

# BLAD



A publication by the Horticoop investment cooperative

Year 4 – **Issue 5**

**Anthura cracks  
DNA codes**

**The future is AI**

**Does CO2 have a  
marketing problem?**



**HORTICOOP**  
GROWING TOGETHER



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Cover photo: *Mark van der Knaap, Anthura*

# Foreword

A Horticoop first! The investment cooperative has paid out 8 million euros in dividends to members, making the added value of transitioning from a procurement to investment cooperative tangible for members for the first time. This news was the cherry on the cake of a successful members' event in Ridderkerk that was dedicated to a different transition and hot item in our industry: the energy transition. Scientist Jouke Campen, innovator Rob van Straten and grower Harry Wubben shared their vision of the energy transition against the backdrop of Van Gelder groente & fruit's state-of-the-art logistics centre. As their stories really whetted our appetite, we invited them to join us at BLAD for more in-depth discussions about the joint ambition of our industry and government to ensure profitable and climate-neutral production by 2040.

The energy transition is also a top priority at member company Anthura. Director Mark van der Knaap sees numerous opportunities here, as long as we choose the correct approach. What does he think that approach should be? Not just blindly focusing on one solution but investing in multiple technologies at the same time. The Horticoop portfolio companies can offer a lot of input here because, as industry pioneers, exploring innovative solutions is what they do every day. We asked them about the developments in their field, their successes and lessons learned in 2024, and the opportunities they believe will emerge in 2025. Their answers provide interesting insights that you can read throughout this magazine in the 'The year of' section.

Finally, you'll see various new faces in this magazine. Horticoop welcomed Theo van Noord as new Supervisory Board member and Jeroen van Weerdenburg, John Vreugdenhil and Kees Hoogendoorn joined the Member Council. These four Horticoop members have put their heart and soul into our cooperative and are delighted to introduce themselves to you.

I hope you enjoy reading this magazine!

**Patrick Groeneveld**  
Managing Director at Horticoop

## Colophon

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Anthura's solar panel-covered greenhouses

# Anthura uses innovation as the key to sustainable growth

How can the horticulture industry become more sustainable and energy neutral? Anthura, specialist in breeding anthuriums, orchids and bromelias, sees the sustainability transition as an opportunity! From pioneering molecular research to smart solutions for sustainable energy, the company is always applying innovative technologies. Director Mark van der Knaap, who within the management is responsible for production, breeding and R&D, explains Anthura's strategies and shares his vision for a green and future-proof horticulture industry.

## Mark, innovation seems to run in your family. Your father also made an early switch to breeding. Can you tell us something about how Anthura started?

'My grandad established the company in 1938, growing various types of vegetables in Wateringen. My parents took over the company in the late 1960s and made the switch to growing cut flower anthuriums in 1974. It was an interesting time because that's when cloning technology was first introduced in the horticulture industry. As this innovation paved the way for breeding, my father, along with many others, decided to get on board. And he was successful. With his feel for breeding and a bit of luck, he bred a cut anthurium variety that is to this very day one of the most widely grown varieties of its kind worldwide. In later years, Anthura made the switch to potted anthuriums and expanded its range to include orchids, and recently also Bromelias. The company expanded and relocated to Bleiswijk, where Marco van Herk, my brother Iwan van der Knaap and I have formed the management for some twenty years.'

## The addition of orchids and bromelias resulted in a major expansion in Anthura's range. What is your vision on specialisation and growth and how does Anthura apply this strategy?

'If your company specialises in a relatively small product, you can become a world market leader. That's exactly what we're aiming for. Anthura is a specialist in flowering tropical pot plants and we operate internationally. We develop new varieties in Bleiswijk that we then breed in our product locations in the Netherlands, Germany, North Macedonia and China. We export our products from these locations to growers in over seventy countries across the world.'

## The development of new varieties is a time-consuming process. How can technology accelerate and improve this process?

'As a breeder, we're always searching for new, improved varieties. Flowering tropical pot plants are complex organisms, with an anthurium's genetic code being even

longer than that of a human being! This genetic diversity offers many opportunities, but also results in a time-consuming and costly breeding process. As it generally takes seven to eight years to develop a new variety, we're now using molecular technology to accelerate this process. Genetic analysis provides insight into plant traits, which we can use for more targeted hybridisation. We opened a hyper-modern Research Center in Bleiswijk in 2018, where our own R&D department conducts cutting-edge molecular research. The knowledge and options available to us now are just the start of what we expect will be a very bright future! >

Mark van der Knaap, Director of Anthura







The heat pump system at the Bleiswijk location

### That sounds promising! How can research into genetic traits contribute to more sustainable ornamentals?

‘We want our ornamentals to offer consumers the experience of nature and contribute to their mental well-being. Using chemicals that harm nature seems at odds with this. Breeding can play a key role in reducing the need for harmful pesticides, which is why we’re conducting a lot of genetic research on plant traits that confer resistance to specific diseases and pests. We’re also studying disease and pest characteristics to obtain a more complete picture of plant resistance. This is how we’re applying molecular research to solve the challenges facing the horticulture industry.’

### These challenges also offer many opportunities. What is your vision for the industry’s future and what role does sustainability play in this?

‘The science is clear: if we are to combat global heating we need to stop using harmful chemicals and reduce carbon emissions. The horticulture industry doesn’t need legislation for this, as the majority of companies have an intrinsic motivation for sustainable production. This is evident from the huge number of initiatives and horticulturists’ dedication to implementing them. The same applies to Anthura. Our buyers are aiming for one hundred per cent sustainability. As a supplier, it’s only natural for us to take the lead in this. I’m convinced that the industry will succeed in being more sustainable; we just need some transition time.’

### It seems natural for you at Anthura to take a leading role in the energy transition. What steps are you taking to realise this ambition?

‘Our strategy starts with geothermal heat. Geothermal systems provide a good basic power supply throughout the year, with no carbon emissions. But geothermal heat alone isn’t enough to supply power to all our locations, which is why heat pumps form a vital addition in generating large amounts of energy. A heat pump extracts heat from air or water, producing more energy than it consumes. The only problem is that heat pumps are much less efficient in winter. They then need much more electricity to transfer heat, while there’s much less green electricity available. The question is: how can we bridge that period?’

‘Breeding can play a key role in reducing the need for harmful pesticides’

### That’s a question many growers have. What do you think could be a potential solution?

‘We’re taking part in a Zuid-Holland provincial pilot in which we store solar power in the ground during the summer for use in the winter. There’s a layer of sand at around 200 metres deep at our Bleiswijk location. This is suitable for storing water, which is heated there to 50 degrees. In winter, we then aim to use a heat

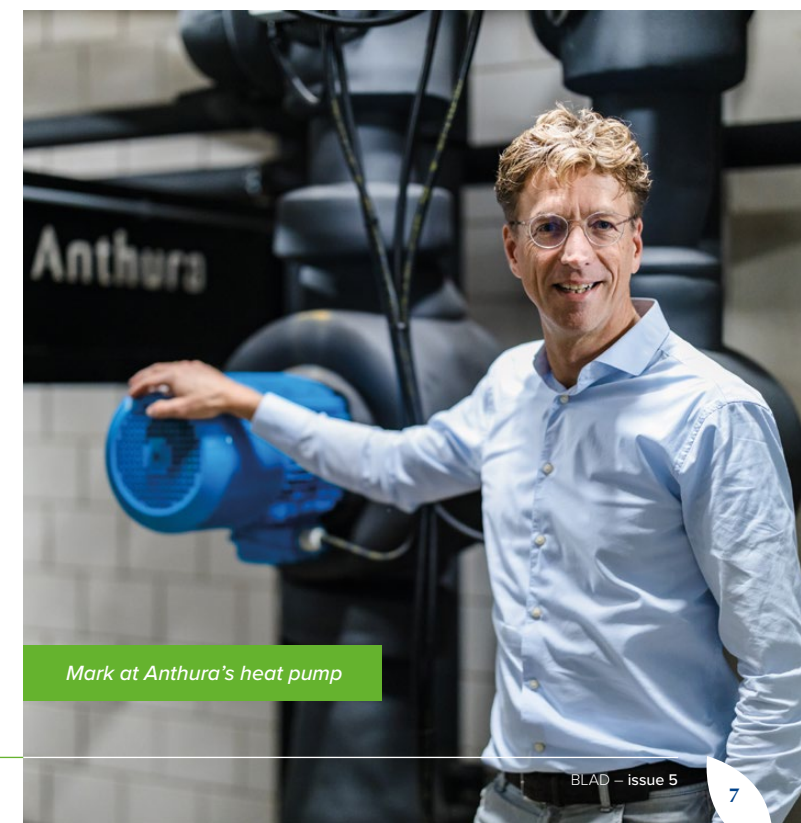
pump to increase the heat of this stored water to 60 degrees so we can use it to heat our greenhouses. We’re looking to optimise our energy mix by combining this system with the heat from the CHPs (combined heat and power units) we already have in operation. These generators produce electricity that horticulturists can either use or supply to the grid. At the same time, heat is released that can heat water to over 90 degrees. Together with the heat from the heat pump, this forms an efficient combination for heating our greenhouses. The disadvantage of CHP units is that they use gas, which is a fossil fuel. A possible solution could be to run the CHP units on hydrogen; a carbon free gas that can be produced using green electricity. Hydrogen production is a way to buffer green electricity from solar and wind power, to cover periods when these are in short supply. Although there is still a lot of discussion about hydrogen costs and use, I think we need to explore the options. I asked someone from Gasunie recently where hydrogen pipelines are being installed. And guess what? Pipelines are being installed close to our Bleiswijk location, which offers us a wealth of opportunities!’

