Growing together

Sustainability at Dümmen Orange



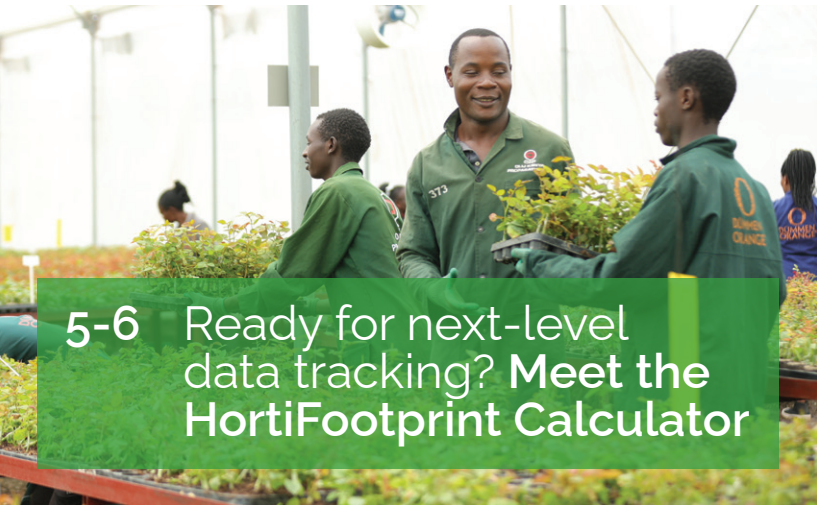






DÜMMEN ORANGE®







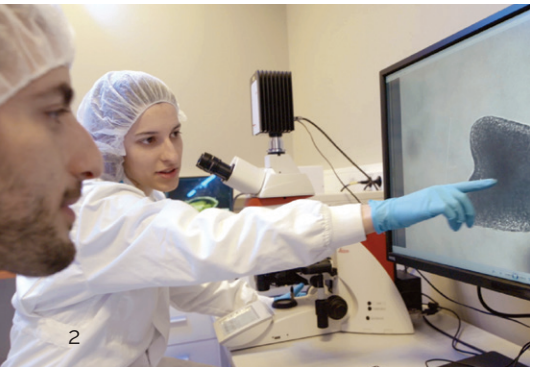














Making the world a better, more beautiful place

Dümmen Orange is a global leader in flower and plant breeding and propagation, with roots dating back to 1909.
Headquartered in De Lier, the Netherlands, we deliver a portfolio of 4,000+ patented crops and varieties to growers, wholesalers, and retailers worldwide. With over 20 breeding and production locations across Europe, Africa, and the Americas, our facilities produce two billion cuttings annually, supported by a robust supply chain.

What we value

At Dümmen Orange, sustainability and innovation drive us.
Our Breeding Technology Centre, the largest horticultural breeding lab in the world, leverages advanced tools and datasets to create disease-resistant genetics under the Intrinsa® label, reducing chemical use and promoting eco-friendly practices. Guided by our purpose of making the world a better and more beautiful place, **we focus on ensuring a healthy planet for future generations.** We prioritize environmental responsibility, social commitment, and technological advancement, supported by certifications like MPS.

Our portfolio includes renowned cut flowers, vibrant annuals, versatile perennials, iconic pot plants, and callas, **offering the largest selection of ornamental crop genetics in the world.**

With 5,300 employees worldwide, we foster talent, teamwork, and transparency through development programs like the Dümmen Orange Academy.

Our passion for sustainability and innovation drives our mission to inspire, transform, and cultivate a more beautiful, sustainable world.

