



Sustainability at  
Dümmen Orange

# Growing together

3 things you need to know about  
sustainability at Dümmen Orange

**Celebrating Fairtrade  
certification at African farms**

**Transforming tulip and  
hyacinth cultivation through R&D**

**Ensuring sustainable power in  
Embu, Kenya with HydroBox**

**Promoting sustainable practices  
through training and auditing**



Dear reader,

Sustainability conversations such as the ones within the pages of this publication are crucial to creating a collective impact.

They highlight our commitment to our people, communities, and the environment. This commitment, in line with our sustainability ambitions and goals, is a core focus of our company strategy.

**Let's Grow Together** as we work towards upholding ethical standards in the floral industry.

By innovating and leading the way in sustainability, we strive for a more resilient future — **a goal we can only achieve with your support.**

We understand that sustainability is a collective effort. By collaborating with industry partners, stakeholders, and local communities, we aim to drive positive change, share best practices, **and build a more sustainable future together.**

# 3 Things you need to know about sustainability at Dümmer Orange

Sustainability is woven into the fabric of who we are and what we do — from our research labs to our propagation facilities and beyond, we're dedicated to making a difference, one flower at a time. Here are three insights into our commitment to sustainability:

1



Rooted in research excellence

## Rooted in research excellence

Our journey towards sustainability begins at our Breeding Technology Centre in the Netherlands, where a dedicated team of scientists and breeders push the boundaries of innovation. By focusing on traits like disease resistance, growth habits, and resource efficiency, we develop stronger, healthier plants that minimize environmental impact.

2



Embedding sustainable practices into our operations

## Embedding sustainable practices into our operations

Through forward-thinking practices and cutting-edge technology, we seek ways to minimize waste, conserve resources, and reduce our ecological footprint. For instance, we set up mother stock plants and propagate starting material in strategic locations around the world to ensure shorter travel times to markets, and therefore, reduced carbon emissions.

3



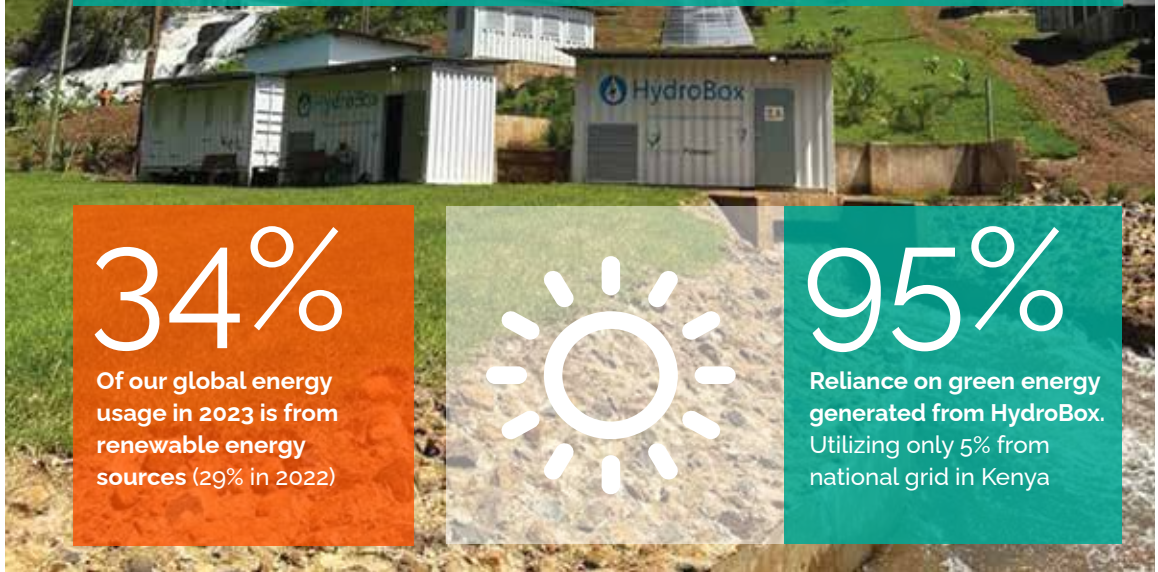
Mission-driven sustainability

## Mission-driven sustainability

Our mission is clear: to inspire people and contribute to a better, more beautiful world. We seek to create value for our customers, partners, and the planet through sustainable products and practices. Our core company values — **committed, focused, passionate, and responsible** — direct our sustainability efforts. Whether ensuring our customers' success or safeguarding our communities' well-being, these values are at the heart of everything we do.

