve green and sustainable development.

Over 100 countries participate in the event which will run until October 7, 2019 in Yanqing district of Beijing, China. Covering over 500 hectares the world event takes place close to the foot of the Great Wall in Badaling. Countries and international organisations take their place at the Expo alongside many gardens from provinces across China.

The opening was a visual spectacle packed with fireworks, dancers and singers. AIPH-President Bernard Oosterom said he was thrilled to be speaking at the opening of Expo 2019 Beijing "It is the purpose of AIPH to support the ornamental horticulture industry worldwide and trade events like this provide a valuable mechanism for all those in this industry to do business and grow together." On behalf of AIPH, Oosterom extended his gratitude to president Xi Jinping and the Chinese government for attaching great importance to the Expo and support it. "I am pleased that participants from around the world will

use horticulture to show us their interpretation of the Live Green Live Better theme, demonstrating a beautiful picture of what can be achieved between mankind and nature." Oosterom said China has led the way in promoting green developments. "It is clear that the Chinese government supports ecologically sensitive development in order to create a beautiful China. AIPH is represented in China by the China Flower Association. Thanks to its efforts horticulture in China has achieved huge growth and the Expo is a testament to how far it has come." The Chinese horticulture industry has seen tremendous growth over recent decades and still it continues to develop into a more and more sophisticated sector. The market for flowers and plants in China is huge and, based on our predictions for this industry, it is set to be much bigger still in years to come. *Here is the video of the grand opening: [www.bit.ly/2leVRk](http://www.bit.ly/2leVRk)*

AUSTRALIA

## NGIA Members show overwhelming support for Greenlife Industry Australia

Members of Nursery & Garden Industry Australia (NGIA) have given their resounding support to establish Greenlife Industry Australia, voting overwhelmingly in favour of the change.

The historical decision received unprecedented engagement by Members with non-compulsory voting increasing significantly for the vote, showing the importance of the decisions. "The members have spoken, and they have sent us a powerful message. They want greater representation, wide industry acknowledgement and relevant national benefits and service from their national representative body," said Karen Brock, NGIA President and inaugural director designate for Greenlife Industry Australia. Greenlife Industry Australia is expected to launch on 1 July 2019 with many requirements already met. The inaugural Board intends to harness the support for Greenlife Industry Australia, and maintain momentum, focusing on the priority areas of growing

markets, protecting investments and reducing costs of Members. Karen advises the process of transition will take some time. It is expected the early months of management will be dominated by administrative activities while operational systems are established. Members are assured that while adjustments will not be obvious initially, their representatives will be working to set up the organisation to deliver the changes as proposed. The inaugural Board for Greenlife Industry Australia met immediately following the meeting to informally work through the immediate requirements for the new entity. *For more information about Greenlife Industry Australia visit [www.nationalreinventionproject.com.au](http://www.nationalreinventionproject.com.au)*

UNITED KINGDOM

## Chelsea Flower Show 2019 Plant of the Year Winner

Plantipp, an independent plant breeder's agent serving the European market, has announced that its Sedum takesimensis Atlantis ('Nonsitnal') has been crowned the Chelsea Flower Show's Plant of the Year 2019 with the hybrid foxglove Digitalis x valinii 'Firebird' and Agapanthus Fireworks (MDB001) winning second and third place respectively.

The overall winner adds a splash of colour to any garden with its yellow variegated foliage. Atlantis is a hassle-free perennial and reaches around 45 cm in height. Sedum Atlantis is a breed of Hortech, Inc. from the United States and submitted by UK-based Suttons Nurseries.



NETHERLANDS



## Royal recognition for Tree Centre Opheusden

King Willem-Alexander and Queen Máxima from the Netherlands visited Dutch tree nursery Volentis in Opheusden on Wednesday May 29. The nursery is one of the hundred and fifty members of Tree Centre Opheusden (TCO), a regional tree grower organisation defending the interests of the industry.

It is surely no coincidence that the royal visit took in Opheusden as TCO ranks among one of the major tree growing areas in the Netherlands. Member growers are proud of their increasingly automatised production processes. These growers also play an important role in providing trees that can help mitigate climate change. Harm Willemsen (aged 25), deputy director of tree nursery Volentis, explained to a well-informed King Willem-Alexander and Queen Máxima why his trees enjoy such high demand around the world. TCO sees the royal visit as important recognition of the industry as a whole. The royal couple did not go home empty-handed. On behalf of TCO and Volentis, they were presented with three Tilia cordata 'Winter Orange'. The tree's unique orange-red stems glow fiery orange throughout the winter.

NETHERLANDS

## Begonia eliator Dreams Garden MacaRouge wins 2019 FleuroStar Award

With not all 30 judges being unanimous in praising the quality of entries in this year's FleuroStar Awards (some of them thought that "breeders could have done a much better job"), among the over 100 people attending the award ceremony at Syngenta's premises in De Lier (June 13, 2019), the majority seemed to agree that Begonia eliator Dreams Garden MacaRouge was worthy of winning the 2019 FleuroStar Award.

Launched in 2009, FleuroStar's aim is to 'bring breeding and retail' closer together by recognising the pot or bedding with the most 'wow appeal' at retail. Beekenkamp's winning Begonia was competing against Begonia Viking Red on Chocolate (Sakata Ornamentals), Pelargonium Pretty Little Pink Splash (Syngenta Flowers), Pelargonium Red Explosion (Florensis), Pelargonium Survivor Idols Rosalinda (Dümme Orange) and Xerochrysum Granvia Gold (MNP flowers). Cor Bremmer, Commercial Director; Marc Driessen, Managing Director; Sirekit Mol, Marketing Manager & Head of Product Trade; and Ans van der Velde, Manager Breeding accepted the prize from FleuroStar Committee Chairman, Heike Gronemann and Fleuroselect President, Karol Pawlak.



## EXTENSION OF PLANT VARIETY PROTECTION IN THE USA

Mr Hidde J. Koenraad is Partner in Intellectual Property at Boekx Advocaten (Amsterdam).

On December 20, 2018, the Agriculture Improvement Act was signed into law by President Trump. This new Farm Bill amends the U.S. Plant Variety Protection Act to add asexually propagated plant varieties, which were previously not available under the act.

In the US there are three types of intellectual property protection that breeders can obtain for new plant varieties and plant related inventions:

- Plant Variety Protection for seed and tubers (issued by the Plant Variety Protection Office PVPO);
- Plant Patents for asexually propagated plants except for edible tubers (issued by the Patent and Trademark Office PTO); and
- Utility Patents for amongst others genes, traits, methods, plant parts or varieties (issued by the PTO)

Until recently, Plant Variety Protection PVP Certificates could only be used to protect plant varieties that reproduce sexually (through seeds) or through tuber propagation. However, as a result of the new legislation, the PVP has now been extended also to plant varieties that reproduce asexually, i.e. from a single parent, through cutting, grafting, tissue culture or root division.

As a result of the new amendments to the PVP Act the asexual multiplication of a PVP-protected variety now constitutes an act of infringement. The changes also extend the reach of Essentially Derived Variety EDV protection, which provides for coverage of varieties that were "essentially derived" from a PVP-protected variety, now also covering varieties that were asexually reproduced. EDV protection is not provided by plant patent.

The proprietor of a PVP Certificate can sue for injunctive relief, damages and attorney fees in the case of (alleged) infringement. If a court rules that there has been infringement, it may award damages in an amount that is (at least) equal to a reasonable royalty, including a fixed amount of interest and costs, for the infringing use of the variety. The damages awarded may be increased up to three times in case of wilful infringement. Furthermore, in exceptional cases reasonable lawyer fees may be awarded to the prevailing party.

These extensions of the U.S. Plant Variety Protection Act should be especially beneficial to the flower industry. Flower breeding companies should therefore consider the potential advantages of pursuing PVP protection for their new varieties in the U.S.





# 'Old Format, New Flormart'

Celebrating its 70th edition in *grande stile* this year, one of Europe's oldest horticultural trade exhibitions Flormart is undergoing a major overhaul. A new team of event organisers have shown an unprecedented willingness to experiment with new features and the ability to truly understand their attendees' and exhibitors' needs. Their efforts are now clearly starting to pay off.

AUTHOR: RON VAN DER PLOEG PHOTOS: PADOVAFIERE AND RON VAN DER PLOEG

Last year's Flormart show attracted over 300 exhibitors, 2,000 delegates and 15,000 industry professionals from around the world. Flormart 2018 was a particularly eventful year as the show hosted an International Trade Mission, the 70<sup>th</sup> Congress of the International Association of Horticultural Producers (AIPH) and the AIPH International Green City Conference on urban greening in historic cities. Flormart's project manager since 2016, Cristiana Bertero, has more than 21 years' experience of organising and marketing trade shows at PadovaFiere. She explains that the 2019 edition of Flormart will build on its tagline 'At the heart of a sustainable future lies a green landscape'. The organising team behind Flormart is committed to ensuring that the end result will be more than just a catchy phrase but rather a meaningful and distinctive concept that will be re-embraced by the country's horticultural community.

#### **Re-embrace aptly characterises the détente florale between Italy's ornamentals sector and the event organisers, am I right?**

"When speaking to Italian companies at the IPM Essen show nearly all admit that they still have a soft spot for our show. They tell me that it was in Padua that their business started to grow. Generally speaking, there's still a lot of affection and nearly everyone is happy to see that we are making big steps to revitalise Flormart. Flormart represents the entire supply chain differentiating itself by its green character and focus on today's landscape. This difference is reinforced by an incredible amount of ornamental plants, young plants, tropical foliage plants, nursery stock products and bedding plants. Think of our top notch educational programme on nursery stock and landscape. Large Italian plant nurseries recognise themselves in Flormart."

#### **So, what can we expect at this year's event?**

"So much change has happened over the past two years and the 2019 edition of Flormart will clearly reflect that change and growth. This year is a very important one and it has got off to a good start in January in Essen where we sponsored the AIPH International Grower of the Year Awards and built strong brand recognition through this partnership. Flormart 2019 will host its own Flormart Awards, a joint initiative of the Italian Ministry of Agriculture and trade magazine Linea Verde."