### The horticulture industry doesn’t only produce a lot of electricity for its own use, but also supplies a lot of electricity to the power grid. How can the industry enhance this positive impact on the environment?

‘The horticulture industry can play a major role in stabilising the power grid. We produce large amounts of electricity and supply a lot of electricity to homes and companies. We can switch CHP systems on and off and supply electricity to the power grid when demand is high. We can also be flexible with our energy consumption. When electricity is scarce, we can temporarily provide the plants with less heat and light. Many plants have a kind of natural battery and they’re more than able to cope with this. If it’s a dark winter day with no wind, horticulture companies can, for example, use their hydrogen CHP units to meet the demand for green electricity. For themselves as well as for local companies and homes!’

### Sustainability offers so many opportunities but also requires the right approach. What do you think is needed to make the most of these opportunities and to future-proof the industry?

‘We need to invest in different renewable solutions at the same time. As the world is in constant flux and technologies are always evolving, we need to keep our options open and stay flexible until we’re sure we’re making the right choices. At Anthura we’re focusing specifically on breeding opportunities as that’s where we can have the most impact. Different problems will end up being solved by different innovative initiatives, with our joint efforts leading to a fully sustainable horticulture industry. Cooperation within and outside the industry is also essential in realising the energy transition. For example, at Anthura we’re using geothermal sources from one of our neighbours and in the future we’ll be able to supply heat from our heat pump system to the power grid. We need to invest together too. Some investments are just too high for one company to carry alone and a company on its own simply can’t invest in all the available potential solutions simultaneously. I’m convinced that horticulture can become energy neutral as long as we continue to invest in different energy sources, technologies and collaborations!’ ■



Mark at Anthura’s heat pump



# €8 million in dividends!

## Horticoop's dividend policy in a nutshell

Horticoop has paid out 8 million euros in dividends to members; our first profit sharing! Decisions on dividend payments are taken according to Horticoop's dividend policy. But what does that dividend policy entail? And how do members benefit from this profit sharing? Managing Director, Patrick Groeneveld and Supervisory Board member Theo van Noord answer the most frequently asked questions.

### How do members benefit from Horticoop's investments?

**Patrick:** 'Horticoop invests in companies that develop innovative solutions to help future-proof the horticulture industry. These solutions include technologies that make our industry more sustainable, efficient and profitable. As well as benefiting from these innovations, Horticoop members also benefit from the value growth of these companies. A good example of this is the dividend payment of 8 million euros. This payment was possible partly because of the returns on the sale of Lumiforte, the growth of which Horticoop had supported for many years. The number of dividends members receive depends on the number of participations they hold. Members can visit the Horticoop Community Platform to check how many participations they have and determine their dividend entitlement.'

### What does the dividend policy entail?

**Theo:** 'Horticoop's profit appropriation is determined when the financial statements are adopted and is based on the dividend policy.'

Balance is key in this document. On the one hand we want to reward our participation holders for their commitment, but on the other we need to ensure that we remain financially healthy so we can continue to grow and invest in new innovations. We aim to pay dividends annually, subject to our financial situation. We operate a pay-out ratio of 20%, which means that 20% of net profit after tax is distributed to members in the form of dividends, where possible. With respect to Horticoop's equity, we are aiming for an average dividend yield of 5 to 8%.'

**Patrick:** 'Ensuring Horticoop's financial health is our top priority. Dividend payments are only possible if there is sufficient liquidity and solvency and we have enough funds available to achieve our strategic objectives. Profit can also be reinvested to stimulate portfolio companies' further growth.'

### How does Horticoop decide whether to pay out dividends?

**Theo:** 'That starts with the financial statements. The Board uses these to assess whether there is scope for dividend payments and produces

a proposal. The Supervisory Board then makes a critical assessment of this proposal. Factors including the financial results, reserves and future investment plans are given a high weighting. If we agree with the proposal, it is then presented to the Member Council for approval. This process ensures a careful consideration of all interests.'

### How are the dividends paid out?

**Patrick:** 'In principle, the dividends are paid out in cash. But some dividends can also be paid out in the form of participations if the participation holders prefer that. There are limits to this: the dividend policy stipulates that the total issue of new participations in a financial year should not exceed 2% of the total number of existing participations.'

### Can members trade in participations?

**Theo:** 'Trading of participations between members will be possible later this year. We're currently developing a facility in which members can contact each other directly to arrange the purchase or sale of participations, without Horticoop's intervention. Members will be able to trade the participations within a fixed period of several weeks. This "transfer period" will take place in the summer, after Horticoop

has published its financial statements. This will ensure that all members, including members of the Member Council and the Supervisory Board, have access to the same knowledge when the participations become tradable.'

### And what if there are unforeseen losses?

**Patrick:** 'Members don't need to have any concerns about this. Horticoop is a cooperative Excluded from Liability (UA). This means that members are not liable for any of the cooperative's deficits or losses.'

### How does the dividend policy contribute to the cooperative's growth?

**Theo:** 'I view this as a new milestone in Horticoop's development as an investment cooperative. The dividend policy offers Horticoop tools to enable the further growth of both the cooperative's assets and the value of participations. This takes us forward towards a strong, shared future!'

### Do you have any questions about Horticoop's dividend policy?

Feel free to contact David Brand, Horticoop's Communication & Community Manager via [cooperatie@horticoop.nl](mailto:cooperatie@horticoop.nl)

*Supervisory Board member, Theo van Noord (left) and Managing Director, Patrick Groeneveld (right)*



# The year of...

Horticoop's portfolio companies reflect and look ahead

The horticulture and greenhouse horticulture industries were certainly not idle last year, nor were Horticoop's portfolio companies. Horticoop manages a varied portfolio of companies, each of which plays a unique role in promoting a sustainable and future-oriented horticulture industry. In 'The year of' section, these companies reflect on 2024 and share their vision for the future.



The Blue Radix team managed to measure the impact of their AI solutions. [Page 11](#)



Lumiforte shifted both its geographical and product range boundaries in 2024. [Page 16](#)



CE-Line transformed to become a mature commercial company. [Page 17](#)



VitalFluid made a conscious decision to focus entirely on crop protection. [Page 26](#)



Vivent Biosignals launched a dashboard to enable growers to follow plants' response to environmental factors in realtime. [Page 27](#)



Based in Bedford, US, Hort Americas is gaining ground in the North American market. [Page 28](#)



Skytree is poised to test a new type of machine suitable for large-scale applications. [Page 30](#)



Horticoop Technical Services switched its focus and that requires a new name: Horticoop Technical Solutions. [Page 31](#)

## The year of Blue Radix

# The proven added value of autonomous cultivation

Blue Radix, market leader in autonomous cultivation, is using artificial intelligence (AI) to support growers in their operational processes. Laurens van der Spek, Chief Operations Officer, talked with pride about the past year's successes and their plans for 2025.