Our goal
Cut our carbon footprint by 50% by 2030

50%

CO_2

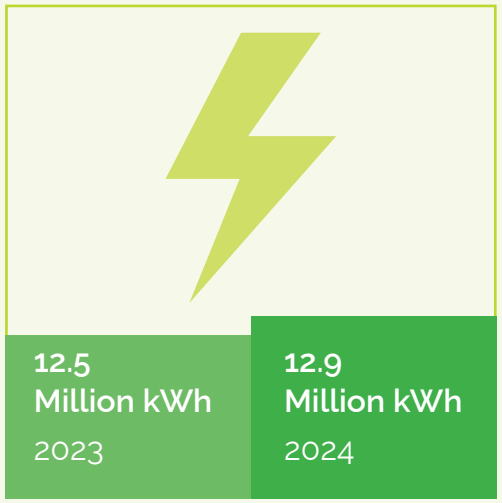
Reducing our carbon footprint

What we've done in 2024 to reduce our footprint

In 2024, the share of renewable energy in our electricity consumption increased, both in the electricity we use and the electricity we generate ourselves. Additionally, in collaboration with MPS, we have focused on optimizing the collection and analysis of data to better assess the environmental impact of our activities. The HortiFootprint Calculator (see overleaf) now measures 16 impact categories, providing valuable insights for sustainable improvements.

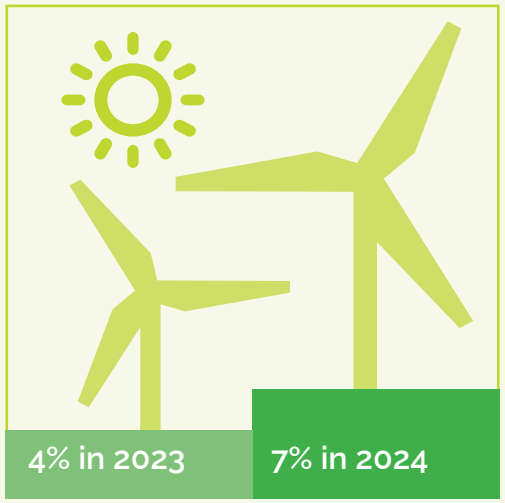
We are committed to sourcing more energy from renewable sources

Renewable electricity **consumption**



Renewable electricity consumption increased from 12.5 million kWh in 2023 to 12.9 million kWh in 2024.

Renewable electricity **production**



Renewable electricity production increased from 4% in 2023 to 7% in 2024.

Improved data tracking with the **HortiFootprint Calculator**

To optimize the collection and analysis of environmental data, we installed the MPS HortiFootprint Calculator on our production farms. Arthij van der Veer, Area Manager at MPS, explains.

"At MPS, we believe data drives sustainability in floriculture. As we celebrate our 30th anniversary in 2025, we've grown from a small initiative in the Netherlands into a global movement, operating in over 60 countries and partnering with nearly 3,500 growers.
Our certifications—including MPS-ABC for environmental performance, MPS-GAP for best practices, and MPS-SQ for ethical standards—set benchmarks that help growers meet sustainability demands, stay competitive, and adopt better practices."


Arthij van der Veer, MPS

"Sustainability is like climbing a mountain — taking one step at a time together to reach the summit. This is how we can create a sustainable future for floriculture."

A clear dashboard to simplify data interpretation

A key tool is our HortiFootprint Calculator, developed with LetsGrow.com in 2022. This tool offers detailed Life Cycle Analysis (LCA) insights tailored for horticulture, covering the full production cycle — from raw materials to the final product. It measures 16 impact categories, such as climate change, water use, and carbon emissions, and helps growers analyze energy use, fertilizers, and packaging to optimize operations. Paired with tools like PowerBI, it provides a clear dashboard to simplify data interpretation, reduce footprints, and take strategic action.

Tools like this are essential, especially with stricter environmental regulations and a growing demand for sustainable practices. Since its launch, the HortiFootprint Calculator has evolved to fully align with FloriPEFCR standards, enabling growers to measure, improve, and report performance across all impact categories. >>

The HortiFootprint tool offers detailed **Life Cycle Analysis** insights tailored for horticulture, covering the full production cycle



"Dümmen Orange shows how tools like the Calculator can transform sustainability. By 2023, they measured 100% of their production area, optimized transport, reduced fertilizer use, and adopted Integrated Pest Management (IPM) practices to lower environmental impacts. This demonstrates the power of data to drive meaningful improvements, and they have demonstrated remarkable resilience and dedication to the process. Their efforts — and those of countless employees across the floriculture industry — deserve recognition.