#### **You're constantly adding new features to provide a better experience for attendees...**

"For example, the XI International Forum EcoTechGreen & Awards will bring together the country's finest landscape and garden designers and is considered to be the connection point for the world's nursery and landscape industry. In addition, the Green Innovation Hub aims to accelerate horticultural businesses in everything from carbon-free plant pots to sustainable greenhouses and eco-friendly packaging."

#### **What are the factors that have contributed to the show's revival?**

"Not least gaining AIPH's stamp of approval as a D-category trade exhibition. As more people are seeking international networks, education and information related to a healthy and green environment, having the endorsement and support of AIPH is extremely valuable. Another reason for recent growth is the current focus on urban greening. City councils and national governments are adopting new requirements for urban green spaces and a trade show such as Flormart provides education on urban greening and its many benefits. As such, one of the show's more popular offerings are Halls 1, 3, 4, 5 which are entirely dedicated to excellence





### 'BUYERS FROM HOME AND ABROAD CAN BE SURE TO FIND NOVELTY PLANTS GALORE'

in nursery stock and ornamental horticulture from home and abroad including flowers, trees, flowering and foliage houseplants and bulbs. Since the show's relaunch two years ago we opted for a brand new format, one that not only promotes the trade show but also Italy's rich biodiversity. Buyers from home and abroad can be sure to find novelty plants galore at Flormart."

#### **Tell us about PadovaFiere's major overhaul...**

"Innovation from a broader perspective can also be seen at the fairground as a state-of-the-art convention centre is currently under construction and will be ready in two years. The demolition of the building (which will leave its monumental façade untouched) is part of one of the largest construction projects at PadovaFiere since it was built at the beginning of the 20<sup>th</sup> Century and held the first Campionaria show in 1919. The €65 million project will create the largest purpose-built convention centre in north east Italy, capable of hosting conventions of around 3,000 people. In addition, part of Pavilion 7 will boast SMACT, an Innovation Centre of the Venetian

region. SMACT is a joint initiative of eight universities in the Triveneto (Veneto, Friuli-Venezia Giulia and Trentino Alto Adige) region: Padua, Verona, Ca'Foscari Venice, Iuav Venice, Trento, Bolzano, Udine and Trieste.

In collaboration with research institutes, Padua's Chamber of Commerce and 29 private companies SMACT will enhance the collaboration between business and research in the the world of 4.0 technologies. As SMACT headquarters will permanently occupy part of Hall 7, it is only natural that it will play a role at the forthcoming Flormart show and will have strong relevance for horticulture in the fields of precision agriculture and robotics. However, Hall 7 will continue to host exhibitors."

#### **How international is Flormart?**

"Flormart hosts exhibitors based across the country and we are extremely delighted to have twenty leading plant nurseries from Southern Italy back in Padua. This strong contingent of Sicilian growers will display their products and services in Hall 5. True to tradition, Flormart will also host a large proportion of international exhibitors and visitors. There will be another round of foreign delegation visits to Flormart. Over 100 industry professionals from the Mediterranean region, Eastern Europe and the Middle East in particular are anticipated. Think of possible representatives of Neom city in Saudi Arabia, a 500 billion megacity which is set to rise in the north western desert of the country. Think Expo 2021 Doha (Qatar), the AIPH-approved world expo with the theme 'Greening the Desert'. That's a lot of Mediterranean, drought-tolerant plants. To find out how to deal with a rapidly changing market and develop opportunities for commercial relations at an international level, with particular attention to emerging markets, be sure not to miss Flormart in 2019!"

#### QUICK FACTS

**Exhibitors:** 300+  
**Visitors:** in 2018, 15,000 industry professionals  
**Dates:** September 26-28, 2019  
**Daily opening hours:** 09:00 – 18:00 hours  
**Venue:** PadovaFiere Convention Centre  
 For more information visit [www.flormart.it](http://www.flormart.it)



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the potential



# The future of peat: bright or mostly overcast?

FCI sat down with the newly appointed Secretary General of the International Peatland Society (IPS) to find out what the future holds for peat use in the sector. Improving the 'quality of the dialogue' between conservation groups and the peat industry is clearly high on his agenda.

AUTHOR: SPENCE GUNN

**E**nvironmental campaigners have long been pressing the horticulture industry to cut, or even eliminate, its use of peat in growing media. The motivation was initially to conserve unique species that live on peatlands. More recently, the contribution that peat extraction makes to CO<sub>2</sub> emissions – peat bogs lock up carbon dioxide, one of the main gases leading to global warming, but extracting peat releases it to the atmosphere – has become more pressing and at some point, 2050 or later, climate change agreements are likely to see peat extraction phased out altogether.

## GROWING DEMAND

But despite the investments made by leading growing media manu-

facturers in developing and using alternative ingredients, the volume of peat extracted worldwide for horticulture has gone up, not down. "That's because demand for growing media itself has increased," says Gilbert Ludwig, who took on the job of Secretary General of the International Peatlands Society

## 'DROP THE DEBATE, BEGIN THE DIALOGUES'

(IPS) six months ago. It is particularly evident in China, driven by the move from traditional agriculture into more greenhouse cultivation, but the same trends are seen in other countries too. "Population growth worldwide means that over the next 10 years we'll need to increase food production by 50%. Many countries see development of greenhouse cultivation as a way to help secure that. It's a huge challenge. As long as peat remains the most consistent and best-performing growing medium, demand will continue to grow." The IPS's 1,400 members from 39 countries includes around 1,000 individuals with an interest in peatland management, but the society also represents peat producers and conservationists. Dr Ludwig's own background is in ecology and bio-economics. "We are to an extent sponsored by the peat industry but

we are most certainly not a lobby group for it," he says. "We aim to promote responsible peatland management based on science and to contribute to policy-making at national and international level."

## BALANCE

As an ecologist he understands the conservation case but he also believes it's vital to keep it in balance with the role of peat in local and national economies and also the societal implications of peatland management. "Would stopping peat extraction tomorrow necessarily help? I don't think we yet have the data to know." For example, he points to recent studies on different types of peatlands and peat extraction sites in the Baltic region which, he says, showed that CO<sub>2</sub> emissions were significantly lower than the International Panel on Climate Change has estimated using the same techniques. "We need to know a lot more about this in order to make the right decisions," he says.

Dr Ludwig sees one of his most immediate priorities as helping to improve the 'quality of the dialogue' between conservation groups and the peat industry. "It is still rather confrontational and that is not helping," he admits. "We need more of a partnership approach, which I believe will be a major role for IPS in the next few years. While it may not be realistic to end peat use tomorrow, it is important that we start to plan for it. Canada is a particularly good example of where sustainable peatland management is helped by constructive dialogue between industry and science", he says.



Gilbert Ludwig, Secretary General of the International Peatlands Society

## HORTICULTURAL USE OF PEAT

With Ireland already working to phase out peat extraction for fuel, and other countries likely to follow suit, horticultural use of peat is becoming increasingly important to the society's work.

"Part of our approach for the wise use of peatlands is to promote development of alternatives wherever possible," he says. "But, fortunately or unfortunately, peat combines so many of the physical and chemical qualities growers need that it's really difficult to find suitable alternatives. The hobby market is relatively easy to change but professional growers can't afford to risk inconsistency and poor quality. And most alternative ingredients have their own environmental footprints."

He adds: "The experience in countries like the UK, where deadlines for phasing out peat have shifted later and later, reveal the difficulties. You can reduce the proportion of peat (in growing media) but we don't know how long it will take before we can replace it completely."

## Will China usher in a peat-free future?

One of IPS's roles is to encourage growing media companies and the wider horticulture industry to recognise a responsibility to invest in alternatives. "The sooner the better for their own long-term future," says Dr Ludwig. "There's already been a lot of good R&D and the big players are taking their responsibilities to develop alternatives, and to restore worked mires, very seriously." Peat demand is increasing fastest in China, but with little in the way of its own peat reserves it is working on an exciting alternative that could potentially usher in a peat-free future. "They are producing sphagnum moss in large quantities on inorganic soils and there is the possibility to grow enough to significantly reduce the country's peat demand," he says. "It is something the IPS is monitoring with interest."

While more research is needed to make sphagnum an effective growing media constituent for most crops – in China it's currently mainly used in orchid cultivation – Dr Ludwig suggests it might be feasible to farm on a wider scale elsewhere too.







**AIPH INTERNATIONAL  
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# JOIN THE AIPH CONGRESS AND WORLD SUMMIT IN CHINA

## AIPH 71<sup>ST</sup> ANNUAL CONGRESS AND WORLD ORNAMENTAL HORTICULTURE SUMMIT

### Provisional Programme

#### Monday 9 September

AIPH Expo Conference  
AIPH General Meeting

#### Tuesday 10 September

Visits to Expo 2019 Beijing  
and the Great Wall

#### Wednesday 11 September

The World Ornamental  
Horticulture Summit Opens  
The AIPH International  
Green City Conference

#### Thursday 12 September

The World Ornamental  
Horticulture Summit:  
Plant Breeding and  
PBR Protection

#### Friday 13 September

The World Ornamental  
Horticulture Summit:  
Understanding the  
Chinese Market  
Visits to Beijing flower  
enterprises and markets.

71<sup>st</sup> AIPH Congress Sponsor



The AIPH-approved 'Expo 2019 Beijing' is in full swing. The world's largest expo of its kind has attracted millions of visitors from around the world. So where better to host the 71st AIPH Annual Congress, this September, than alongside it in China's capital city. Unique to this year's programme is the World Ornamental Horticulture Summit.