'Our AI solution, Crop Controller, integrates seamlessly within the greenhouse ecosystem, while keeping growers in charge. This solution enables growers to optimise their cultivation strategy, after which this is implemented autonomously. Having Crop Controller implement routine tasks gives growers the space to focus on other important aspects of their business operations. Autonomous cultivation also plays a key role in addressing a growing challenge: ageing in the industry. Even if staffing problems are not currently a problem, it's a good idea for the horticulture industry to look ahead. Innovative technologies make horticulture more attractive to young talent and that is vital in future-proofing the industry.'

### Proud of GreenTech Innovation Award

'2024 was an important year for us. Our customers' confidence in us was confirmation of our added value: almost all new customers decided to continue after their trial period, and many of them even scaled up and extended our services to other production locations. For us, that was a huge compliment! And to cap it all off, we received the 2024 GreenTech Innovation Award. We're so proud of this award, which feels like a recognition for the value we've added to the horticulture industry across the world.'

### The next step

'We'll be rolling out our autonomous irrigation module worldwide in 2025 as an extension to autonomous climate control using Crop Controller. We're also expanding the possibilities of our integrated new strategic optimisation tool. This tool calculates scenarios so that growers obtain insight into the consequences of their choices and can decide whether these are a match for their strategy. We'll also continue to expand our commercial team and reach and are investing in new possibilities to support growers worldwide. We're looking forward to further increasing our impact in 2025!'

On [page 36](#) Blue Radix CEO Ronald Hoek looks ahead to the future of AI in the horticulture industry.



Laurens van der Spek



# Reap what you sow!

A reflection on a successful members' event



Horticoop members gathered together during the Horticoop members' event on 12 November 2024. This time, the meeting took place at Van Gelder groente & fruit in its hyper-modern logistics centre, the progressive outlook of which formed a perfect match for the event theme: the energy transition in the horticulture industry.

Although Horticoop members regularly have pause to reflect on greenhouse sustainability, this certainly doesn't mean a complete pause, as our cooperative members are always taking fantastic steps towards a greener future for horticulture. This was even more apparent during Horticoop's members' event. Van Gelder's distribution centre in Ridderkerk formed the backdrop for the meeting. The main programme started following the opening, which involved a tour of Van Gelder during which those present expressed their amazement of Van Gelder's innovative approach to packaging fruit and vegetables. Three inspiring speakers informed attendees about their vision on the energy transition in horticulture; each from their own perspective. Jouke Campen,

Energy Programme Manager at Wageningen University & Research told members about the research WUR is conducting on alternative energy sources in horticulture. Rob van Straten, CEO of portfolio company Skytree, talked about the development and implementation of their technology, which captures, filters and stores CO2 from the air. And finally Horticoop member and santini grower, Harry Wubben, explained the energy transition from his perspective as a grower. Which innovations help him grow santinis and what else do they need solutions for? His story really resonated with the audience, which resulted in interesting discussions and great insights, providing a sound basis for Horticoop to really target its search for relevant solutions. For Harry, and for the many other members!

## Want to know more?

Were you unable to attend the members' event or would you like to read the insights put forward by Jouke Campen, Rob van Straten and Harry Wubben on the energy transition in horticulture? The three speakers continued to exchange ideas at the end of the members' event and shared their golden tips for growers. You can read all about this in this on [page 20](#).



## Horticoop realises its first profit sharing

The investments that Horticoop has made as an investment cooperative in recent years are starting to bear fruit. As well as meeting the needs of Horticoop's backers with strategic investments, the investment cooperative realised its first profit sharing. After a drum roll, Supervisory Board Chair, Joris Elstgeest announced that Horticoop will pay out no fewer than 8 million euros to the cooperative's members in 2025. The amount that Horticoop members will receive depends on the number of participations they hold. Members will also be able to trade their participations from 2025. Horticoop's Financial Director Hend van Ravesteyn explained how the scheme works and what it means for cooperative members.



Would you like to know more about trading participations? Managing Director, Patrick Groeneveld and Supervisory Board member Theo van Noord explain the policy on [page 8](#).

## Three new faces

There would be no Horticoop without a Member Council to represent its members. The members' meeting, which took place during the event in Ridderkerk, saw the election of three new Member Council members: John Vreugdenhil, Financial Director of KP Holland, Kees Hoogendoorn, Managing Director of Tuinderij Hoogendoorn and Jeroen van Weerdenburg, Managing Director of Aphrodite Orchidee. With the experience that the new Member Council members are bringing with them from their work at leading companies,

they're certain to be true assets for the cooperative. Curious to find out more about them? The new Member Council members introduce themselves to you on [page 32](#). The event topics were discussed extensively during the closing drinks and dinner buffer, with the special, plant-based dishes from the Van Gelder kitchen proving to be a delicious way to conclude a successful day.

Horticoop member



John Kuipers – Tuincentrum John Kuipers B.V.

'I only knew Van Gelder groente & fruit by name, but my curiosity just kept on growing the more I heard about the company. I'd never expected there to be such a modern and impressive organisation behind the packaging, processing and distribution of fruit and vegetables! As well as the festive news about the dividend payment, the tour around the Van Gelder distribution centre was also certainly one of the high points of the event!'

## Members' thoughts about the members' event



Jeroen Scholten – Boomkwekerij Jeroen Scholten B.V.

'For me, the members' event is a great opportunity to meet up with familiar faces from the industry every year. Besides the fact that it's great to be able to chat to each other, the event always includes many interesting programme elements. I find it useful to hear about Horticoop's plans for such things as new investments and the news about being able to trade our participations. And as icing on the cake, Horticoop announced its first profit sharing pay-out. This feels like a reward for the valuable relations we're cultivating together. It's great to see that our cooperation and investments are bearing fruit.'





Managing Director, Patrick Groeneveld welcomed those present



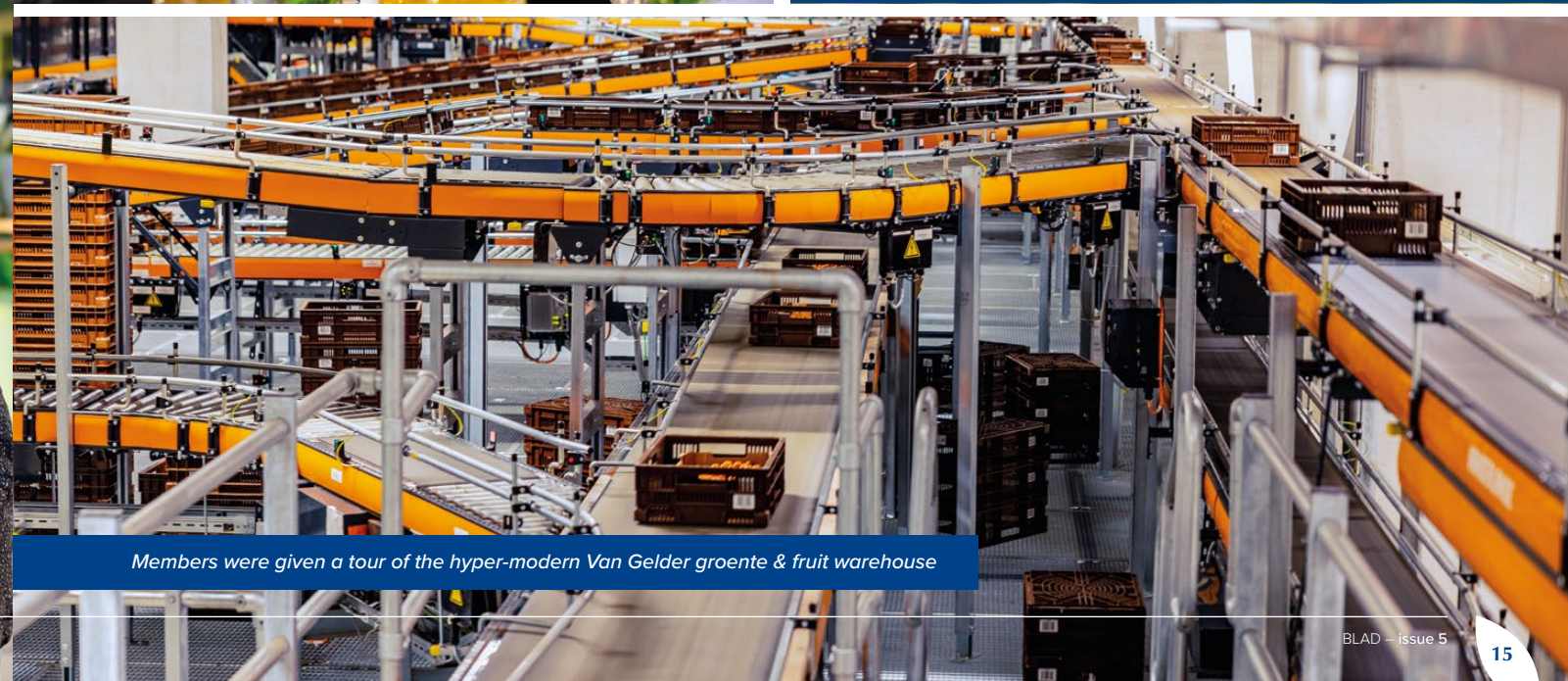
Horticoop members enjoy in-depth discussions during the closing drinks