Create a sustainable future for floriculture

The industry continually pushes forward, and while the journey isn't always easy, the commitment of everyone involved is necessary and inspiring. As I often say, 'sustainability is like climbing a mountain' — taking one step at a time together to reach the summit. This is how we can create a sustainable future for floriculture."

Arthij van der Veer, Area Manager, **MPS**

HortiFootprint Calculator

What is the impact of using the HortiFootprint Calculator?

> Producers gain transparency to meet EU standards and optimize processes.
> Consumers can make eco-conscious choices with product specific data.
> Communities can benefit from social upliftment and outreach initiatives.

Dümmen Orange's partnership with MPS

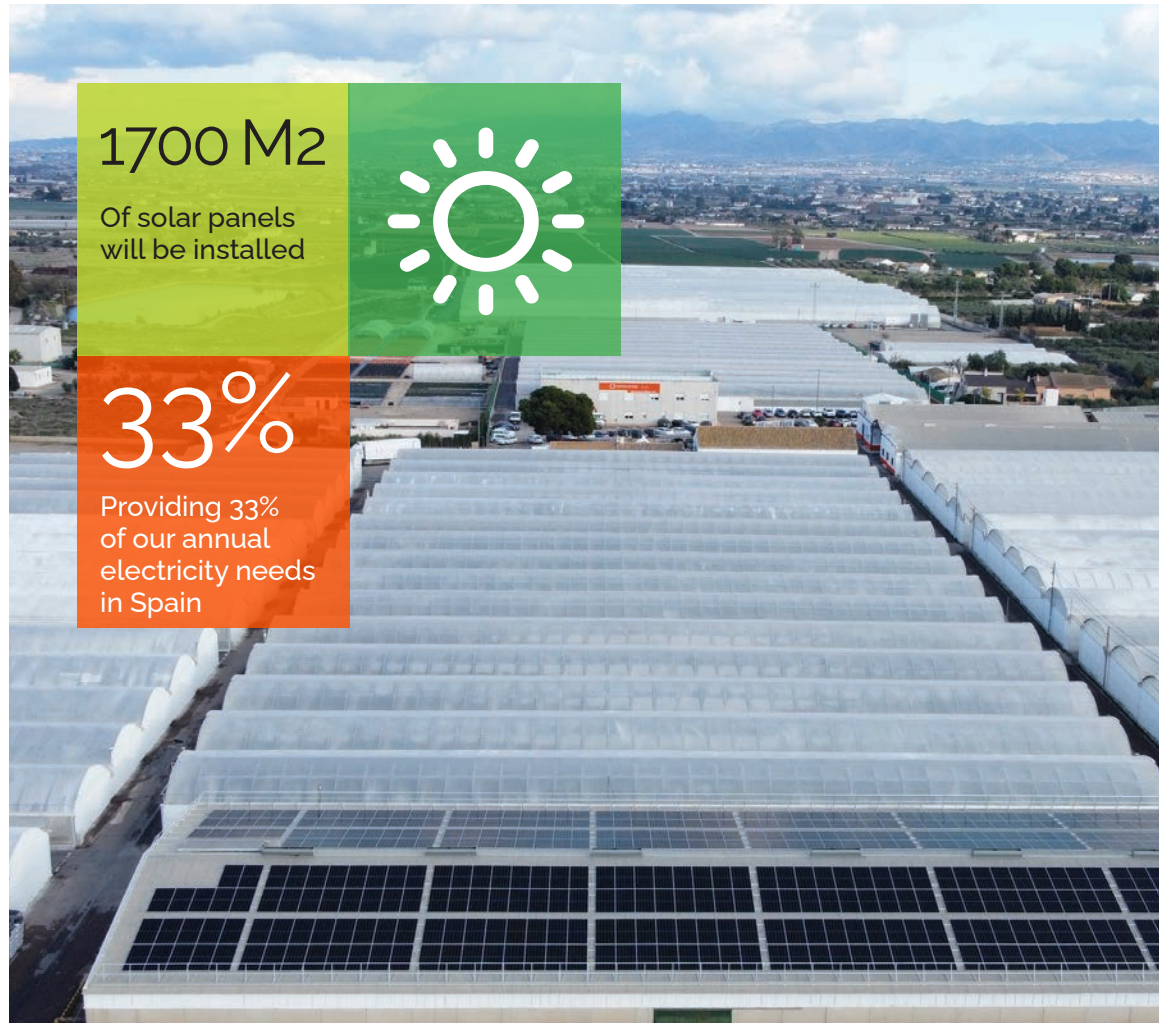
> We worked with MPS to measure 100% of our production area using the HortiFootprint Calculator.
> This knowledge will help us ensure more efficient transportation, reduce fertilizer use, and implement IPM practices to reduce environmental impact.