AUTHOR: PENELOPE TOMKINS

**T**he programme for the 71<sup>st</sup> AIPH Annual Congress (September 9 - 14) includes; the AIPH Expo Conference, the AIPH International Green City Conference, the AIPH General Meeting and a series of professional and cultural visits. Unique to this year's programme, however, is the World Ornamental Horticulture Summit. Running from September 11 - 13, this event offers an exceptional opportunity for developing knowledge of Chinese trade and markets and understanding complex international issues. Among the latter, plant breeding and PBR protection will feature as major topics.

### THE AIPH EXPO CONFERENCE

With a mandate agreed by international convention, AIPH has been approving and regulating international horticultural expos since 1960. The AIPH Expo Conference is attended by AIPH approved expo organisers to report on progress and share knowledge and best practices for the development of world class horticultural events around the globe.

### THE AIPH INTERNATIONAL GREEN CITY CONFERENCE

The AIPH International Green City Conference highlights the important role of plants and flowers and provides an opportunity for global thinking on the successful integration of nature into the built environment. The conference invites key decision makers, city planners, landscape architects and horticulturalists to share ideas, best practice and

knowledge on the challenges, benefits and practical implementation of urban greening.

### THE WORLD ORNAMENTAL HORTICULTURE SUMMIT

Taking place for the very first time in China, the World Ornamental Horticulture Summit is this year's premier event for the global ornamental horticulture industry. The speaker programme includes leading industry figures such as Biense Visser (CEO Dümme Orange), Edgar Krieger, (Secretary General, CIOPORA) and Marco van Zijverden (CEO, Dutch Flower Group). The summit is aimed at international growers, associations, government bodies, representatives from the landscape and afforestation industry, academics and experts from around the world. This event is organised in partnership with AIPH member the China Flower Association (CFA) and China Council for Promotion of International Trade (CCPIT).

### EXPO 2019 BEIJING

The AIPH Congress includes a visit to the AIPH approved A1 expo. The impressive 503-hectare park includes over 110 international participants and four main pavilions for hosting themed days and events.

### INFORMATION AND BOOKING

The 71<sup>st</sup> AIPH Annual Congress and World Ornamental Horticulture Summit provide invaluable opportunities for professional development and engagement with industry colleagues from around the world. To find out more and to book, visit: [www.aiph.org](http://www.aiph.org)



# Leading the way in sustainable plastics

Dutch and UK-based plastic manufacturer Desch Plantpak offers growers across Europe a complete solution when it comes to standardised and custom-made pots, containers and trays. Desch Plantpak strongly advocates a circular horticulture industry where plastics are collected, redesigned, re-used and recycled with D-Grade being their most powerful eco-friendly brand.

AUTHOR: RON VAN DER PLOEG

Originally founded as a start-up, Desch Plantpak traces its roots back to the 1980s when Mr Deelen and Mr Schuddeboom from Beuningen were brave enough to buy two enormous thermoformers and extruders and a huge collection of moulds to supply low-weight thermos pots/containers to an industry that was dominated by much heavier injection-moulded products. The company grew by leaps and bounds and acquired Synpro Horti Activities in 2003 which included factories in Waalwijk, Mundon and Congleton. When the company's history comes up it's mostly because of work anniversaries. "It's pretty amazing how often we celebrate employee milestones by getting a cake for them. Though we are owned by a private equity firm, we are proud of having the attributes of a family owned company," says Jan Willem Wieringa, a 51-year old farmer's son from the northern Dutch province of Groningen with over 25 years experience in the plastics industry who



Jan Willem Wieringa, CEO Desch Plantpak: "Unfortunately the plastics debate has gone off track."

was appointed as Desch Plantpak's CEO in 2014.

## EXTREMELY SUSTAINABLE

Wieringa is quick to add that there's no need to dwell too long on the past. "What matters is the future. A new era needs new perspectives of strategy, especially now that the industry faces an unprecedented backlash against plastic packaging. We're living in the most fascinating, at times equally frustrating, time period in the world to date. Often it seems that the truth belongs to the one who shouts the loudest and this also applies to the plastic debate." As a plastics manufacturer Desch Plantpak believes that its product portfolio is already extremely sustainable. "Simply because our products are made out of over 90% recycled material, whether it concerns injection moulding or

thermoforming. Moreover, anything that is left over during production is reused as raw material," ensures Wieringa.

## PLASTIC PANIC

The company's chief feels sorry that plastic panic seems to be everywhere. "Unfortunately, the plastics debate has gone off track following garbage patches in the oceans and marine animals entangled in plastic debris." We must individually take responsibility, Wieringa says, drawing an unconventional parallel between plastic waste and dog poo. "If you step into it, can the dog be blamed? The answer is no. It all boils down to the dog owner who should be responsible and pick up after their dog." The plastic crisis emerged very suddenly creeping into society seemingly out of nowhere, leaving the manufacturer's marketing



department scratching their heads. Wieringa: "Only a few years ago they were predominantly focusing on appearance of plants on retail shelves. Now we are clearly ramping up our sustainability communication."

*D-Grade Bio is a 100% plant-based product, which is perfectly suited for (organically) growing potted herbs.*

## INNOVATION

In Wieringa's ideal world all plastics would be collected, redesigned, re-used and recycled but the journey to achieve this requires leadership, sector collaboration and considerable technical innovation. The company, for example, redesigned a range of trays with more rounded edges to reduce material use by 10% while increasing its potential for recycling and reuse. Additionally, a collection and recycling service is available for long term customers in the Netherlands and the UK with all material collected from the grower being cleaned, re-processed and made back into pots and trays. Owned by Lincolnshire Management from New York, Desch Plantpak is part of an international conglomerate with manufacturing sites on two continents and customers in over seventy countries worldwide. Wieringa explained that Desch Plantpak attributes almost 70% of its earnings from exports with Germany, France, Belgium and Italy being its major markets. In Eastern Europe there's still room for growth while the Dutch domestic market

*Pots with strong green credentials. Left to right D-Grade Bio, D-Grade Fibre and EVO.*



(relying on three production sites in Waalwijk, Ter Aar and Beuningen) has remained fairly stable over the past few years, it still accounts for 30% of total sales. "However, our UK-based manufacturing site in Essex also produces for the home market so it depends on how you interpret 'home market', explains Wieringa. He adds, "With an annual revenue of almost €70 million, Desch Plantpak ranks among the biggest nursery suppliers.

## KERBSIDE RECYCLING

Desch Plantpak offers a wide range of products –pots, decorative containers, marketing trays, shuttle trays, propagation trays, bedding plant systems and hanging baskets to a broad client base (plant propagators, breeders, finished product growers and garden centres). Being a global company there's no such thing as a 'one-size-fits all' approach. "Contrary to one of the famous quotes attributed to Henry Ford – any customer can have any colour he wants, thus not only black. Think of the UK's Taupe plant pots which are made from carbon-free, recycled polypropylene that can be identified by near infrared and consequently recycled through kerbside recycling. More or less serving the same purpose in the German market is our Recover brand including blue pots made of recycled plastic that are easy to identify in recycling processes. Customers look for different colours as they feel these are easier to recycle."

## STRONG GREEN CREDENTIALS

One of the company's shining examples of innovation is the product line including pots and containers with strong green credentials. Launched in 2009, the D-Grade brand of eco-friendly pots and trays have been extended to currently include D-Grade Bio and

D-Grade Fibre. D-Grade Bio is a 100% plant-based product, which is perfectly suited for (organically) growing potted herbs and vegetable transplants, while the Fibre range is made from recycled paper pulp and includes an intriguing blend of egg and plant trays. Wieringa commented that the packaging is still in the testing phase which also applies to D-Grade®EVO, a pot which is set to create a stir in the packaging industry. EVO pots are made from green waste and as such are 100% biodegradable. They can be placed in the ground with the plant and its compost, and decompose in the soil naturally. Wieringa pointed to an interesting trial involving large-scale Hedera growers in the Netherlands who specialise in big project-based road side plantings sometimes requiring up to 100,000 plantings at once. EVO requires special orders in advance and offers the additional benefit of fertilising the plant once it is in the ground.

## RETHINK

Wieringa, an active member of the Rethink think tank, an industry association regrouping the Dutch rubber and plastics industry, stresses that his company focuses both on concrete actions and discussing the plastic issue at all levels of the value chain. He thinks it is extremely important to get ideological opponents to work with the industry. "Ecologists and the industry don't need to be enemies in this transition. We all know that plastic is also a success story. It's all around us, it's cheap, lightweight, flexible, impermeable and extremely tough." However, of all the ironies about plastic perhaps the greatest is its short time use combined with an extremely long life. "So the worst thing we can do is to quit plastic as quick as possible. Instead we just need to value it," he says. "Plastic only becomes waste when it's wasted on single-use throwaway items." The winds of change are in the air. "We're slowly succeeding in having the industry more involved in the end-of-life disposition of their products. Up to 25 years ago growers didn't even think about it."