Supervisory Board Chair, Joris Elstgeest unveils the dividend payment of 8 million euros



John Vreugdenhil, Kees Hoogendoorn and Jeroen van Weerdenburg join the Member Council



Members were given a tour of the hyper-modern Van Gelder groente & fruit warehouse



## The year of Lumiforte

# Lumiforte shifts the boundaries



Guido Janssen

**2024 was a successful year for Lumiforte in several respects. By shifting both the geographic and product range boundaries, the specialist in smart coatings again managed to set a sales record. CEO Guido Janssen talks about changing course and grasping opportunities.**

'We've made great strides including in France, Italy, Poland, Australia, Saudi Arabia and China both in the horticulture industry and in sports field line marking. We also started diversifying Lumiforte's product range in 2024, which will enable us to tap into even more niche markets. This includes cooling the roofs of buildings, in which our coatings can make a difference

of some 6 to 8 degrees Celsius in the summer. A fantastic worldwide addition to our range! Moreover, we conducted tests with coatings on fruit trees in 2024 to improve photosynthesis and tested the use of our cleaners to clean solar panels. The initial results are very promising and I'm looking forward to launching these products on the market in 2025. Last but not least, 2024 was all about finding the right party for the sale of Horticoop's majority stake in Lumiforte. We found that party in Kartesia!

### Three key lessons

'Every acquisition process requires thorough preparation. I always advise entrepreneurs to bear several issues in mind. First, you must think carefully about whether your company is ready for acquisition. Do you have enough capacity and the right people to realise ambitious plans? Once you've decided to go ahead, don't allow yourself to stumble over a certain step in the process that's new to you. After all, you can't know everything. My credo is: take that step and you're sure to learn something along the way! And if you're unsure, there are always consultants who can advise you. Although it's good to realise that they'll leave again once the process has ended, so you still need to be able to do things by yourself.'

### Anticipation in the air

'What do I see as a huge opportunity for horticulture? Drones! Not only for precise monitoring of crop development in the greenhouse, as there are also opportunities outside greenhouse too, such as applying coatings. This is currently done by an increasingly expensive and scarce workforce. I certainly also see opportunities internationally. In contrast to Dutch growers, growers abroad hardly have any spraying companies to apply the coatings. Drones offer the solution. It's such an interesting development that's certainly worth investing in!'



You can read more about Horticoop's sale of its stake in Lumiforte on [page 29](#).

## The year of CE-Line

# 'Smart production is the key to success'



Simon Meijer

**High-tech company, CE-Line enables real-time monitoring of nutrient levels in water. It's a technology with international allure. The company underwent a major transformation over the past year. CEO Simon Meijer sees a future full of opportunities for CE-Line and Dutch horticulture and shares his vision about the road to success.**

'CE-Line made a huge leap forward in 2024 by transforming from a company that mainly focused on science to become a mature commercial company that serves customers worldwide. In early 2024, we mainly employed engineers who focused on developing an innovative product. Once they managed that, the product needed to find its way to the customer. This required new expertise, which resulted in CE-Line expanding to introduce new roles, doubling its workforce and undergoing a key cultural shift. Good communications within the company ensured that the transformation to a mature commercial company was a success and we now offer our product across the world.'

### Don't just sit back and wait – go for it!

'To be successful we need to ensure our product's ongoing sales. Cooperation with leading horticultural technology suppliers often appears promising but doesn't always deliver the desired result. It's wise to stay in control, for example by approaching potential customers yourself and keeping in touch with them. That's why it's important to remain proactive in searching for ways to reach these customers. This formed the basis for a new motto: don't just sit back and wait – go for it!'

### Sense of calm in the greenhouse and at night through smart monitoring

'My goal this year? Make horticulturists aware of the importance of measuring nutrients. Many horticulturists don't do this on a daily basis, which is a pity because regular data collection offers valuable insights. CE-Line's real-time data monitoring helps prevent crop failures, allowing Horticoop members to save tonnes of crops and run their business with more assurance. Less uncertainty means a greater sense of calm – so you can sleep better!'

### Knowledge: the export product for tomorrow's horticulture

'Smart production enables the Dutch horticulture industry to retain its top spot on the international market. We can't expand in terms of surface area but with automation, data-driven insights and innovative technologies we can increase production per square metre. Connecting the elements provides our national horticulture with a wealth of knowledge, which helps us retain our top position. This knowledge can even become a more important export product than the actual crops. That's why smart solutions are the key to enabling Dutch horticulture to retain its lead in the future too!'



# Introducing Horticoop's Supervisory Board member Theo van Noord

'Tackling challenges together with innovative investments.'

Theo van Noord is the newest member of the Horticoop Supervisory Board. As owner of an innovative greenhouse horticulture company, Noordhuys, and former Supervisory Board member of fruit and vegetable company, The Greenery, he has a wealth of experience. Theo introduces himself and shares his vision on the opportunities and challenges within the horticulture industry and Horticoop's role in this.

## Let's start at the beginning. Theo, tell us who you are and where you come from?

I'm Theo van Noord. I was born and raised in Oude-Tonge, where I grew up in a horticultural family that grew open-field vegetables. As is traditional in horticultural families, after attending horticultural secondary school, I started work in our family company. Although I enjoyed helping my parents, I wanted to broaden my horizons. I left for Tinte, where I became the location manager for a grower in Westland. With the establishment of Noordhuys in 2000, I achieved my dream to become an independent horticulture entrepreneur. Over the past twenty-five years, we've expanded from three hectares of tomatoes to 46 hectares, spread across several locations in the south west of the Netherlands and in the province of Utrecht. Noordhuys also has its own packaging location, where we package our own tomatoes as well as third party products in any type of packaging they require for various retailers. As people are the key to Noordhuys' success and to enable our enthusiastic colleagues to all work together, Noordhuys has over 200 luxury accommodation units for its loyal migrant workers. We have a young, motivated and talented team, ensuring that we achieve incredible results. We're so proud of our team!

## In the period that Noordhuys became a Horticoop member, the cooperative underwent a transformation from purchasing cooperative to investment cooperative. Why did that interest you?

'Our introduction as a member of Horticoop did indeed coincide with Horticoop's transition to an investment cooperative. It was an interesting period! The cooperative set a new course by focusing on innovative investments. I was delighted to discover that Noordhuys and Horticoop have a lot in common, such as the joint focus on innovation and the aim to develop sustainable horticulture solutions.'

## Are the similarities between Horticoop and Noordhuys the reason that you wanted to be a member of Horticoop's Supervisory Board?

'Actually, my twelve years of experience as a Supervisory Board member at The Greenery was an important motive. I benefited a lot from this. It gave me a huge sense of satisfaction to use my input to support the members and to work together to achieve horticultural success. I learned how important innovation and cooperation are for the industry, and how these contribute to sustainable growth.'