# Ensuring sustainable power in Kenya with HydroBox

With HydroBox, water is harnessed from a nearby river, utilizing its natural flow. Water is directed through a pipeline fitted with solar panels, powering the system. Inside the HydroBox container, high-efficiency turbines generate electricity. Once the turbines have done their job, the water is released back into the river, causing minimal environmental disruption. This streamlined approach simplifies impact assessments, requiring only permission to install the system along riverbanks. **It's a smart, eco-friendly way to generate power.**



34%

Of our global energy usage in 2023 is from renewable energy sources (29% in 2022)



95%

Reliance on green energy generated from HydroBox. Utilizing only 5% from national grid in Kenya



**Diana Onchiri,**  
Compliance & Quality Assurance Manager  
Embu, Kenya

"The HydroBox project ensures the livelihoods of around 600 people who live on-site and around 1000 outside, comprising employees and their families. The impact is widespread — both on the environment and our communities."

Our **HydroBox Project** marks a real step towards sustainable energy solutions at our propagation farm in Embu. Motivated by grid reliability challenges and environmental concerns, we embraced an innovative collaboration with Belgian company **HydroBox** and their partner Yetu Smart Grids. Combining hydro, solar power, and battery backup, the project addresses energy needs and furthers our commitment to environmental stewardship and community welfare.

## Ensure we could have more reliable and sustainable power

"We faced significant challenges with the electricity grid," says **Jan Molenaar, Managing Director of our propagation farm in Embu.** "About 20 to 30% of our power supply came from fossil fuels and generators. And because some of our operations are critical in terms of power supply, we even had two backup generators for our two backup generators. So we started looking for an energy project to ensure we could have more reliable and sustainable power. That's when we came across **HydroBox** — an integrated sort of hydro box or hydro dam power that is hybrid, combining hydro, solar, and battery backup. This means if there's less energy from one source — for example, rain is pretty seasonal here in Embu — we still have power coming in from another source."

## A surge in employee satisfaction

"Harnessing natural resources reduces reliance on fossil fuels, lowers carbon emissions, and provides financial predictability, while reliable power enhances work-life balance and community amenities, boosting employee satisfaction," states **Diana Onchiri, Compliance & Quality Assurance Manager** at Embu. "Our project's careful preparation and upgraded electrical infrastructure have alleviated power strain during peak hours, enhancing reliability for activities like cooking," continues Diana. "Therefore, we noticed a surge in employee satisfaction due to improved work-life balance from stable and continuous power. Employees are also returning to our on-site housing, which boosts morale."

"We are proud to say our farm will soon be 95% reliant on green energy generated from the HydroBox. Utilizing only 5% from the national grid is a really low carbon footprint and is very impressive. The project lays the groundwork for similar potential initiatives at our Uganda, Ethiopia, and Tanzania farms."



**Jan Molenaar,**  
Managing Director  
Embu, Kenya

Three of Dümme Orange's African farms – Tanzania, Kenya, and Ethiopia – are now Fairtrade certified, with 97% of our crops within the Annuals, Perennials, and Pot Plants (APP) group offered as fully certified.

**Ensuring workers receive fair wages and work in safe conditions**

Fairtrade, a universally-recognized certification, means adhering to rigorous standards of ethical and sustainable production.

Fairtrade certification ensures that workers receive fair wages, work in safe conditions, and have access to opportunities for social and economic development.



"It's about making a positive impact. We're not just growing plants; we're cultivating a better future for our workers, communities, and the planet."

Damas Gulyatongoka,  
Quality Assurance Manager

**A shift towards sustainability and ethical operations**

**Damas Gulyatongoka, Quality Assurance Manager at our farm in Tanzania, explains:**

"Obtaining Fairtrade certification here in Tanzania was not without its challenges. We had to make changes in our practices, focusing on improving our approach to sustainable resource management, adopting strict controls on the use of chemicals, and undertaking employee welfare initiatives. It was a shift towards sustainability and ethical operations, essential for the well-being of our environment and community."

**A commitment to social and environmental responsibility**

Damas recounts the transformation journey, highlighting an example of one of the many changes made to ensure the farm's commitment to social and environmental responsibility. "For example, we shifted from using hard chemicals to more sustainable alternatives," he shared. "We embraced the process wholeheartedly, and as a result of our determination, we got there."