# FOR EVERY SITUATION, A SUSTAINABLE SOLUTION



**D-GRADE® | EVO**  
From green waste material  
Soil compostable



**D-GRADE® | FIBRE**  
From recycled cardboard  
Soil compostable



**D-GRADE® | BIO**  
\*\*\*\* Bio-based and OK Compost certified



**RECOVER C | BLUE**  
100% recyclable, certified



**RECOVER | GREY**  
100% detectable, 100% recyclable



**DESCH RANGE**  
Up to 100% recycled plastic



WE CARE ABOUT  
**YOUR PLANTS  
OUR PLANET**  
RECYCLED RECYCLABLE



# SUSTAINABLE GROWTH

Nowadays, taking care of people and the environment is becoming more and more important. People are worried about the level of energy use, CO<sub>2</sub> emission related to transport by road and air, working conditions, use of chemical crop protection products and the waste of packaging material. Sustainability is acknowledged as a precondition to a healthy future and a license to operate in the floriculture sector. The UN's Sustainable Development Goals (SDG's) provide an international framework for sustainable development for all member states. Sustainable growth is a challenge for all segments of the economy and thus for the floriculture sector. Royal FloraHolland's sustainability mission is a future-proof floriculture industry in which flowers and plants are cultivated and traded in a manner that respects humanity and the environment. The SDG's cover a wide range of goals. For instance goal number 12, that aims at responsible use of resources, ensuring sustainable patterns of consumption and production. There is an increasing demand from the market for transparency on the production of flowers and plants. The traders as well as consumers want to know where products come from and how flowers and plants are produced. The efficient use of natural resources is encouraged which already leads to a decrease of the use of chemical crop protection and the use of water. These efforts are made not only in The Netherlands, but also in other main production areas. The Kenya Flower Council and the Ethiopian Horticulture Producer Exporters Association have done a great job in working towards certification. The majority of flowers coming from Kenya and Ethiopia therefore are certified which is being recognised in the European market and beyond. Royal FloraHolland joined forces with the main stakeholders in the international horticulture sector within FSI, the Floriculture Sustainability Initiative. Together we

work towards 90% sustainably produced flowers and plants by 2020. Stakeholders work together to initiate projects that work on the empowerment of women, the conservation of natural resources such as water and to help linking small farmers to the market. A topic that gets attention all over the world is the reduction of the environmental burden due to packaging material, plastic in particular. Too much packaging is going to waste without having the important function of protecting or safeguarding the quality of our products. The call on a ban on the use of plastic bags is heard in many countries. Royal FloraHolland signed the Plastic Pact an initiative of the Dutch government. The common goal is to maximise the recycling of plastics and to reduce the use of it. We need to realize that a focus on sustainable production and trade will offer ample business opportunities. In the long run investments in sustainable solutions will pay off and will lead to sustainable growth.

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





# ROSES WITH LUXURIOUS ALLURE: ALEIA'S PATH TO BLOOM

A newcomer to rose cultivation has been founded on a company's expertise in large-scale greenhouse production of tomatoes in Mexico. Company owner Luis Corella Arroquia chose to diversify into Red Naomi roses because of the product's unrivalled beauty, stable ranking and a desire to explore new territory.

AUTHOR: RON VAN DER PLOEG

**S**pain produces more olive oil than Italy, exports more wine than France and is one of the most important fruit and vegetable suppliers to the European market. In terms of global production of cut roses, however, the country is an extremely small player with only a handful of rose nurseries producing for the domestic market. Until now. A new Spanish-Dutch greenhouse project, Aleia Roses, dedicated to growing the signature Red Naomi rose year-round for the north European market, is set to revolutionise the future of rose growing in Spain.

## A FORGOTTEN CORNER OF RURAL SPAIN

Aleia Roses' 14-ha site is based in Soria, an almost forgotten corner of rural Spain, a province in the autonomous community of Castilla y León. Madrid, to the south, is about a two-hour drive away. It is a region of farmland, scattered market towns and unspoilt habitat where you can just be lucky enough (unless you are a sheep farmer) to see wolves roaming the undulated landscape.

Practically unheard of outside Spain, Soria is pretty unknown even to most Spaniards, apart from having the questionable reputation of being the country's province with the lowest population density with 9.23 inhabitants/km<sup>2</sup> and in some villages even less than 1 inhabitant/km<sup>2</sup>. In this context Aleia has brought new life to the region at a time when across the country huge crowds take to the streets over the 'emptying' of rural Spain.

For Aleia's company owner Luis Corella, the snow-capped mountains of the Sierra de Urbión and Sierra de Cebollera in Soria's north west echo with the sound of vehicles being re-fuelled and the click of the pump that automatically stops. The sound of Soria's fuel station in the 1970s, is what Corella remembers as the only animated place in town when he stopped in Soria halfway along the journeys between his home in Madrid and that of his grandparents.



Luis Corella Arroquia.

Corella, however, is quick to show some pragmatism in commenting on Soria as Aleia's home base. Rising 1030 metres above sea level, the province stands out for its climate with warm days and cool nights, its low humidity levels, its relatively close distance to the North European market and its pristine water from the Duero river.

Corella, with an impressive track-record in banking, fashion, car manufacturing and real estate development, learnt all about greenhouse production in Mexico when back in the 1990s his Toluca-based Bionatur greenhouses produced tomatoes for the USA retail sector. Moving back to Spain in 2013 he looked for new territory to explore. He explains that the presence of a biomass plant was the most decisive factor in choosing Soria. The GESTAMP (an industrial group with revenues of €9 billion and market presence in over 25 countries) plant will supply the company's primary energy needs (heat and power)



from next year onwards. What's more, the 17.02 MW plant draws its power from burning pine and olive wood cuttings. The produced carbon dioxide is captured, purified and used to enrich the glasshouse atmosphere. The CO<sub>2</sub> is required for plant photosynthesis and increased CO<sub>2</sub> concentrations of typically 1000 ppm will lead to improved crop productivity. Market visits and other hands-on activities delivered insights into the opportunities and challenges in export markets and played their part in convincing Corella. In August 2015, construction began of what was to become the country's most technically advanced and largest rose greenhouse complex.

## BATHED IN NATURAL LIGHT

Bathed in natural light – Soria enjoys more sunlight than almost anywhere else in Spain (25% higher levels of solar radiation compared to the Netherlands) – Aleia's

*The installation of a highly sophisticated Furora sorting/bunching and sealing line ensures that Aleia combines high productivity with exceptional quality.*

greenhouses were designed and built by Dutch-based manufacturer Dalsem – with whom Corella also worked with in Mexico – to embody environmental technologies aimed at reducing the facility's carbon footprint. High pressure sodium grow lights are installed that supply 156 micromoles / m<sup>2</sup> / sec. in winter. It is with great interest that the company follows the different LED lighting trials at Dutch rose farms and research institutes. The value which LED lights deliver has been carefully weighed but so far they prefer HPS lamps as these generate both light and heat.

A vast and impressive construction of Venlo greenhouses with a 6 metre post height incorporate diffused glass for better light distribution and to avoid leaf burn. Drip irrigation allows very precise water and nutrient delivery to plants and their roots.

Water from the nearby Duero river is the primary water source for irrigation at Aleia's and rain water from the roof is captured in two giant water retention basins of 25,000m<sup>3</sup> each. Irrigation water is recycled using slow sand filtration and UV systems. According to the company's technical management, Soria receives 600 mm of rainfall a year so water supply shortages are 'not an issue' despite nigh on daily alarm from the national weather service AEMET that rainfall during the first few months of this year in much of Spain, was below average.

## TAMING THE ROSE CROP

The roses are grown hydroponically with the first of a total of 1 million young rose plants being planted onto the raised gutters filled with rockwool slabs in the autumn of 2016. Throughout the initial stages of its business cycle, Aleia Roses has endured a number of technical challenges. A greenhouse grown rose crop needs time to mature to full production and crop engineers have not always found it easy to tame the



Flowers travel comfortably on water that keeps them hydrated even with a daily truck ride to the Netherlands taking around 19 hours.





Freshly harvested roses are transported via conveyor belt to the Furora line, then graded, quality checked, bunched and packed.

rose crop, to provide it with the right balance between light, heat and food and especially to adapt it to Soria's climate where night-time temperatures drop at dazzling speed to climb again at the same pace during the day. What's more, almost all their workers had never before entered a greenhouse. Capacity building required extra time and energy. The MPS A, MPS GAP and MPS-SQ certified operation employs 300 staff including a Dutch management team and a hungry army of millions of bio-control

agents that eat pests such as Thrips. Chemical crop protection products are only used for controlling pests when they reach damaging levels. The compulsory use of sanitary measures such as wearing protective white overalls and plastic shoe coverings for visitors outside while staff use footbaths before entering the different growing areas makes clear that all efforts are geared towards avoiding contamination by any pest or disease especially the dreaded Ralstonia, one of the world's most destructive pathogenic bacteria. That hygiene is part of the company's corporate values is also clearly expressed through the design of its workplace. A fusion of striking lighting solutions and understated furniture, Aleia's offices, designed by Luis' brother, are so clean that you could eat off the floor. Its contemporary design perfectly matches Corella's adage; 'If you are going to do something, then do it right.'

#### WAIT-AND-SEE ATTITUDE

In the beginning, generating demand was easier said than done and undoubtedly much more time consuming than when selling Mexican-grown tomatoes in the USA. Corella recalls that one single visit to a big box store was often enough to sell his entire year's produce. In contrast, Aleia's predominant Dutch customer base, that is Royal FloraHolland based floral wholesalers, took a wait-and-see attitude at first. Now that the company has launched its Aleia Maxima brand, under which it sells its premium quality roses in stem lengths 60,70, 80 and 90 cm, it has found its path to bloom and able to deliver the cream of the rose crop. In all independent trials, Aleia roses score high on trust and vase life. The company has invested in its



High pressure sodium grow lights supply 156 micromoles / m<sup>2</sup> / sec. in winter.



own quality control department to make sure that 'Red Naomi' allure exceeds buyers' and end consumers' expectations thanks to its high petal count, 12-14 days shelf life, large flowers heads (that always open fully) and its delicate sweet fragrance. Aleia foresees profits improving steadily from 2020 onwards. Corella disclosed no pricing information but from his words it is clear that in a country that is unknown for its rose production, Aleia Roses has to go the extra mile for brand recognition. Overcoming prejudices and unfamiliarity with the product are key to increasing sales. Olive growers from Spain, who receive 50% less sale price for their extra virgin olive oil than their Italian fellow growers, may be among the first to understand the issue.

#### LUXURY MARKET

The global market for roses is typically highly competitive with the market being flooded with flowers predominantly grown in Kenya, Ethiopia, Colombia, Ecuador and the Netherlands. Aleia is aware that successful suppliers need to be able to provide a globally competitive offering – based around price and product quality. Its management underlines that African-grown roses, cooled and dry packed in boxes for shipping, are not the type of product they like to be compared with. In contrast, Aleia staff pick the roses and put them onto water while using Chrysal flower food solution to provide immediate post-harvest care. The roses, set to seduce high-end consumers in the luxury market, are pre-cooled at 2-4°C, sorted and packed for trucking to Aalsmeer based flower auction FloraHolland. Flowers travel comfortably on water that keeps them hydrated

even with a daily truck ride to the Netherlands taking around 19 hours. It has been demonstrated that trucking permits the ultimate maintenance of the cold chain with a perfectly controlled temperature environment.