## How do you view your role as a Supervisory Board member?

'As a Supervisory Board member I take all Horticoop stakeholders into account, such as Horticoop members, employees and companies. I also advise the management, with a focus on the long-term strategy and various stakeholder interests. For me, the best part of being a Supervisory Board member is giving advice. With my horticulture, business acquisition and agricultural business experience, I can help make well-considered investment decisions. I'm delighted to be able to use my knowledge to represent the interests



Take a look behind the scenes at Theo's company!

of other members and to support Horticoop in making decisions to realise a sustainable future for the horticulture industry. Many developments are taking place in horticulture. If Horticoop makes the right investments in innovative companies, the cooperative can address the industry's challenges, including energy and labour. We see so many interesting ideas and, as a Supervisory Board member, I always weigh up the pros and cons based on the financial figures and the positive impact such an idea will have on the horticulture industry. If an investment proposal exceeds a certain amount, the Supervisory Board and the Member Council assess whether Horticoop should invest in the company based on a proposal from the management. We aim to assess as best we can whether we can expect the investment to be paid back and whether we will achieve a good return on investment. Of course, I hope that every investment is a huge success. But I think it's also my task to make difficult choices when times are tough, as long as I can explain these.'

## What is your view on Horticoop's future?

'The horticulture industry's current position is partly due to initiatives such as Horticoop. Working together enables us to support amazing companies and take important innovative steps. The increasing demand for healthy and great products offers us a wealth of opportunities. Together we can grow further and build on a successful and sustainable horticulture industry and, as far as I'm concerned, the future of both Horticoop and the horticulture industry is rosy.'



Three visions on the energy transition  
in greenhouse horticulture

# Heading to the future full of new energy

The energy transition is a hot topic in greenhouse horticulture. And rightly so, because in the '2022-2030 Greenhouse Horticulture Energy Transition Covenant', the industry and government have announced the joint ambition to achieve carbon reductions of 4.6 megatonnes by 2030 and to ensure profitable and climate neutral production by 2040. Scientist Jouke Campen from WUR, innovator Rob van Straten from Skytree, and grower Harry Wubben discuss this ambition.



Jouke Campen, International Project Manager GTB Horticulture Technology WUR  
and Programme Manager of Greenhouse as an Energy Source

## 2022-2030 Greenhouse Horticulture Energy Transition Covenant in a nutshell

The covenant focuses on making greenhouse horticulture more sustainable and reducing annual carbon emissions to no more than 4.8 megatonnes by 2030. How? By making the switch to more sustainable energy sources, using innovative technologies and improving cooperation between government, industry organisations and energy companies. The covenant also includes agreements regarding financial support and regulations to enable the transition. The covenant was signed by the Dutch government, Glastuinbouw Nederland, Greenports Nederland, and energy sector representatives. The parties aim for the industry to be entirely climate neutral by 2040.

### Fossil free: option or illusion?

The objectives in the covenant are ambitious and also mean ending the use of fossil fuels entirely by 2040. How realistic is this? Jouke began: 'In 2022, energy prices were so high that we easily achieved the 2030 target. As soon as energy prices fell, however, the industry's gas consumption shot up again. So we're certainly able to realise this ambition as long as fuel prices are high enough to make fossil free cultivation more economically attractive.' As a grower, Harry added a caveat here. 'I agree entirely that we need to reduce carbon emissions and we ultimately need to use less fossil fuels. But don't forget that, in the Netherlands, we're already pretty far ahead of our neighbouring countries in reducing fossil fuel use. In Germany, for example, companies are currently receiving a subsidy if they switch from coal to gas. We're way past that point in

'We can realise this ambition as long as fossil-free cultivation is more economically attractive'



Jouke

the Netherlands. Yes, we need to progress, but we have to be realistic about this. That's why I envisage that CHPs (combined heat and power units) will remain as a back-up for now, despite these units running on natural gas.' >



Culprit and essential force

Harry's not the only one to cherish CHP units, as other greenhouse horticulture entrepreneurs embrace them too. And that's understandable because, as well as electricity and heat, CHP units also generate CO2 that can be supplied directly to the plants. This means that these units provide crops with a necessary nutrient. Another advantage is that excess energy is returned to the power grid, which enables the horticulture industry to supply many households with electricity. This makes CHP units financially attractive for growers. Harry added: 'Our CHPs are a solution to maintaining energy supply balance because they enable us to supply electricity easily whenever there's a shortage. That's why it's useful to keep these units cost-effective, operable and up to date, even if they'll be running less in the future due to the energy transition.' Although Rob understands growers' views on this, he adds: 'But it remains a fact that CHP units run on gas. If we're to achieve the covenant objectives, we ultimately need to stop using gas. This means that we'll need to find sustainable alternatives for greenhouse heating and lighting. Potential solution alternatives for growers include wind and solar power supplemented with batteries that can store excess energy, geothermal heat, heat roundabouts and water source heat

pumps for companies that cannot connect to a geothermal network.'

'We need to progress, but we need to be realistic about this'



Harry

Full speed ahead on innovation

WUR is conducting a lot of research into what is needed for fossil free cultivation. One of the highlights of this research is KAS2030, a full electric greenhouse in Bleiswijk, where a variety of crops are grown in four different compartments. They are researching such things as how much electricity is needed and to what extent green electricity can contribute to this. The greenhouse is also insulated with various types of screens and low-e glass. This is glass to which a coating has been added that reduces heat loss to the surrounding area, reducing the need for heating. Besides electrification and insulation, Jouke sees major sustainability opportunities in greenhouse dehumidification. Jouke: 'Plants in a greenhouse produce considerable amounts of moisture that

needs to be removed. This usually happens through simultaneous heating and opening of windows to enable the moisture to evaporate and leave the greenhouse. That wastes a lot of energy. We're using dehumidification systems, hygroscopic materials or condensation dehumidifiers to investigate whether latent heat generated by crop transpiration can be converted into usable heat for the greenhouse.' Rob speaks very highly of the various studies being conducted on fossil-free cultivation: 'As there are so many innovations that can help with the energy transition, I can well imagine that growers can no longer see the wood for the trees. Because, which of these innovations offers the best solution for their greenhouse and matches their future plans?' Skytree aims to help growers with this. Skytree is clustering its initiatives with other innovators via organisations including Horti World Centre and HortiHeroes. Rob: 'After Skytree joined forces with three other startups in 2024, we won the Dragon's Den Pitch for the Fieldlab Greenhouse for the Future of Greenport West-Holland. In this case, the pitch involved carbon or energy innovations. We're hoping that these kinds of collaborations make it clearer to entrepreneurs what an innovation can offer their business operations so that taking the step towards actual innovation feels smaller. Because it's high time that entrepreneurs got moving with energy innovations.'

Self-sufficiency will be vital in the future

Harry Wubben has already been involved in many innovations. For example, he only uses LED lighting in his greenhouse and, as well as his CHP unit, he has a battery to store excess energy for later use, or to supply to the power grid. He's also carefully monitoring geothermal developments in his region. For his next innovation, he'll be working closely with Rob. Harry Wubben Flowers is actually one of the four companies in Skytree's pioneer programme. As one of the first companies in the Netherlands, Harry will have a Skytree Stratus DDAC (Decentralized Direct Air Capture) unit installed in 2025. This will enable him to start capturing CO2 from the atmosphere for his plants. >

Harry Wubben, Director of Harry Wubben Flowers and Funny Santini



Rob van Straten, CEO at Skytree







**Jouke's tip:  
use the Greenhouse  
Energy Guide**



Opportunities for fossil and emission-free cultivation are being explored in WUR's 'KAS2030' demonstration greenhouse

Why is Harry investing in this? Harry: 'Although it may not be entirely profitable right now, it will be in the future. The DDAC unit will soon complete the circle in terms of CO2 supply in our company. It will allow us to extract CO2 from the atmosphere and capture the released CO2 from our own product in a CO2 buffer tank and reuse it for our new plants. This means that in the future we'll no longer depend on others for CO2, nor will we incur procurement costs for it. And, more importantly, we'll not need to use our CHP unit at those times when it's only needed to supply CO2 but isn't needed for energy. We can be self-sufficient, and that's vital for the future.'