**Fair labor standards and environmental practices**

**Benjamin Goepferich, Regional Director Production Africa**, also reflects on the impact of the Fairtrade certification: "As you can imagine, this certification marks a significant milestone for our business unit. With three of our farms in Africa now Fairtrade-certified and 97% of our crops there within the Annuals, Perennials, and Pot Plants group offered as Fairtrade certified, we ensure fair labor standards and environmental practices. Another positive effect of this is that it opens doors to larger markets and opportunities for our products."

"Fairtrade certification is not just about labels," concludes Damas, "it's about making a positive impact. We're not just growing plants; we're cultivating a better future for our workers, communities, and the planet."



Celebrating Fairtrade certification at African farms



97%  
Of our APP crops in Africa are offered as Fairtrade certified

Tanzania

Our commitment to the Floriculture Sustainability Initiative



"Dümme Orange is committed to sustainability and has worked with FSI on sustainability projects since 2015," says **Jeroen Oudheusden, Executive Officer of FSI**. "The company's goal is to obtain FSI certification for all their production sites worldwide using MPS (*Milieu Programma Sierteelt*) certifications in line with the FSI Basket of Standards by January 1, 2025.

They aim to promote sustainable practices in the industry, so that customers always make a great choice when buying flowers and plants. Collaborative partnerships like ours represent a promising path forward for the industry and ensure flowers and plants are produced sustainably without causing harm to people or nature."

Our global phytosanitary team, **the Greencare team**, places people at the core of our training and audit methodologies, ensuring operational excellence through continuous improvement.

## Promoting sustainable practices through training and auditing

**"The training and auditing advancements we've made are strongly aligned with our sustainability goals, especially in crop protection,"** says **Manuela van Leeuwen, Phytosanitary Manager**. "Empowering people with knowledge of biological alternatives and sustainable practices promotes a healthier ecosystem and ensures long-term operational viability."

### Providing participants with an understanding of preventive measures

"Through our webinar series, we transfer invaluable knowledge on a global scale," affirms **Manuela**. Webinars explore areas such as hygiene and crop protection, providing participants with an understanding of preventive measures and pest control strategies. "We ensure employees are well-versed in all aspects of crop protection — including biological options — while prioritizing their safety and well-being," she adds.

### What is Integrated Pest Management?

IPM is the integration of environmental, biological, and chemical practices to control insects. IPM always starts with prevention and environmental measures, such as weeding or installing insect screens. Our employees scout the greenhouses to monitor pests and disease. Should the levels be high, **we implement extra measures for using biological organisms**. These are natural predators that combat pests. Only if levels remain high can we use selective pesticides, which include safe chemicals and don't have an adverse effect on the environment.

**We prioritize IPM, aiming to ensure that 80% of our production area worldwide implements IPM by 2030.**

Despite challenges in some regions, we remain dedicated to delivering pest- and disease-free cuttings without harming our ecosystem.



Percentage of our global propagation under IPM



### Excelling in our work while advancing towards a more sustainable environment

After completing the IPM webinar series, participants apply knowledge through practical assignments as part of a stringent exam. Moreover, the three-day face-to-face audit training covers auditing practices, including theory exams, field audits, and risk analysis with tools like FMEA, enabling effective risk mitigation.

"We've also integrated the Six Sigma framework into our training to ensure employees gain additional tools for conducting thorough analyses and making informed decisions," furthers Manuela.

Additionally, language adaptations ensure comfortable training and audit experiences, while educational tools such as Kahoot and additional support address diverse learning needs. "We are strongly committed to knowledge and ensuring each individual has what they need to excel in their work and work towards a more sustainable environment," concludes Manuela.

1.4%

Global safety incident rate for 2023 (2.3% in 2022)



# Cultivating a culture of Health and Safety at Dümme Orange Uganda

0,2%

Injury rate Uganda for 2023



At Dümme Orange, Uganda — a farm of 20 hectares and around 800 employees producing Chrysanthemum cuttings — the commitment to Health and Safety is more than a project. It's ingrained in the farm's core values and is fueled by a community of passionate Health and Safety employees.

### Everyone needs to be on board to make an impact

**Barbara Najjuma, Health and Safety Manager in Uganda and representative for Health and Safety in the African region,** explains: "Health and Safety is so important in any business. These are not checkboxes — they're vital to sustainability and organizational success. And we know everyone needs to be on board to make an impact."