#### MOTION AND MONEY

Corella told FCI that what he and his team set out to create with their 'Red Naomi' is a rose that reflects allure, dedication, innovation, passion and a commitment to sustainability. Beyond the purple prose is a €60 million project. On what was a vast expanse of grazing land, now stands an impressive 14 ha state-of-the-art greenhouse, fully equipped with Dutch technology. Models for predicting financial and economic outcomes reveal the company's ambitions of reaching a €35 million revenue. Around 300 employees of 17 different nationalities harvest 40 million stems a year, equal to roughly 98% of Spain's entire annual production of roses. Corella has also revealed himself to be a social entrepreneur, with his rose farm employing people with physical or mental health problems. Being the province's largest employer brings a lot of responsibilities which he does not take lightly.

#### EXPANSION UNDERWAY

The company is busy pursuing planning permission to add 7ha of greenhouses of an estimated €20 million venture which may involve new investors. The venture, seen as revolutionary for the agricultural region of Greater Soria, is being supported by Federación Empresariales Sorianas (FOES), a local enterprise partnership instrumental in providing business support and attracting investment for the province. As well as partnering with Dalsem Horticultural Project and the Dutch Wageningen University of Science and Technology, Corella has also enlisted the help of bio control supplier Koppert. As such, it makes sense that Aleia Roses sees itself as a Dutch company with a Spanish touch. Anyone who has tried to understand something about the country and its people will have discovered that Spaniards are genuinely welcoming and extremely proud of what their country has to offer. Aleia Roses, a Dutch company, sounds like a Spanish rose in Dutch Haarlem.

A hungry army of millions of bio-control agents eat pests such as Thrips.

Warm water and carbon dioxide storage.





# Maintaining a balance between the past and the future

Working to its strengths the Polish nursery sector focuses on a wide range of products that are suitable for harsh winter climates. This specialisation, together with geographical proximity, positions the industry for the attention of the large markets of Eastern Europe.

AUTHOR: DR AUDREY GERBER PHOTOS: AUDREY GERBER AND ALICJA CECOT

Every year, the Polish Nurserymen Association publishes a catalogue, *Katalog roślin*, which provides descriptions and photographs of more than 2,000 plants produced in Poland, including many innovative, locally bred products. This useful resource is available in printed form in Polish and Russian and is also accessible as a searchable internet database [www.e-katalogroslin.pl](http://www.e-katalogroslin.pl). Yet this only covers part of the wide range of hardy nursery stock that is available. To facilitate B2B introductions and sales for its members, PNA annually distributes a Polish nursery stock reference book: the *Katalog Szkółek*. This provides detailed information on Polish nursery businesses, their full range of products, and their services, and includes a useful Polish-Latin and Latin-Polish dictionary.

## GROWTH IN EXPORT SALES

Recognition and respect for the quality and range of Polish hardy nursery stock has led to an increase in exports over the last decade. The most important countries, by value, importing from Poland are the Russian Federation, Germany, and the Netherlands. Worth close on €300 million, this export trend

has been accompanied by a steady increase in production area since 2002, with conifers dominating a more than 50% increase in open-area production. The AIPH International Statistics Yearbook further differentiates the products that contribute to this growth in export sales. Although garden roses are the second largest export product, when measured in terms of production area, this area has actually declined slightly over the last ten years. The biggest growth comes in production area of avenue trees.

The average size of a Polish nursery is about 2ha. Only 15% of nurseries are larger than 5ha, and these alone produce nearly 60% of the total industry value. As businesses increase in size they naturally turn to technical developments that support more efficient practices. Most Polish nurseries are family owned and run, and represent the commitment and ambition of generations of nurserymen.



Dariusz Panek and his wife, Anna, are the third generation to manage this Polish nursery, and the fourth generation are now also involved in the business.

## TRADITIONAL DOMINANCE OF CONIFERS

The traditional dominance of conifers in the Polish nursery industry was quite obvious at the 2018 edition of Poland's premier tree nursery trade fair *Green is Life*, with dozens of stands displaying high quality and variety. Iglak's trade stand at the show displayed many of the 126 species of conifer that the nursery produces, including Thuja, Picea, Pinus and Juniperus. "Our main focus at Iglak", explained Patryk Wójcik, "is to keep the family tradition of taking pride in producing a good quality product". Iglak nursery was started by Waldemar Wójcik, and today his sons Robert and Patryk share management of the business.

This second generation nursery business, has been producing conifers since mid-1990s, and the nursery now covers 40ha. Spread across 5 sites, Iglak supplies natural forms as well as shaped and grafted plants to local garden



centres, contractors and public institutions. Of their 150,000 units produced each year, approximately 70% are exported. Iglak nursery buys in approximately 80% of their stock, and propagate or graft the remaining 20% themselves. The volumes and species for each year's production is a 50:50 mix of pre-orders and decisions based on the previous year's sales orders. Iglak nursery is managed with a combination of traditional production techniques, and new methods that reflect market preferences for sustainable production. The soils tend to be sandy, with a deep clay base; a combination that provides the free-draining conditions that conifers need, with deep retention of moisture that limits the frequency of irrigation. Weed control is an essential task of open ground production. In young plant production areas, weeds are controlled by manual removal, which minimises the use of chemicals. In the vast areas of larger plant production, mechanised and targeted sprays are used for maximum efficiency.

## LEARNING OF THE LATEST PRODUCT TRENDS

A dynamic nursery sector that responds to changing market trends runs alongside traditional nursery production in Poland. In response to the increasing demand in Poland

for perennials, Panek Nursery expanded their production area three years ago, and now operates from two sites. Managers Dariusz Panek and his wife, Anna, are the third generation of the Panek family operating the nursery. They are excited by new and innovative varieties of plants that enrich the nursery's offer to its customers. Regularly visiting European horticultural exhibitions, they learn of the latest product trends, and include these into Panek's range. *Green is Life* fills an important role in bringing Panek to the attention of trade customers and the end consumer – home gardeners. Panek exhibits at the show, and takes part in the Plant Novelties Competition at *Green is Life*, having won many awards over the past ten years.

These past award winners form the core of Panek's many seasonal specialities, and all are tested on site for the Polish climate. Panek offers a range of "Cool Herbs", featuring plants that can be grown indoors and used to make refreshing and soothing teas. Products in the "Spring Awakening" range are early flowering, fast growing, vibrant perennials. "Colourful Grasses" present to markets a variety of size and colour for the current consumer preference for ornamental grasses. And for the ever-increasing demand for edible plants, Panek offers

*Iglak uses both manual and targeted chemical treatments for weed control of its vast areas under production.*

*Warsaw's Green is Life show (September 5-7, 2019) is an opportunity to gauge the mood of the Polish market.*

potted fruit and vegetables in the "Your Plantation" range. Panek's range of compact plants for balconies and terraces, are delivered directly to Do-It-Yourself markets, garden centres, and supermarkets. As the size of their production changed, and the number of clients increased, Panek saw a need for improved business efficiency, and set up an online ordering platform. Each week new photos are taken of products that are available, and clients can see exactly what the plant looks like now, as well as general images in the catalogue. "Many of our customers still prefer to phone, though", laughs Karolina Rytel, fourth generation in this family nursery. "We don't mind - personal contact remains an important part of our business".





# AT GEVES NOTHING BEATS THE HUMAN EYE FOR EXAMINING SEEDS

FCI visited GEVES (Groupe d'Etude et de contrôle des Variétés Et des Semences) – the French variety, seed study and control group in Angers.

AUTHOR: RON VAN DER PLOEG

Cereals, oilseed, barley but also vegetables, salads and ornamentals; the vast majority of crops produced around the world come to life with the sowing of a seed. Seeds are life but are also of immense biological and economic importance with the USD 59.71 billion global seed market dominated by the big five: BASF, Bayer, Dow, Dupont and Syngenta (ChemChina), accounting for more than half the sales of seeds, crop protection products and fertilisers in the world. According to Michael Muschik, former Secretary General of the International Seed Testing Association (ISTA), there is no doubt that “seeds have been the most important and the most crucial means of production ever since mankind has worked in plant production and agriculture”. Seeds have turned into a global commodity with seed quality touted as one of the most critical factors in the establishment of a uniform plant stand, marking the first step in producing a successful crop, particularly now that there are growing concerns about a rapidly increasing world population to feed, changing weather patterns and the spread of new crop diseases.



GEVES hosts one of the world's most important seed collections, stored in tubes and include 17,000 species of cultivated and adventive plants from around the world. The seeds are dry stored (and therefore no longer able to germinate) and used in seed physical purity testing of commercial seed lots to identify seeds from different species.

## RELIABILITY AND PERFORMANCE

Naturally, seeds must undergo pre-market release testing to help ensure reliability and performance. Widely considered as the founder of seed testing is Professor Friedrich Nobbe (1830–1922), who back in 1869 established the world's first seed testing laboratory in Tharandt, Germany. Nobbe's ground-breaking work led to considerable market growth in the seed testing sector with more than 119 seed testing

stations in 19 countries 30 years later.

In France, seed testing facility GEVES opened in 1971, established in the government's National Institute for Agricultural Research (INRA), providing expertise and methodological research which is related to variety and seed testing. It moved from Versailles to Beaucouzé (in the country's horticultural heartland Anjou) in 2009 where communication assistant Rosie Gilonis walked us through the institute's three operating divisions: SEV, the variety testing department, SNES, the national seed testing station and BioGEVES, the molecular biology and biochemistry laboratory. GEVES has 250 employees and a pool of temporary workers for seasonal activity.

“Seed is alive which means that our work-load is much dependent on the seasons. The three departments



within GEVES intervene at different stages of the seed sector.”