**CO2 surplus or shortage?**

There's certainly a need for this. Because however strange it sounds now that the discussion and policy are focusing on reducing carbon emissions, there's also a threat of a CO2 shortage. CHP units in greenhouse horticulture are currently the main source of generating CO2. In addition, 10 to 12% of the required CO2 is supplied via the OCAP network. These pipelines run from industrial sources, such as Shell and Alcoa,

**'CO2 is a fantastic molecule.  
It's just that we have too much in  
the atmosphere'**

**Rob**

mainly to greenhouse horticulturists in the west of the country. However, these sources are drying up. For example, from 2027, Shell will be storing CO2 beneath the North Sea as part of the so-called Porthos project. Moreover the greenhouse horticulture industry isn't the only industry that needs CO2. Rob added: 'I often jokingly say "CO2 has a marketing problem". It often sounds like there's too much CO2, while we also need this everywhere in society, including in carbonating soft drinks, or welding, food packaging and transporting donor organs. These are all examples of applications that are impossible without CO2. CO2 is a fantastic molecule. It's just that we have too much in the atmosphere. So what could be better than us using our units to extract it from the atmosphere for immediate reuse?'

**Innovation also pays off**

An innovation such as a DDAC unit is a considerable investment for growers, but Rob thinks this will change in the future. It's currently still cheaper to run gas to obtain CO2 than to invest in a DDAC unit. This difference will reduce as gas prices rise. And there's another factor involved. Rob continues: 'We keep improving our technology. By becoming more efficient, the costs per tonne CO2 will fall. At some point the lines of the costs of investing in a DDAC unit and the costs of purchasing CO2 will cross. The government is fortunately using subsidies to stimulate the initial buyers of the technology so that this step doesn't involve such a financial risk. And these early adaptors' experiences will also enable us to further innovate.' With his DDAC unit, Harry is one of the pioneers. He adds: 'I'm innovating because I think it's useful and it's important that we stay future oriented in growing crops. Ultimately, every investment does at some point need to pay for itself. It would be great if I get something in return, so that I can reinvest if a new opportunity arises to further innovate my business.'

Jouke continued: 'Sometimes investing in an innovation gives you something extra. Take tulip growers, for example, who are investing in dehumidifiers. Tulips are grown at fairly low humidity levels. The use of dehumidifiers, has

resulted in huge improvements in tulip bulb quality and higher yields. These are additional gains on top of any sustainability gains you make, making it more profitable for growers to invest in such a system now.'

**Finally: golden tips for Horticoop members**

When asked whether the three men have any golden sustainability tips for Horticoop members, the advice starts flowing. Jouke is the first to start: 'WUR has created the Greenhouse Energy Guide, a tool that enables you to calculate what a technology can mean for your company, how much gas or electricity you need for it and what your carbon reduction will be. You enter the data about your current situation and you can then see what an investment will cost you. And, above all, what returns you'll get from it. It's a handy tool that I recommend to every grower!' Harry also shares his insights: 'My tip is to stay alert, up to date and always curious about new things! And publicise what you're already doing in terms of the energy transition because an unprecedented amount has already been achieved in resilient, organic and environmentally-responsible farming. As an industry, we could do a lot more to convey that!' Rob adds: 'I say; don't wait, innovate!', to which Jouke agrees: 'But fortunately, most growers already think like that. Take Harry, for instance!'

**View the  
2022-2024  
Greenhouse Energy  
Monitor and other  
studies here**





## The year of VitalFluid

# Plasma as proven alternative for pesticides

VitalFluid brings the power of plasma to greenhouses. The startup develops machines that convert water into Plasma Activated Water (PAW). This water has properties that contribute to healthy crop growth. CEO Erik Hertel reflects on the past year and looks ahead to promising developments.

'Plasma Activated Water has two important applications in horticulture: it contains essential nutrients for plants, making it a greener alternative to fertiliser, and it has a disinfecting effect that makes plants more resilient to pathogens such as fungi and bacteria. We initially focused on both applications, but last year we decided to focus on plant health. A key reason for this is that, with respect to fertilisers, we were unable to compete on price with existing companies, but we can do that as far as plant health is concerned! Moreover, focusing our resources on just one solution has enabled us to accelerate development.'

### Proven effective

'We achieved various milestones in 2024 that will take the application of PAW to the next level. For example, we demonstrated scientifically that PAW is effective against fungal diseases such as mildew. This proves that our products offer a good alternative to pesticides. We also further optimised our machinery to accurately produce the specific composition of PAW required for crop protection. We've received such positive feedback from the growers we're working closely with to test our technology in practice, and we're so proud of this. And let's not forget the support we've received from partners including Horticoop, which has helped us innovate and grow.'

### Promising year

'2025 promises to be an exciting year. We're conducting new tests in the first quarter. We'll use the insights we obtain from these tests to further refine our crop protection technology. After that, we'll introduce the machines on a large scale to English and American strawberry and cucumber growers. Following a test period, we'll officially launch our products on the market. Our initial focus on these markets is due to regulations: in Europe, unfortunately, the registration process is complex and time-consuming. We're working with Horticoop to explore how to speed up these processes. We're eager to introduce our technology and the knowledge we gain from abroad to the Dutch market as soon as possible!'



Erik Hertel

## The year of Vivent Biosignals

# 'Data-driven cultivation is the future'

Scale-up and portfolio company Vivent Biosignals has developed a biosensor for realtime plant health monitoring. Commercial Director Carl Rentes talks about the successes in 2024 and Vivent's contribution to the industry.



Carl Rentes

'We aim to be able to provide plant feedback to the grower 24/7 and to achieve that, we introduced a new dashboard in 2024. This provides growers with live images of how plants respond to their environment. The grower receives an immediate notification if there's a shortage of a certain nutrient, or if the greenhouse ventilation isn't working properly. This realtime information enables growers to take action immediately. The right measurement equipment is needed to obtain this information from the plant, which is why we're taking the next hardware step in spring 2025, with the introduction of our mini sensors. They're smaller, work on batteries and are easier to install. We're also planning to introduce a new energy light model. This enables growers to check the dashboard to see whether the plant is benefiting from the supplied extra light. This actually isn't always the case, which is of course a waste of energy!'

### Cooperation helps you progress

'Over the past year, we've learned a lot from intensive cooperation within the industry. For instance, Horticoop members gave us feedback about the Vivent service and systems, including

the dashboard. Receiving such feedback can be quite tough, but it's mainly motivating. It helps us give growers increasingly specific information. And another great example is the cooperation with breeding company, Axia Vegetable Seeds. We've worked together to research new virus-resistant varieties. It usually takes several seasons to fully understand the development of a variety. We worked with Axia to reduce this learning curve so we're better able to advise growers about new varieties.'

### A new generation of growers

'A generation of growers is gradually retiring so we need many new, young growers in the coming years. We've noticed that the younger generation is motivated by the use of artificial intelligence and machine learning models. Vivent's technology enables us to interpret in an increasingly specific way what the plant is telling us, which offers the industry great opportunities. Choices are made less on the basis on experience, knowledge and intuition and more on the basis of data. Data-driven cultivation is the future and helps growers take better decisions for their crop.'



## The year of Hort Americas

# Vision with a holistic view

CEO Chris Higgins runs Hort Americas in the American city of Bedford, Texas. He does this with a clear vision that extends beyond his own company. Because, as he says himself: 'If you want to be a long-term leader in this industry, you need to look holistically at the industry and dare to pose critical questions.'

'2024 marked the growth of Hort Americas. Geographically, with new branches in Canada and Mexico, and through the expansion of our range. This growth has enabled us to take a giant leap forward in achieving the goal we set ourselves on our establishment, some 15 years ago now, of being a strong player in the North American market. You could say that 2024 was the expansion of our foundation on which we will continue to build in 2025.'

### The full package

'Historically, Hort Americas is a wholesaler, but we've well and truly outgrown that role. In the US, we've become an extremely influential knowledge centre, not least due to education projects and close cooperation with universities. We've even become so adept at this that people sometimes forget that we also sell products. But, of course, we do have to generate revenue, which is why we're expanding our services to include professional services such as a maintenance technician to adjust equipment on location. This means you can contact us not just for knowledge, advice and to purchase products, but also for associated maintenance services. So, we're now offering the full package!'

### A view of the future

'Many opportunities have emerged in our industry in recent years. Investors have also become aware of these opportunities and have converged on our industry in great numbers. They have a different approach than the traditional family companies that

have characterised our industry for generations. This results in interesting insights on both sides with respect to short and long-term expectations. The question is: are we learning our lessons? Do entrepreneurs dare to look further than their own gain and put the interests of the industry first when new opportunities arise? I think Hort Americas can set an example here and should look holistically at the industry. It's our duty to ask these kinds of questions so we can fundamentally strengthen the industry instead of just aiming to make quick buck.'