From sunlight to savings in Spain

In December 2024, we began installing solar panels at our Puerto Lumbreras farm in Spain, harnessing clean energy to power our operations. 1,700 m^2 of solar panels are being installed and will be fully operational in January 2025. This installation will significantly lower our energy costs and carbon footprint.

> The 646 modules, delivering 335 kWp, will meet 33% of our farm's annual electricity needs, generating 473,610 kWh annually.

The panels also offer a bonus: shielding the buildings from direct sunlight, helping keep them cooler during the hot Spanish summers. With peak energy production aligning perfectly with our highest consumption periods, this initiative is a win-win for sustainability and the farm's efficiency.





Our goal
80% of our production area GreenGuard-labeled by 2030

80%

Reducing chemical crop protection

The power of Integrated Pest Management

At Dümmen Orange, we follow Integrated Pest Management (IPM), which combines environmental, biological, and chemical methods to control insects and prevent pests and diseases. **IPM starts with prevention and environmental measures,** like maintaining strict hygiene and using methods such as weeding or installing insect screens.

Our trained employees regularly scout the greenhouses to monitor pests and diseases. If levels are high, we take extra steps by using natural predators to combat pests. If pest levels stay high or corrective biological products aren't available, we may use selective pesticides, safe chemicals that don't harm the environment.

The GreenGuard label

The GreenGuard label is awarded to production facilities that fully implement the IPM system. **By 2030, we aim to label at least 80% of our production area as GreenGuard certified.** The efforts required to maintain pest- and disease-free production vary by region. While some regions present challenges, we remain committed to delivering pest- and disease-free cuttings while safeguarding our ecosystem.

GreenGuard and IPM coverage

The percentage of our production areas under GreenGuard remained steady in 2023 and 2024, with no change in the labeled area. While we've made significant progress with implementing IPM practices, including using self-produced predatory mites and reducing chemical use, we are focused on expanding the GreenGuard-labeled areas.



Europe
In the Netherlands, our R&D sites in Aalsmeer, De Kwakel, De Lier, and the Elite facility in Rheinberg, Germany, follow IPM principles. Spain and Italy have implemented IPM practices and are working towards GreenGuard certification.

Central America
IPM practices cover 20-30% of the production area in this region, and we are working towards having our farms GreenGuard-certified.

Africa
Almost 80% of our regional farmland is GreenGuard labeled.

Note: We have no breeding or production operations in the Asia-Pacific region. Similarly, this overview does not include North and South America due to our limited breeding and production activities there.



Taking biological crop protection to greater heights

Together with Koppert, our preferred partner in sustainable floriculture, we're advancing biological crop protection at our production sites worldwide. Koppert provides natural solutions, such as predatory mites, parasitic wasps, and nematodes, helping us reduce our reliance on chemical crop protection.