Barbara has been instrumental in driving Health and Safety forward within Africa: "We have kickstarted quarterly meetings, where representatives from different countries come together to share best practices and address challenges. From conducting risk assessments to emphasizing training and procedural adherence, the team is committed to reducing incident rates and fostering a culture of safety," continues Barbara.

### We are strongly focused on achieving zero incidents

Consistent efforts in Uganda specifically — of which employee training also forms a part — have yielded tangible results, with a notable decrease in injury rates and a commitment to continuous improvement. "Our injury rate for 2023 in Uganda was 0.2," states Barbara. "The journey is ongoing, and we are strongly focused on achieving zero incidents."

"Viewing our efforts in light of the bigger sustainability picture is important," says Barbara. "Health and Safety is strongly interwoven with ESG — environmental stewardship, social responsibility, and governance. Proactive measures to minimize environmental impact and ensure employee well-being are fundamental. If we don't care for the health and wellbeing of our employees and the community, what would the future look like for us all?" she questions.

"From conducting risk assessments to emphasizing training and procedural adherence, the team is committed to reducing incident rates and fostering a culture of safety."

**Barbara Najjuma,**  
Health and Safety Manager  
Uganda

Leading the change alongside Barbara is **Yaeger Adlam, Managing Director in Uganda and a member of the Global ESG Team.** Yaeger emphasizes the significance of establishing standardized protocols and fostering a culture of safety across all locations. "Our goal is to enhance safety practices in all locations, leveraging insights from different regions to drive continuous improvement."

### ESG isn't just a duty, but a garden of hope that inspires generations to come

"In nurturing our environment and our societies, and ensuring the safety of all, every sustainable choice we make blooms into a future where our Earth flourishes, communities thrive, and people are safeguarded. Let us continue cultivating a world where our commitment to ESG isn't just a duty, but a garden of hope that inspires generations to come," concludes Yaeger.



## Your questions about our DEI policy answered

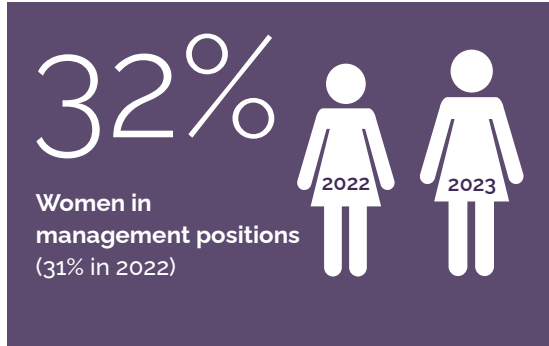
**Ellen Mackenbach-Lakeman**, a member of our Executive Committee and Global ESG Lead, gives us insights into the importance of Diversity, Equality, and Inclusion (DEI) at Dümmen Orange.

### Why is Diversity, Equality & Inclusion (DEI) important to us?

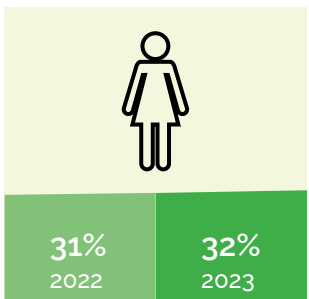
We value our diversity, understanding it as our strength. It's even a company saying — 'We're not just in the flower business; we're in the people business.' Each person's experiences, perspectives, and talents enrich our culture and drive success. Our commitment to diversity, equality, and inclusion is both moral and smart business practice. Fostering a supportive, inclusive culture attracts top talent and sparks innovation and creativity, propelling our company forward. These principles guide us in creating a workplace where everyone feels respected, valued, and empowered to contribute.

### Why do we need a DEI policy?

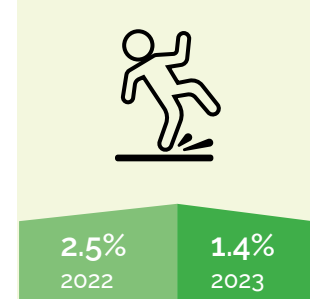
A DEI policy is crucial. Aligned with our value of Responsibility, we ensure global equality and opportunities for all employees. As an innovative breeder, diversity fosters creative thinking. Our commitment to employees drives DEI policy implementation. A diverse, inclusive workplace enhances engagement and company results, fostering a better workplace environment.