## SEED BANK

GEVES youngest ‘seedling’ is GEVES Resources, a seed bank for preserving much needed crop diversity in a world dominated by giant corporations and growers increasingly turning to modern, high yielding varieties, abandoning the oldies that frequently offer a wealth of genetic information. Gilonis says, “We contain the national coordination for the conservation of plant genetic resources for the benefits of the French Ministry of Agriculture. Crop diversity is all around us. It is in the food we eat, medicines, the clothes we wear and in our gardens. The world in general is becoming more aware of the wealth of the many existing varieties and species. All this is called plant genetic resources. Through this new activity GEVES identifies stakeholders who are involved in conservation of these varieties and the aim is also to compose a national collection for plant genetic resources in France.”

## PLANT BREEDING

Another field GEVES is working in is plant breeding, the science of producing new varieties with desired characteristics. Breeding

work is done by private breeders and public bodies including INRA and universities. France alone hosts 67 plant breeding companies. “Plant breeding is not something we carry out but is something we are aware and on top of. GEVES follows new developments in plant breeding. Once a party has produced a new variety it wants to sell it. And this is where GEVES/SEV comes in. In order to sell a variety it needs to be registered in the official catalogue to receive marketing authorisation. In order to be registered the variety undergoes testing and this is the responsibility of GEVES,” explains Gilonis. GEVES carries out DUS-testings and it is surprising how modern DUS testing can be traced back to questions seed pioneer professor Nobbe asked himself 150 years ago: “We check that new varieties are Distinct from existing varieties, that they are Uniform and that they are Stable over time.”

GEVES has additional trials called VCUS for agricultural species. “They check whether new varieties are going to provide added value. The idea behind it is that agricultural varieties are the future of agriculture and need to be examined in relation to agro-policies. If, for example, a policy aims to reduce pesticides and a new variety turns out to be low yield or disease prone

then it will not be of much use to farmers even if it is distinct, uniform and stable.” VCUS trials are undertaken by GEVES which bases itself on European protocols. GEVES produces this data, analyses it to present the results to the CTPS, the country's technical committee for plant breeding. “This is where it gets a bit tricky,” admits Gilonis. She continues, “A group of scientific experts are in charge of examining the results of the technical tests and then granting the subsequent marketing authorisation. CTPS is also involved in developing the technical protocols behind registration because these protocols are not fixed but constantly evolving.” The same technical testing carried out for registration in the catalogue applies to Plant Variety Rights (PVR) testing. PVR grants the title holder exclusive rights and allows them to be the only one who can commercialise a new variety. The holder can subsequently authorise others to commercialise the variety and collect royalties from it. PVR aims to foster innovation in plant breeding,” says Gilonis, “because if you don't collect royalties there is no incentive to produce new varieties.” She stresses the world craves new plant varieties. “New varieties from five years ago might not be relevant



## GEVES AND ORNAMENTALS

GEVES receives requests from INOV (French protection), the CPVO (EU protection system) or other EU offices for DUS testing. Candidate flower varieties are cultivated in open fields or under cover, and compared to well-known varieties in order to guarantee a precise observation of the required criteria. Ornamental and aromatic DUS at GEVES include 80 genera entrusted by the CPVO including Hydrangea, Lavendula, Buddleia, Lagerstroemia, Abelia, Hibiscus, Coreopsis, Leucanthemum, Salvia, Spiraea, Ipomoea, Forsythia, Nerium, Nicotiana, Ocimum, Osanthus, Rosmarinus, Tagetes, Thymus, Viburnum, Salvia, Photinia and Persicaria. Entrustment evaluation is in progress for natural season Chrysanthemums. Working with a dedicated team of 6 flower experts, GEVES is a major EU examination office for conducting ornamental DUS trials.

## QUICK FACTS FROM THE INTERNATIONAL SEED FEDERATION

The global seed export market was valued at USD 11378 million in 2016. International seed trade has grown 7x since 1994, demonstrating the strong and dynamic growth of the sector in recent time. In terms of volumes, 4,435,089 metric tonnes of seed were exported in 2016. Globally speaking, France is the largest seed exporter in volumes, followed by Slovakia, Czech Republic, Hungary, Canada and Belgium. Source: International Seed Federation [www.worldseed.org](http://www.worldseed.org)





## FRANCE'S ICONIC AGRICULTURAL TRADE SHOW SIVAL SET FOR JANUARY 14<sup>TH</sup> TO 16<sup>TH</sup> 2020

**SIVAL is one of France's iconic agricultural trade shows gathering nearly 650 exhibitors (15% foreign exhibitors) and 24,000 professional visitors from 42 countries annually. The 2020 edition will take place at the Parc des Expositions in Angers, France from January 14<sup>th</sup> to 16<sup>th</sup>, covering 32,000m<sup>2</sup> of exhibit space.**

Each year, a select number of trend-setting innovations receive a SIVAL award. This year, in the category plant innovations, the jury recognised the sustainable character of Inra-ResDur's line of four grape varieties with resistance to powdery mildew, awarding them a Gold Medal. In the category Machinery and Automation Olmi scooped up the Silver Medal for its Vortex pneumatic leaf removal machine for use in commercial apple production. In the Services and Software category Agrithermic's Hortinergy, the first online tool to help design energy efficient greenhouses, won the Gold Medal. With an expanded show floor, record attendance and a top notch educational programme the Sival show reflects a vibrant industry showcasing the latest trends that are making up the agriculture of tomorrow. SIVAL is the only trade show in France to present a comprehensive and impressive offering of equipment and services for all plant productions: arboriculture, vegetable crops, seeds, viticulture, horticulture, medicinal and aromatic plants, cider, mushrooms and tobacco.

today as we might have new diseases. We need varieties that can cope with climate change. In this field, we work with INOV the French organisation for plant variety rights and CPVO, the EU organisation for PVR." Gilonis points to the 8,500 varieties registered in the French catalogue which boils down to 600 new varieties registered per year. The European catalogue includes 45,000 registered varieties, being the sum of all national catalogues. "That's a clear benefit. If you register in the catalogue you also obtain marketing authorisation for the whole of the European Union."

### SEED TESTING

Once a party has obtained marketing authorisation it moves on to seed production. Seed production companies establish contracts with seed growers, seeds are planted, harvested processed and will undergo thorough testing. In France and the rest of Europe, strict seed quality control exists with criteria for marketing seeds. Seed standards are defined by EU directives and GEVES' national seed testing station SNES does the necessary testing to meet these criteria. Gilonis says there are various aspects to seed variety testing. The first is to ensure that a sample has trueness to type, also referred to as variety. It is equally important to monitor the quality of the seed, particularly in respect of its germination, health and physical purity. The seed must be able to successfully establish a uniform plant stand and must be free from other materials such as dirt, plant debris or weed seeds.

### Seed germination room.



For this activity the human eye is very important. "We have not yet developed a technology that can beat the human eye for examining seeds. We have seed analysts that have been here for years and years. They know their species back to front." Over 70 seed analysts and support staff at SNES test over 20,000 samples each year. Tested species many include cereals, oilseed rape, pulse crops, grasses and vegetables and, to a lesser extent, ornamentals. Germination tests are carried out in Copenhagen Tank incubators and there's a trend of using high purity seed testing paper. The papers are made from pure cellulose without any additives and do not contain any substances that could influence the growth of the seeds. The constant water absorption of the papers ensures the continuous provision of the required amount of water. Seed testing services include physical and genetic purity testing, seed germination testing and seed health testing with over 90,000 analyses each year. SNES is a national reference laboratory, says Gilonis. "So we carry out training for seed analyst, audits and inter-laboratory comparisons. As such we have a full role in this." GEVES, to conclude, also carries out methodological research at BioGEVES, its molecular biology and biochemistry laboratory. This research department actually assists the institute's variety and seed testing activities. Think detecting GMOs, genotyping by protein electrophoresis and molecular markers and biochemical analysis.



# Green City Post

## Urban greening worldwide inspired by TNOC Summit in Paris

Paris was the venue in early June for The Nature of Cities (TNOC) summit. Coming from countries around the world, researchers, practitioners and decision-makers gathered to share thoughts, ideas and successes on green design and nature-based solutions that are fundamental to the capacity of cities to be just, liveable, resilient, and sustainable.

**T**he transdisciplinary collaboration that the summit fosters aspires to change the process of city building through conversations that connect thought leaders, knowledge creators, practitioners, and stakeholders from diverse disciplines, ways of knowing, and modes of action into unified, and visionary gatherings. Founder and Executive Director of TNOC, David Maddox, said that this first summit was inspired by TNOC online conversations and essays that reach 50,000 people in 2,000 cities in 75 countries every month.

### PARIS' GREEN INITIATIVES

Paris offers many examples of green initiatives throughout the city. Although home to many internationally famous historic gardens, such as the Tuilleries Garden, Paris cannot rely on its past glories. To cope with the challenges facing cities, particularly one as densely populated as Paris, Pénélope Komitès, Deputy Mayor of Paris, declared that 100 hectares of additional green space will be installed by the end of 2020. Mme Komitès urges city authorities to strengthen the place of nature in their cities, and to do so in consultation and collaboration with residents so that they take ownership of the change. The Végétalisons Paris programme, intended to develop and cultivate new spaces for nature in the city, provides free planning permits to residents who wish to add greenery to their neighbourhood. There are 1,329 completed projects, including rooftops gardens, green walls, fences, balconies, potted plants and tree surrounds.