Chris Higgins

## Nice niche

### The sale of Lumiforte

Horticoop has sold Lumiforte to international investment company Kartesia and is reinvesting with a minority stake. This has paved the way for Lumiforte's further international growth, enabling it to target markets outside the horticulture industry. Indeed, this global leader in smart coatings sees opportunities for growth in North America and Asia, as well as product expansion in other sectors, which is beneficial for both Lumiforte and for Horticoop.

Lumiforte will not disappear from the Horticoop portfolio. On the contrary, the reinvestment means that the cooperative retains a substantial stake in the coating specialist. Horticoop's cooperative members also benefit from the potential growth enabled by Kartesia joining as a shareholder. Kartesia has extensive international experience as a growth investor and can enable Lumiforte's development; accelerating Lumiforte's growth ambitions, both through organic growth and strategic acquisitions. Horticoop members can see the potential returns from this growth reflected in the returns of the cooperative.

'Lumiforte continues to be of great value to our members.'

### Niche markets

Financial Director of Horticoop, Hend van Ravestein explains the cooperation with Kartesia in more detail: 'With Kartesia as a shareholder, Lumiforte has gained the space to expand its product range and grow further in our industry. And beyond! Because as well as smart coatings that regulate greenhouse conditions, Lumiforte is tapping into other niche markets. Their expertise in coatings can be used in many sectors, with sports field line marking, climate control in buildings and protective biological coatings for orchards being just the beginning of the many applications. I'm confident that, supported by Kartesia's extensive network and investment expertise, Lumiforte can reach its full potential and continue to be of great value to our members.'

Hend



## The year of Skytree

# 'Going green together'



Rob van Straten

Sustainable food production starts by thinking in terms of solutions. And Skytree, developer and manufacturer of the Decentralized Direct Air Capture technology, enjoys helping to come up with solutions. CEO Rob van Straten reflects on a year full of growth and looks ahead with an equally positive outlook to the future sustainability of greenhouse horticulture.

'Skytree's DDAC machines enable growers to capture CO<sub>2</sub> from the outside air and use it for crop growth whenever this is needed. With a high capacity and low-price level, these systems form a serious alternative to CO<sub>2</sub> originating from fossil fuels. We successfully installed our first Cumulus machines at various customers in 2024. The data we received from them and from test locations such as those at WUR and Delphy enable us to gain important insights every day regarding how the system works in practice, so we can continue to improve and expand our technology. In 2025, our Stratus machines, which are suitable for large scale applications, will also be running in the greenhouses of those taking part in the pioneer programme. An exciting milestone! After this test phase, we can roll out the system more widely. We've already received various contracts, while the machine isn't even available yet! So there's a huge demand for this type of equipment.'

### Innovation takes time

'As we're one of the first to build small-scale CO<sub>2</sub> capture systems, this development took longer than expected. It involved a lot of trial and

error since we didn't have the benefit of others' information and experiences. Moreover, the system comprises hundreds of components, which means that any delay in the delivery of even the smallest component resulted in us having halt the process. As CEO I learned to manage my expectations as well as those of customers and investors; and to set realistic goals. After all, innovation takes time. If it were easy, everyone would be doing it.'

### Greenhouses of the future

'The demand for sustainable solutions is growing. Fortunately, Dutch greenhouse horticulture is supported by an extremely innovative industry. This gives our country a leading international role in the field of sustainability. Cooperation between greenhouse horticulturists, governments, universities and others is essential in this and is deeply rooted in Dutch culture. We experienced this ourselves when we came in contact with other startups via World Horti Center. We joined forces in taking part in the "Greenhouse of the Future" competition. The goal? Demonstrate that by using a combination of our four innovative systems, greenhouse horticulturists can make their processes much more sustainable without production losses. The collaboration paid off as we ended up winning! It just shows that, although the Netherlands is small, if we join forces we have the potential to have a huge impact on food production sustainability worldwide.'

Rob goes into more detail about joining forces to facilitate the energy transition on [page 20](#).



## The year of HCTS

# The strength of making choices



Julia Nikulina

HCTS proves that progress starts by having the courage to make choices. This portfolio company decided to follow a new strategy in 2024, with a new focus and a new name. Financial Director Julia Nikulina explains how this new direction has given the organisation a boost and has taken collaboration with partners to the next level.

'At HCTS, we believe that success lies in forming strong collaborations on familiar territory, which is why we decided to focus for now on our home market: The Netherlands, Belgium and North Rhine-Westphalia. This allows us to further specialise and offer our customers the best solutions. It doesn't mean that we'll no longer serve our current customers outside this area but, for now, we'll not be taking on any new projects outside this home market. This clear focus will enhance our customer relations, offer direction to our team and improve our services, ensuring that our colleagues feel even prouder of their work. We also decided to review our identity. As an independent section within Horticoop, we want to convey our strong identity, which is why we've been operating under a new name since January 2025: Horticulture Technical Solutions (HCTS). Same abbreviation, different message! The aim of this name change is to really emphasise our focus on technical solutions and ambition within the horticulture industry.'

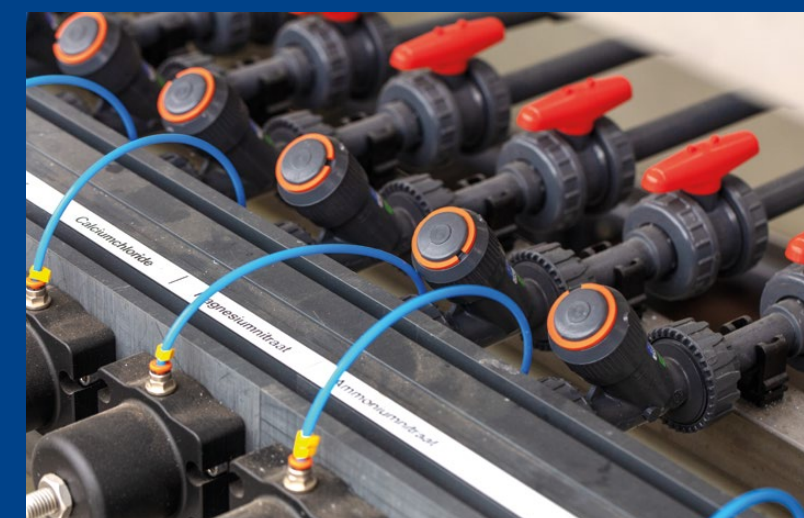
### Training together for tomorrow's greenhouse

'Our focus on the home market has not only given us a strategic boost, it also provides ample opportunities for growth in knowledge and expertise. We'll be building on this sound basis in 2025 and will be investing further in training our team. We've established a climate computer specialist training together with partners, enabling our electricians to specialise in a field that is seeing a rapid growth in

demand from the horticulture industry. By investing in our colleagues and cooperating with customers, we're creating a win-win situation for everyone.'

### From challenge to opportunity

'2024 was also the year in which we started viewing the energy transition in the horticulture industry as an opportunity rather than a challenge. We believe that the future of horticulture is all about smart, data-driven solutions. Cooperating with our customers and partners enables us to contribute to sustainable and innovative solutions that really help the industry progress. We're looking forward to continuing these collaborations in 2025 and joining forces to prepare horticulture for the future!'





# New members of the Member Council

Tuesday, 12 November 2024 was a special day for Kees Hoogendoorn, Jeroen van Weerdenburg and John Vreugdenhil, as that's when they were elected as new Horticoop Member Council members. They're eager to use their extensive knowledge and wealth of experience to contribute to improving the horticulture industry. How will they do this? Let's hear it from the horse's mouth!