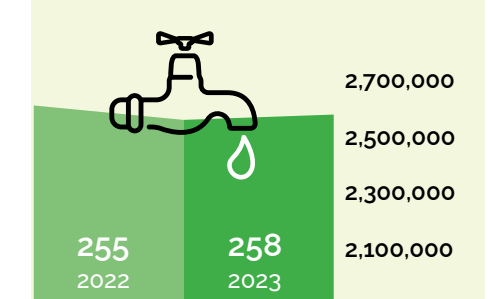
## Monitoring our performance indicates progress and areas of attention



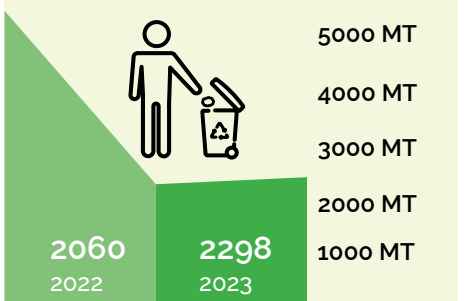
**Women in management**  
32% women in management positions — This has fluctuated over the years.



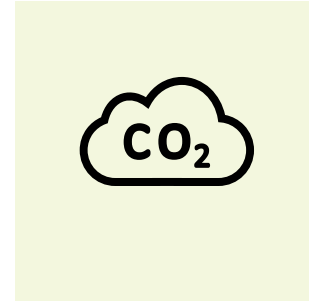
**Safety incident rate**  
This has decreased compared to previous years; it is currently at 1.4% and is moving towards our <1% goal.



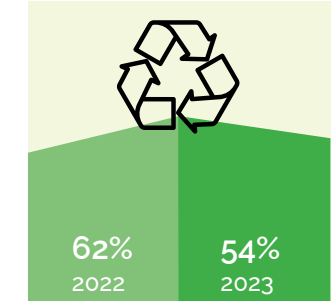
**Water usage M<sup>3</sup>**  
Our water usage has remained relatively stable over the last years.



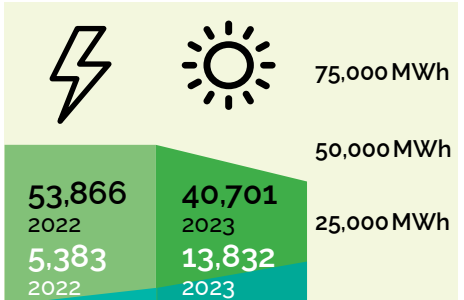
**Waste production (MT)**  
We experienced a peak in 2021 due to COVID-related plant uprooting (over 50% of waste was recycled during this peak).



**Emissions**  
We've made progress and have installed a 'Footprint calculator' in propagation locations in Africa and Central America in 2023 for data validation and reporting.