*La Petite Ceinture (Little Belt) promenade is more about rewilding the city and creating traffic-free pedestrian routes than presenting a designed landscape.*

### HIGH VISUAL IMPACT

High visual impact urban greenery that attracts much attention is the 800m<sup>2</sup> green wall of the Musée du Quai Branly. Designed by Patrick Blanc, planted in 2004 and renovated in 2017, the wall is impressive in detail and design. Displaying 15,000 plants from 150 species from around the world, it is as much a work of art as a piece of green infrastructure. From this perspective it has received criticism in having high water and maintenance demands, and is currently under review. Nevertheless, it is impressive, and brings attention to urban greening even in the midst of a grey, dreary Paris winter. More in keeping with the current trend to rewild cities is the recently reopened abandoned railway line of La Petite Ceinture (Little Belt). Decommissioned in the 1960s and opened for pedestrian access in 2013, the Little Belt is not a designed landscape, and maintenance activities provide minimal intervention required for safety of access. It is a haven

for wildlife and will extend in sections for 10kms by 2010. South of the city is one of the earliest examples of reuse of an abandoned elevated transport line, the Coulée Verte, which opened twenty years before the New York High Line, and is considered to have inspired the High Line. The Coulée Verte is a designed landscape that offers a balance between beauty, biodiversity, and the benefits of green space to our health and well-being.

### HORTICULTURAL INDUSTRY RISKS TO BE UNDER-ESTIMATED

Despite the transdisciplinary aspirations of TNOC, the forum had under-representation in important disciplines. The most significant of these, and surprisingly so given the topic of increasing living green in urban areas, is the ornamental horticultural industry. Without more active representation in conversations between visionaries and decision makers, the horticultural industry is in danger of being undervalued and under-estimated.





# Dutch circular agriculture to improve resource efficiency and reduce environmental impact

The Netherlands was this year's Partner Country of SIVAL, the French plant production industry's annual trade show held in the second week of January in Angers, France. The Dutch were strongly represented with Wageningen University & Research using the fair to reveal a radical new vision for Dutch agriculture.

AUTHOR: RON VAN DER PLOEG

**T**he Dutch embassy in Paris, with the support of Wageningen University, Delphy (the Dutch knowledge sharing organisation for cultivators around the world), LTO (agricultural sector body) and BO Akkerbouw (arable crops sector body) brought together key industry players for a conference entitled 'Science-based solutions for sustainable cropping systems in the Netherlands.' The objective of this event was to exchange experiences, challenges and best practices that the Netherlands and France are facing in their transition to sustainable, resilient, nature-friendly agriculture which restores rather than undermines biodiversity, eliminates avoidable waste and which makes a significant contribution to a zero-carbon world.

#### ENTERING A NEW ERA

Willem Jan de Kogel, thrips expert and business unit manager for biointeractions and plant health at Wageningen University highlighted how agriculture in the Netherlands is clearly entering a new era.

A new era as described in 'Agriculture, nature and food: valuable and connected', the vision that Dutch minister of Agriculture, Nature and Food Quality, Carola Schouten presented in September 2018. Dutch farming, horticulture and fisheries are constantly innovating, making the Netherlands a global leader in these sectors. However, industrial agriculture, a system dominated by large farms growing monocrops year after year, using large amounts of raw materials and resources is not built to last. Dutch agriculture is dependent on the import of raw materials and basic commodities from other parts of the world. These resources are not always extracted and produced in a sustainable manner. Change is needed, stressed De Kogel.

#### CIRCULAR AGRICULTURE

By change he means the transition to circular agriculture to prevent depletion of soil, freshwater supplies and raw materials, halt the decline in biodiversity and fulfil the country's commitments to the Paris climate agreement.

De Kogel depicted a minister's ideal world in which arable farming, livestock farming and horticulture primarily use raw materials from each other's supply chain and waste flows from the food industry and food supply chains, while emissions and residues of pesticides are minimised and pests and diseases prevented by using integrated pest management. The government's goal is a near-to-closed-loop system of raw materials and resources by 2030. A Dutch championship in circular agriculture is easy to say but more complex to achieve, admitted De Kogel. The economic position of farmers, growers and fisherman should be such that they are able to earn a good income in circular agriculture and can innovate. Also, to help build strong, sustainable agriculture, more appreciation for food and its value is needed. Waste should be avoided. To help Dutch farmers embrace sustainable practices and retain their leading position in the world, it's equally important that the Netherlands continues to support research and education.

In crop protection, De Kogel mentioned several farming practices that will further evolve in circular agriculture: rotating crops, applying integrated pest management, strip cropping and permaculture.

#### EVER SMARTER TECHNOLOGY

De Kogel said that to meet the global challenges of the future more needs to be done with less and it will need to be done better. He predicted an increase in the use of ever-smarter technology. Think new automated cutting stickers for young plants, smart weed-killing

robots in arable crops or semi-controlled greenhouses with full water recovery.

The question arises - what is the right technology to develop to apply circular economy principles?

De Kogel believes the best approach is a 'total system approach' to sustainable pest management where the fields biodiversity-rich in stead of biodiversity-poor and the entire system effect is greater than the sum of individual actions. In such an environment the farmer is proactively making use of modern tests and diagnostic tools such as Taqman-PCR (a technique based on polymerase chain reaction allowing real-time visualisation of the specific DNA and/or RNA information of one specific organism during reproduction), LAMP real time on site detection (pathogens or pests are detected on the basis of DNA or RNA) and Next Generation Sequencing (NGS).

Circular agriculture also requires a good dose of holistic thinking where ecology meets technology.

#### SUSTAINABLE CROP PROTECTION AND POLLINATORS

De Kogel cited the five-year programme 'Sustainable crop protection and pollinators' funded by the Dutch Ministry of Agriculture and designed to reduce dependency on chemical crop protection and increase the number of pollinators in arable cropping, apple, strawberry and lily production.

In field crops, for instance, intercropping and in time rotation, flowering field margins and robust varieties are being introduced. In apples, the focus is on excluding highly powdery mildew susceptible varieties, covering trees during rain to block fungal diseases and stimulating natural enemies and pollinators. In lilies, priority is also given to robust varieties and a linear system, starting from plant tissue culture.





# ANVE leads the Italian industry to adopt new EU plant health regulations

AUTHOR: AUDREY GERBER PHOTOS: EDOARDO SCIUTI

On 14th December 2019 the new EU regulation 2016/2031 comes into force. The new regulation sets in place formal documentation and processes that will be required for plant movement across European borders and within EU member states. This aims to modernise the plant health regime, while ensuring safe trade, at a time when international trade has become faster and busier, and the risk of introduction and rapid spread of plant pests and diseases is greater than before.

**S**peaking at the ANVE meeting held in Bari on June 1, 2019, Michele Emiliano, President of the Region of Puglia, said that this regulation was important to safeguard Italian and European horticultural production. According to European Nursery Stock (ENA) figures, the Italian nursery stock

industry is the highest value in Europe, trading more than a billions euros annually, and is one of the largest international trade countries in horticulture, alongside the Netherlands and Germany.

**URGENT ISSUE**

Within the European context, Josep Pagès, Secretary General of ENA,

said that member states are seeing this as an urgent issue and as a valuable collaborative opportunity to stop plant health threats before they reach European ports and borders.

From an international perspective, AIPH supports this new regulation, believing that it brings the industry closer to full traceability that

Picture on opposite page: President of ANVE, Leonardo Capitanio, encourages the Italian industry to adopt the new regulation to support continued recognition of the quality of Italian plants internationally.

enables effective and efficient response to pest and disease threats. One significant change that the regulation brings is that the 35 genera/species on the high risk list will be prohibited entry into the EU, unless the third country formally applies for a derogation, and can guarantee that plants are free of EU quarantine organisms.

**RESTLESSNESS AMONG PARTICIPANTS**

Leonardo Capitanio, President of ANVE, considers it too early to judge the feeling of Italian horticultural businesses to these new regulations. This was the first meeting to present in detail what is required from all sectors of the horticultural supply chain. There was some restlessness amongst meeting participants when Anna Percoco (Department of Agriculture, Rural and Environment, Puglia) described new responsibilities of businesses, countries and regions to establish formal processes to implement and monitor plant movement. Many horticultural businesses in Italy are small, specialised, family owned and managed, and may lack the capacity to independently develop new stringent protocols. Mr Capitanio assured the meeting that ANVE is leading discussions

with authorities at a national level to prepare standardised documentation, including management plans, and response protocols, to make it easier for all horticultural businesses to adapt and implement processes to meet the requirements of the new regulation.

**XYLELLA**

There is no doubt that Xylella remains the focus of the Italian industry, particularly in Puglia. Nurseries here are likely to be more receptive to the new regulations as they are already confronted with responding to an industry catastrophe without clear procedures in place. This certainly highlights that prevention of introduction of new threats is far preferable to managing control. This view is further strengthened when the industry considers how use of agrochemicals is becoming less acceptable, with many bans anticipated or already in place. Regulation 2016/2013 applies to all EU member states, which supports uniform and strict systems that safeguard not only horticultural and agricultural businesses, but also forests and natural areas. The proactive approach that ANVE is taking serves as an example for other countries to follow.

The ANVE meeting was held on site at Vivai Capitanio nursery near Bari, Puglia.



## ISRAEL'S NEED FOR DROUGHT-TOLERANT TREES

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

Last month I travelled to Israel to attend the official opening of a Jacaranda-lined boulevard at the Hebrew University of Jerusalem. Back in 2016, Hochberg Export Ornamental Plants Nurseries, collaborating with Dutch-based Plantipp and Plant Network from Japan, planted the street's 100 Jacaranda mimosifolia Bonsai Blue ('Sakai01'). Contrary to the seed-raised Jacarandas which outgrow their space quickly and try one's patience before they finally bloom, this vegetatively-propagated semi-evergreen dwarf tree takes two to three years to bloom. It was bred by Mr. Sakai in Japan.

The project's landscape architect, Mr. Isaac Biran, emphasised the need for drought-tolerant shade trees in a country where more than half the terrain is desert. Across Israel, new build homes and new real estate areas are creating a demand for trees and plants. According to Omer Hochberg, Israeli landscapers are moving away from poor quality and increasingly opting for sturdy and sustainable varieties.

Jacaranda Bonsai Blue ('Sakai01') is protected by PBR in Israel. Not many other new cultivars have entered the local market yet. However, this is changing. "For years nurseries selling to the local market struggled. The last few years, the market has been growing", says Moshe Ben Gal of Jaldety Plant Propagation Nurseries. "In particular there is a growing interest in succulents and perennials."