Previously, we relied on shipping these beneficial organisms from the Netherlands. This meant transport times of multiple days, affecting their quality. Under the renewed partnership, Koppert now supplies only elite material propagated locally at our production sites. >>



"Local production of beneficial organisms also reduces the number of air shipments. As a result, crop protection becomes more effective and sustainable, with a lower carbon footprint."

Manuela van Leeuwen,
Phytosanitary Manager

>>

"Locally produced, high-quality beneficial organisms enable us to control pests more effectively and help us minimize chemical use," says Manuela van Leeuwen, our Phytosanitary Manager.

Peter Couwels, Director of Operations at Koppert, states: "By further deepening our partnership, we are confident we can assist Dümmen Orange in ensuring top-quality products and making sustainable crop protection more accessible and efficient for their worldwide operations."

This collaboration demonstrates our commitment to sustainable solutions in the floriculture industry. Working together across the value chain shows that innovation and sustainability go hand in hand.

Koppert: a global leader in biological crop protection and pollination

Partnering with nature, Koppert helps growers support, protect, and strengthen their crops with an integrated system of natural solutions, using natural enemies to combat pests, bumblebees for pollination, and microbes to support, protect, and strengthen crops.



"We are confident we can assist Dümmen Orange in ensuring top-quality products and making sustainable crop protection more accessible and efficient for their worldwide operations."

Peter Couwels, Koppert

Improving plant health both above and below ground.

Growers and farmers in more than 100 countries use Koppert's products and knowledge to restore the natural balance in their crops. Improving crop health, resilience, and yield. Founded over 50 years ago, Koppert is committed to making agriculture healthier, safer, and more productive. Their vision is clear: the world needs 100% sustainable agriculture.

Certifying sustainability

We are dedicated to maintaining quality, sustainability, and compliance across our global operations, with certifications highlighting our achievements and guiding continuous improvement.

All our owned production farms, except our facility in Encinitas, California, hold MPS-ABC approval. In Encinitas, we have initiated the process of entering data into the MPS platform and are working towards certification there.
In addition, our farms in Guatemala (ORO), Ethiopia, Germany, Spain, Tanzania, Uganda, and Kenya (Embu) hold MPS-GAP certificates, and our farms in Guatemala (ORO), Ethiopia, Germany, Tanzania, and Uganda are also MPS-SQ certified. Other recognized bodies have certified several of our farms, such as in Kenya (Naivasha: KFC Silver) and Ethiopia (Red Fox: EHPEA Gold & Silver).
Farms in Ethiopia (Red Fox), Germany, Tanzania, and Kenya (Embu) are also Fairtrade certified.
Through our efforts, we aim to address challenges effectively and enhance our reputation while advancing sustainability and operational excellence.