**Recycled waste**  
Over 50% of our waste is being recycled.



**Electricity usage (MWh)**  
We've seen a decline in our electricity usage in recent years.

**Renewable energy**  
This has significantly increased by 34% in the recent years.

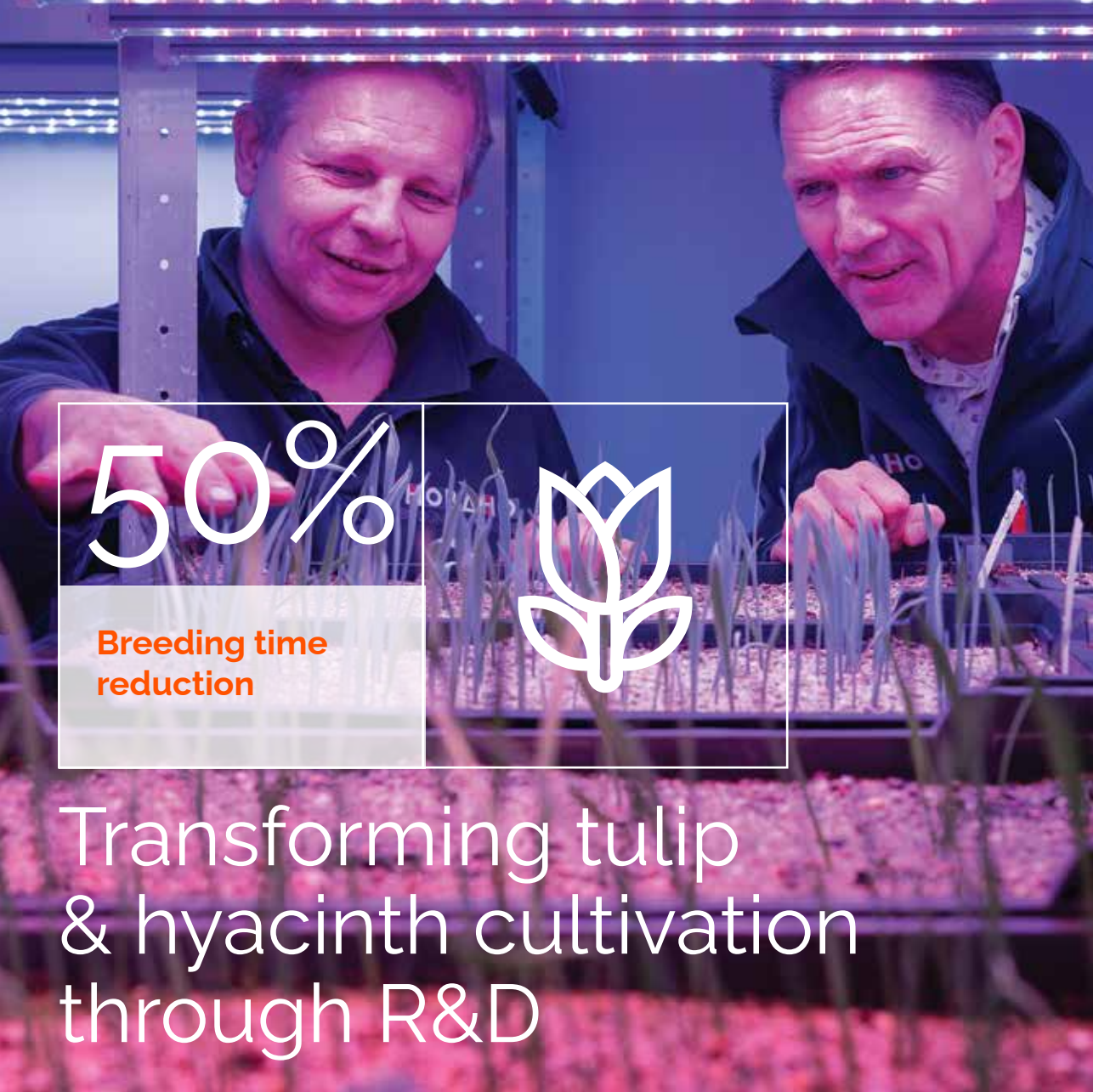
### Ensuring compliance and measurement

Our reporting adheres to global, industry, governmental, and stakeholder regulations, ensuring transparency and accountability. We follow EU regulations such as:

- > Corporate Sustainability Reporting Directive
- > Sustainable Finance Disclosure Regulation
- > Pay Transparency Regulation

We also acknowledge the Pay Transparency Regulation to close the gender pay gap. Furthermore, as a former board member of the IRBC, we contributed to sustainable production and trade in ornamental plants.





50%



Breeding time reduction

# Transforming tulip & hyacinth cultivation through R&D

In the Netherlands, famous for its tulip fields, our subsidiary **Hobaho** leads in tulip and hyacinth R&D. With over a century of expertise in flower bulb mediation, auctioning and breeding, Hobaho aims to transform traditional practices while prioritizing sustainability.

### Tissue culture promotes biodiversity and supports minimized chemical usage

**Theo Aanhane, General Director of Hobaho, explains:** "Our goal is to exceed industry standards, ensuring our practices are efficient and environmentally conscious." The advancement of tissue culture techniques for tulips and hyacinths is central to these endeavors. **Arjan van der Lans, Team Lead at our Testing Center at Hobaho, explains:** "Tissue culture offers potential for speeding up the breeding process and enhancing sustainability. We can rapidly multiply bulb numbers and introduce new and more robust varieties in a shorter timeframe. Moreover, it promotes biodiversity and supports minimized chemical usage."