I was surprised to see that Israel only has a few, small garden centers. Selling plants in supermarkets and big box stores is still fairly uncommon and home gardening is slowly becoming more widespread albeit still considered a luxury. So far our company has worked with Israeli companies that are mainly focused on export. Jacaranda Bonsai Blue ('Sakai01') is our first step into the local market and hopefully more new varieties will follow.



“If life is nothing more than a passage, let’s at least sow flowers along it.” (Michel Eyquem de Montaigne (b. 1556 – d. 1599). The words of notable French poets and writers, past and present, blossomed this spring as they were brought to life during the 12th Floralias de Nantes held from May 8–19, 2019.

When digging into the origins of *Floralias Nantaises* you’ll find that behind philosophical contemplation lies a grey, impoverished and dreary post-war existence. France had just emerged victorious from World War II but paid a high price. The country was on the verge of bankruptcy and had suffered heavily because of allied bombs. During most of the war a large share of its industrial output was produced for Germany with the allies aiming at destroying their opponent’s morale and economic ability. This explains the heavy allied raids against French industrial targets such as Boulogne-Billancourt (Renault factories) and Le Creusot (steel industry). Nantes, home to an important shipbuilding sector, met the same fate when it was bombed in September 1943 taking an unprecedented toll of casualties. Naturally, the purpose of the Floralias was to promote horticulture and inspire consumers by providing a first class showcase for flowers and plants grown in the benign oceanic climate of western France. As early as the 17th century, Louis XIV’s *Grand Siècle*, the region was being used as a mega garden for acclimatizing, growing and studying medicinal and ornamental plants which arrived from around the world. What’s more, the Floralias provided a welcome dose of colour and fragrance to Nantes’ population which had endured so much, for so long. The inaugural edition of the Floralias were held in 1959 in the historical *Palais du Champ de Mars* food wholesale market in

downtown Nantes. “After such a long period of doom and gloom people were craving greenness and entertainment and the Floralias offered something they had never seen before. At the time there were long queues of people waiting to get in,” recalls an older lady attending the opening ceremony of the 12th Floralias de Nantes on Tuesday, May 7th, 2019. While the two first editions of the Floralias (1956 and 1963) where held in the city centre, the exhibition moved 3 kms north-east, to the Parc de la Beaujoire in 1971, which to date continues as the venue of choice for the event that is held every five years. As is the case with nearly all European flower shows, after its initial heyday in the 1970s and 1980s – with over half a million visitors and 150,000m<sup>2</sup> of exhibit space and France’s First Lady, Ms Anne Giscard d’Estaing opening the show, Floralias’ attendance figures slowly started to decline. Now 30 years on, however, the AIPH-approved flower show continues to rank among one of the country’s top attractions welcoming a sizeable number of 300,000 visitors in ten days. Opening the 2019 edition of the Floralias was Mayor Johanna Rolland who explained how Nantes values its green spaces, not least for the many benefits it brings to its citizens. Dubbed the City of 100 Gardens, Nantes was crowned Europe’s greenest capital in 2013 following a series of major overhauls and expansions of city parks, an urban green corridor network, public picnic areas across the city, urban



Vying for attention was a beautifully landscaped *Alice in Wonderland* garden celebrating the qualities of young children: naturally imaginative, curious and able to play without a worry in mind. A creation of the city of Changé the garden clearly took inspiration from Tim Burton’s movie.



*Colviveros* is the Association of Colombian Nurseries and Ornamentals Growers. They had turned their *Boterostyle* garden into a colourful display

Nantes’s Mayor Johanna Rolland (second from right) and Christelle Moranaçais (second from left), President of the Regional Council of Pays de La Loire, were given a sneak preview of the *Floralias International* in Nantes.



The Palais du Luxembourg not only houses the French Senate but also an impressive collection of over 60 *Paphiopedilum* species and 460 *Paphiopedilum* hybrids. Recognised as national heritage, the collection was first established in 1840 with the arrival of *Paphiopedilum insigne*. Head gardener Auguste Riviere and his successor Octave Opoix, excelled in growing these orchids and added amongst others *Paphiopedilum callosum*, *dayanum*, *druryi* and *sanderianum*.



Cutting ribbon ceremony with Johanna Rolland second from right.



The Floralties offered combined tickets for the flower show and *Naturya The Musical*, touted the first flower-themed musical in the world.



Sumptuous floral displays.



AIPH-President Bernard Oosterom presented the coveted Floralties awards.

farms and a number of floral events and garden festivals. Nantes takes pride in having 57 m<sup>2</sup> of green space per person with everyone in the city living within 300 meters of green space.

The city of Nantes brims with enthusiasm for its parks as they improve social cohesion, reduce air pollution and the urban heat island and tackle mental and physical health issues. But the majority of its parks are open day and night and are often the only spaces available for homeless people in the city. Nantes is no exception. In September 2018, French police cleared out over 400 migrants from a Daviais city park where they had been camping for months. The refugee camp along with the city's urban violent crime on the rise are the focus of huge tension between the city government and its citizens and reveals that behind the rhetoric of reconciling the city

with nature for the sake of the city's quality of life lies another reality. In winning hearts and minds both in the political and marketing sense of the word, little could beat the Floralties this spring, covering an area of 45,000m<sup>2</sup> indoor and outdoor space. There was the Antoine de Saint-Exupéry garden where the Little Prince explored new planets and (NIRP) roses, there were shining examples of urban gardening and Botero's trade mark chubbies from Colombia who were lost in salsa...and a lush oasis of potted plants submitted by Colombia growers' association Colviveros. Also vying for attention was a beautifully landscaped Alice in Wonderland garden symbolising children's unprejudiced and innocent approach to the world. At the 2019 Floralties the human life cycle came to life: themed areas recalled innocent and worry-

free infancy, adolescence, third age maturity and late adulthood when spiritual concerns take front stage. Many designs were based on foreign horticulture with a creation of Niigata city inspired by Japanese gardens while other exhibits echoed the atmosphere of One Thousand and One Nights such as the award-winning garden from Pakistan. Bedouin tents provided inspiration for the desert garden design from Qatar. AIPH-President Bernard Oosterom was invited as guest of honour and presented the coveted Floralties awards at a special opening night celebration. The first Grand Prix d'Honneur in the categories French and International Collective stands went to Artisans Fleuristes from Loire-Atlantique with their harmonious garden of life and to Pakistan respectively.

In the category of French individual stands, Fevrier Agnès & Lucien scooped up the first prize while Martinique's Regional Park walked away with the highest accolade in the category of Individual Stands from Abroad. Amid the arrangements of blooms and endless horticultural varieties was one garden which celebrated a much more natural display garnering the Best Stand Award which featured a tropical rainforest, a creation of Nantes' department of parks and gardens, SEVE. The same Best Stand Award was also presented to the Island of Noirmoutier, NIRP International/ Pépinières de la Guérinais, the rose committee Doué en Anjou, Atelier Pilzhaus and Artisans Fleuristes de Loire-Atlantique.

## JULY 2019

**2-7. UNITED KINGDOM**

RHS Hampton Court Palace Garden Festival, Richmond upon Thames. [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 in Columbus, Ohio. [www.cultivate19.org](http://www.cultivate19.org)

**15 JULY-2 AUGUST. UNITED KINGDOM**

Ball Colegrave Summer Showcase, Banbury, Oxfordshire. [www.ballcolegrave.co.uk](http://www.ballcolegrave.co.uk)

**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, Cheshire. [www.rhs.org.uk](http://www.rhs.org.uk)

## AUGUST 2019

**13-15. UNITED STATES**

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

**21-23. NETHERLANDS**

Plantarium, international nursery trade fair, Boskoop. [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

**1-2. GERMANY**

spoga+gafa 201, German garden trade show at Messe Cologne. [www.spogagafa.com](http://www.spogagafa.com)

**1-6. UNITED KINGDOM**

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



## The good and the great of plant technologies

The German city of Ellerhoop will host the 12<sup>th</sup> edition of Baumschultechnik from August 29-30, 2019.

There can be no better place to organise a European trade fair for plant technologies and equipment than Ellerhoop, a city 25 km north-west of Hamburg and located in the state of Schleswig-Holstein, known for being the country's epicentre of nursery stock production (with 4000 ha of nurseries owned by 300 growers). Schleswig's Pinneberg region takes pride for having a long tradition in nursery stock production with nurseries including well-known brand names such as Kordes Jungpflanzen, Rosen Hachmann Baumschulen and Lorenz von Ehren GmbH. The 2019 edition of Baumschultechnik has 'Innovation meets tradition' as its theme.

The exhibition will feature approximately 300 exhibitors and will take place at the Horticulture Centre (Gartenbauzentrum) in Ellerhoop. Baumschultechnik offers a wide range of machinery and devices and includes field demonstrations of equipment (a special area for field demonstrations is already prepared and planted with hardy nursery stock spaced at 50, 100 and 250 cm). Growers will also present their plants and give presentations on the latest knowledge in nursery stock production. Alongside the fair, from August 29<sup>th</sup> to September 5<sup>th</sup>, they will have "open days" for an expected 6000-8000 visitors from all over the world, including Japanese, American and Canadian guests. [www.baumschultechnik.de](http://www.baumschultechnik.de)

**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)

**9-14. CHINA**

71<sup>st</sup> AIPH Annual Congress, Beijing, including the AIPH International Green City Conference (11 September). [www.aiph.org](http://www.aiph.org)

**10-12. FRANCE**

Salon du Végétal, France's leading horticultural trade show at the Beaujoire exhibition centre in Nantes. [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 Moscow's Crocus Expo. [www.flowers-expo.ru](http://www.flowers-expo.ru)

**11-13. CHINA**

The World Ornamental Horticulture Summit at Beijing. [www.aiph.org](http://www.aiph.org)

**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.

**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 in Worcestershire. [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**

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

**2-4. NETHERLANDS**

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

**9-10. CANADA**

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





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