Supervisory Board Chair, Joris Elstgeest introduces John, Jeroen and Kees as new Member Council members during the Horticoop members' event



## Kees Hoogendoorn

Managing Director of Tuinderij Hoogendoorn

'My father was a horticulturist by trade and imparted a love for horticulture to me when I was just a child. As soon as I was old enough, I started working in his nursery in Bleiswijk. Our dedication and hard work resulted in the flourishing nursery's success, so we decided to leave for Zeeland where we could expand. I ended up growing sweet peppers there until 2022 and discovered all the facets of the trade: from preparing business plans and budgets to hands-on experience in the greenhouse. It was a period in which I learned so much but, after many years, I was ready for a new challenge. As I wanted to think bigger and make a decisive contribution to the industry, I quickly settled on the sustainability theme. I now supervise

various projects to make horticulture greener, including the implementation of battery projects to store energy efficiently. This how I decided to do my bit. But, to ensure that horticulture is truly future proof, we really need to cooperate as an industry. As an investment cooperative, Horticoop plays a key role in this. And that's why I was so pleased to join the Member Council. With members bringing a wealth of knowledge, insight and experience, the council is immensely valuable to the collective in identifying the industry's needs. My diverse background provides relevant insights, and I enjoy using these in cooperation with other Horticoop members to improve horticulture.'



A portrait of Jeroen van Weerdenburg, a middle-aged man with short brown hair, smiling. He is wearing a blue patterned button-down shirt. The background is a blurred indoor setting with large green plants.

## Jeroen van Weerdenburg

Managing Director of Aphrodite Orchidee

'I'm Jeroen van Weerdenburg and I'm Managing Director of Aphrodite Orchidee, a family company that has been in business for 90 years. We started specialising entirely in growing orchids in 1970. Our company, established in Rozenburg, has now grown to be an important player in the European orchid market, with a strong focus on Scandinavian countries. Aphrodite Orchidee has a long history in which knowledge and passion have been passed on from generation to generation. Something I'm really proud of! I now work every day with my brothers and cousins on the further growth and development of our family company. Our cooperation with Horticoop goes way back. Horticoop always

offered us excellent service as a procurement cooperative, which is why I'm absolutely delighted to play an active role within the organisation, as a Member Council member. The horticulture industry is actually facing major challenges, but there are many opportunities too. I'm convinced that Horticoop can play an important role as an investment cooperative in addressing these challenges. As a Member Council member, I don't only want to contribute to advancing sustainable work processes, I also want to share our orchid cultivation knowledge and experience with my fellow members. I'm looking forward to a fruitful collaboration with Horticoop!'

A portrait of John Vreugdenhil, a man with short brown hair, smiling. He is wearing a white button-down shirt with a 'kp holland' logo. He is holding a tablet. The background is a large greenhouse with many rows of plants.

## John Vreugdenhil

Financial Director of KP Holland

'I first came into contact with the industry at a young age. My parents had a horticulture company, where I got my first part-time job. It was great fun, but I soon discovered another passion of mine: figures. I decided to study Business Economics and Accountancy in Rotterdam, after which I started work at various accountancy firms. Although I was no longer in greenhouses every day, I remained involved in horticulture as many of my then customers were active in this industry. After gaining 15 years of financial knowledge and experience, I was given the opportunity to start as Finance Director at KP Holland, a 75-year-old family company that breeds, propagates and produces potted plants. We do this at seven locations in Westland, with 20 hectares of greenhouses and around 190 colleagues.

When Horticoop was a procurement cooperative it was already hugely important for KP Holland. As an investment cooperative Horticoop has caught my attention even more! On the one hand because they're active in the field I work in every day and where my heart lies, and on the other because I believe in the power of cooperation. Horticoop can call on the vast wealth of its members' knowledge and expertise, enabling it to really make the right investments. Because, as an industry, we need to progress. This includes new technologies for fossil-free growing, automation and robotisation. These are developments in which Horticoop can play a key role. I believe that KP Holland's knowledge and my financial background will definitely come in handy! ■





# The future is AI

## Crop Controller helps growers worldwide with autonomous cultivation

The increasing shortage of experienced growers is forcing greenhouse horticulture to consider alternatives so it can keep growing. One of the solutions is the use of Artificial Intelligence (AI). Specialist, Blue Radix is offering an advanced system for this: Crop Controller. A joint investment from Horticoop and investment fund Navus Ventures will enable the autonomous cultivation pioneer to have global impact with its AI greenhouse applications. CEO Ronald Hoek: 'More and more growers are starting to understand the power of and need for AI.'

Blue Radix is a market leader in autonomous cultivation. Crop Controller, developed by Blue Radix, is currently controlling some 100 greenhouses in sixteen countries. This AI solution enables growers to optimise their cultivation strategy, after which the entire process is autonomous. Ronald: 'Crop Controller's climate and irrigation control enables us to take over eighty per cent of the climate computer work that growers usually do manually. In Crop Controller, AI handles all the difficult adjustments and ensures that implementing the chosen strategy is no longer a labour-intensive process that requires the knowledge of experienced growers. You enter your desired cultivation goals into Crop Controller and this implements all your climate and irrigation requirements every five minutes, 24/7. With our system, many of the considerations that growers usually make in their heads are weighed and assessed by AI.' Whereas Crop Controller initially only handled the implementation of strategy, strategy optimisation was recently also integrated in the system.

This feature makes life much easier for growers and enables more growth. Growers can now also produce the annual cultivation plan with Crop Controller, adjust this periodically if necessary and calculate whether the crop is on track to achieve the desired end goal.

### Time and energy savings

Crop Controller doesn't only result in an improved work-life balance for growers, it also results in a 7% increase in production, energy savings of 15% and a 10% reduction in water and fertiliser use! 'The proven added value of Crop Controller is now so high that its further scale-up is something we want and can achieve', explained Ronald. 'The financial boost we received from Horticoop and Navus Ventures has helped us to accelerate our commercial growth, which also means we can expand our sales and marketing departments. And that's vital because growers across the world would benefit from our product!'



### The beginning of Crop Controller

Although artificial intelligence is currently really taking off and is on many people's radar, this wasn't yet the case some seven years ago. Ronald explains: 'At that time, most people still worked using Excel and data wasn't so important. However, that wasn't the case for me! At that time I was working at AgroEnergy with various current Blue Radix colleagues, where we developed algorithms for daily energy management. The wealth of opportunities and just how essential it is to use new technology to control greenhouse processes was already clear to us then. When we talked with greenhouse horticulture company growers and owners, we noticed that they were becoming concerned about the scarcity of good growers.' Ronald and his colleagues decided to focus on the entire cultivation process with AI, established Blue Radix together and developed Crop Controller.

'The proven added value of Crop Controller is high. We can and want to scale up further now.'



### The need for AI

You can't avoid data, algorithms and artificial intelligence these days, which means there's a big market for Crop Controller. Ronald: 'Today

we see the convergence of two aspects. First, growers and the greenhouse industry as a whole increasingly understand the power of AI and data-driven solutions. Our system was also developed over the years so that it can control, optimise and add value to all those greenhouses across the world. We're currently a global leader in autonomous control of greenhouse processes. For 2025, we're focusing on achieving growth in specific regions, although there's also a lot of potential for growth in the Netherlands. Our country is really lagging behind in adapting to these kinds of autonomous control processes. And that's a shame, because Dutch growers are really good, but they could be even better if they had the tools to obtain those extra kilos from the greenhouse. AI helps them fine-tune all of this.'

### Progressing together

Blue Radix cannot and doesn't want to accelerate its commercial growth alone. Ronald explains: 'We're working in close cooperation with other companies in the greenhouse, such as suppliers of climate computers, mat scales and irrigation sensors for vegetable cultivation. It's extremely important for us that we cooperate not only with partners but also with growers. And particularly with Dutch growers so we also can further roll out autonomous cultivation in the Netherlands. We offer a solution to solve the structural problems of grower scarcity, but we can't do it alone. We really need horticulturists because cooperation is essential!'





# Top 10 green smash hits!

**Do you need inspiration for a new playlist for your home or greenhouses? Horticoop to the rescue! From classics to a medieval folk ballad, this versatile horti-hits Top 10 is full of musical surprises!**

**Top 10**

1. Westland – D!K
2. Green Green Grass of Home – Tom Jones
3. Homegrown Tomatoes – John Denver
4. Tulpen uit Amsterdam – Herman Emmink
5. Can I Call You Rose? – Three Sacred Souls
6. Blue Orchid – The White Stripes
7. Zeven Anjers Zeven Rozen – Willy Sommers
8. Scarborough Fair / Canticle – Simon & Garfunkel
9. Vegetables - The Beach Boys
10. Cucumber water – Biskwiq



# Find the 10 differences



Radish grower Jaco de Zeeuw in 's Gravenzande



Solution of BLAD issue 4



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