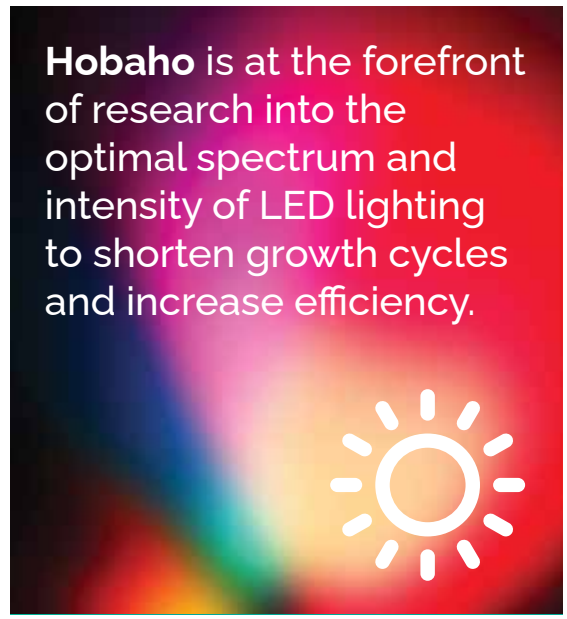
### A significant milestone in sustainable cultivation practices

"Traditionally, tulip breeding has been a lengthy process," furthers Aanhane, "taking up to 25 years to introduce a new variety on a small scale. With the integration of tissue culture methods, we aim to halve this."

A key aspect of this optimization is using LED lighting to promote growth and energy storage in bulbs. Hobaho is at the forefront of research into the optimal spectrum and intensity of LED lighting to shorten growth cycles and increase efficiency. Advancements in LED technology enable achieving three growth cycles in two years — as opposed to one per year — under controlled conditions, marking a significant milestone in sustainable cultivation practices.

### We ensure the benefits of our efforts are available to all

"We recognize the importance of knowledge-sharing," adds Aanhane, "By democratizing our findings, we ensure the benefits of our efforts are available to all." Van der Lans concludes, "We aim to lead the industry towards a more sustainable future. If we persist in a traditional approach, there may be no beautiful fields our children deserve to enjoy."



Hobaho is at the forefront of research into the optimal spectrum and intensity of LED lighting to shorten growth cycles and increase efficiency.



Theo Aanhane  
General Director  
Hobaho

"Our goal is to exceed industry standards, ensuring our practices are efficient and environmentally conscious."

# PC2X1 Initiative boosts computer literacy skills in El Jocotillo, Guatemala

Dümmen Orange's Oro Farm in El Jocotillo, Guatemala, serves as a hub for a noteworthy social endeavor impacting the local community of El Jocotillo. **Amalia López Montiel, biologist and Laboratory Chief**, is leading this initiative.

## PC2X1 is a computer literacy program designed to equip individuals with fundamental computer literacy skills

Driven by a passion for volunteering since childhood, Amalia helped make the project and computer program PC2X1 a reality at the farm in 2021. The program was first introduced to Amalia by Susy Zamora, Manager of the Educar para No Migrar (Educate to Avoid Migration) NGO, who was looking for companies that believed in it so it could be introduced there.

At its core, PC2X1 is a computer literacy program designed to equip individuals with fundamental computer literacy skills, including Microsoft Excel. What sets it apart is its integrated approach, which meets different skill levels and addresses the needs of adults and children in the community.

## Family members can join the program at no cost

Our company now fully covers the cost for employees to attend the training, and as an added incentive, two of their children or family members can join the program at no cost. Moreover, children from the local public schools are also participating and during the last two semesters, half of the available spots for kids have been given to children from one of the local schools and the other half to our farm workers' children. So, the program has a much wider reach beyond our farm's employees and their families.



Despite the logistical challenges faced when starting the project, Amalia embraced the opportunity to make a difference and bolster the skillset of fellow employees. Since then, the program has flourished, providing basic, intermediate, and advanced Excel training to employees and their children. The success stories within the program are symbolic of its impact, with participants like Ana Divas, Laboratory Assistant and colleague of Amalia, once hesitant to get started with a computer, now thriving in her role and using her new set of skills daily, also to the benefit of her colleagues.

Moreover, the success of the training is evident in the feedback given by participants and our company's donation of seven computers to the NGO for future training.

## We empower our people and foster sustainable growth within the community

Beyond individual achievements, this program symbolizes Dümmen Orange's commitment to community development and social responsibility. By investing in education and skills training, we empower our people and foster sustainable growth within the community.



**Amalia López Montiel,**  
Biologist and Laboratory Chief  
El Jocotillo, Guatemala

"As the saying goes, Be the change you want to see in the world," says Amalia. "Through programs like PC2X1, we're not just making a difference; we're inspiring a movement toward positive change and skills development in El Jocotillo."



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