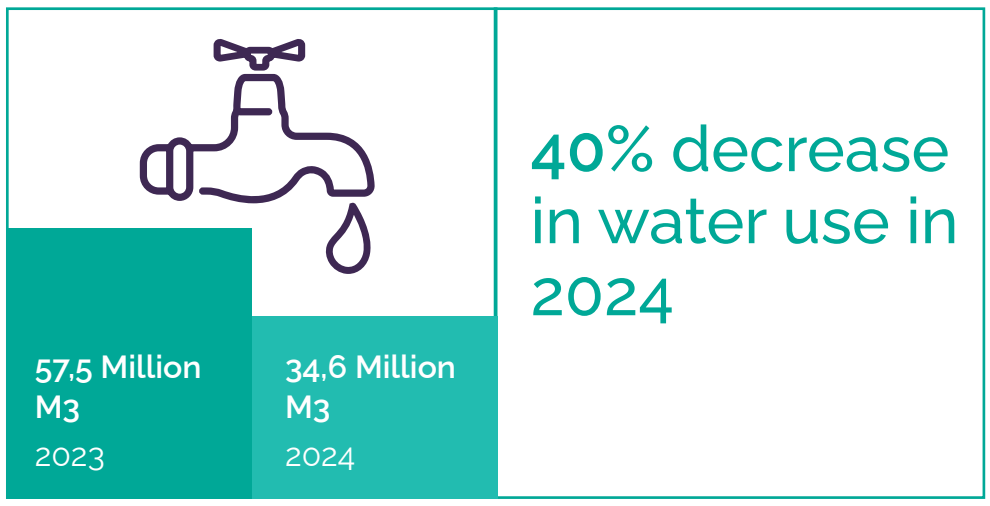


We have obtained various certificates, in line with the FSI basket of standards

- **> MPS-ABC**
- **> MPS-GAP**
- **> MPS-SQ**
- **> KFC**
- **> EHPEA**
- **> Fairtrade**



We are committed to responsible water management and are pleased to report a decrease in our water use in 2024, down to 34.6 million cubic meters from 57.5 million cubic meters in 2023.
This reduction is primarily due to organizational changes, in particular, the divestment of our Tropicals business.
While we acknowledge the challenges climate change poses to water availability, we remain focused on finding innovative ways to conserve this vital resource.
Overall, water use at the farm level remains consistent with 2023 levels.



Our water use decreased from 57,5 m^3 in 2023 to 34,6 m^3 in 2024.

Turning rain into results

Sustainable water use in Ecuador

"At Cayambe, water is essential. We conserve this vital resource through innovation, protecting our operations and the environment. Our farm has constructed a reservoir to harness fresh rainwater and dew, **providing a sustainable and reliable water source for daily operations.** Additionally, we've installed an advanced filtration and purification system that allows us to reuse excess water from our production processes. This system preserves local water sources and soil quality and minimizes our environmental footprint.

When water cannot be reused, we ensure that it is handled responsibly. Certified environmental experts oversee its disposal, adhering to strict environmental standards.

These initiatives embody our commitment to conserving resources, safeguarding the environment, and building a sustainable future. By responsibly managing water — from capturing rain to treating wastewater — we support our communities, guard natural resources, and make choices that benefit future generations today."

Socorro Martinez, General Manager, **Cayambe | Showhouse Rose**



Cleaner water, **greener future**

At our farm in Naivasha, Kenya, we've turned a wastewater challenge into a thriving ecosystem. Since 2018, our constructed wetland system has transformed water management, proving that sustainability and biodiversity can go hand in hand. The result? Water is treated far beyond national standards and is ready for reuse.



From ponds to progress

We began with basic wastewater ponds but knew we could do more to ensure cleaner water. Partnering with local experts in wetland design, we built a sophisticated system that treats water through five key steps:

1. **Sedimentation system** > Removes large particles to prepare water for treatment.
2. **Day cell** > Enables specialist plants to absorb pollutants naturally.
3. **Gravel bed** > For the transformation of impurities and removal of harmful nitrates.
4. **Aeration cell** > Organic matter is broken down with increased oxygen levels.
5. **Deactivation pit** > Uses sand and charcoal to neutralize pesticides and fluoride.

Turning waste into life

Once treated, our water doesn't go to waste — it supports life. After funneling into a fishpond teeming with tilapia, the water irrigates the surrounding trees and landscapes. This system has created a vibrant ecosystem, attracting birds, insects, and fish. It's now a green oasis where our workers can relax and reconnect with nature during breaks.
We're working with partners like Chrysal and Adaptive Green Solutions to test the system and **share it as an example of best practice across the industry,** helping others turn wastewater into a resource using our wetlands as a blueprint for sustainable wastewater management.





Raw material recycling increased from 16% in 2023 to 36% in 2024 - thanks to actions such as certified plastic recycling and composting plant materials.

Accurate tracking and reporting on waste and an increased focus on managing data played an important role in our business operations in 2024. While progress still needs to be made in a number of areas, we saw a very clear increase in the percentage of raw material recycling compared to 2023. This shows we're on the right path.

Recyclable seed trays

At our Spanish production farm in Puerto Lumbreras, **a small but impactful change is reshaping our horticultural practices:** the introduction of Almáciga seed trays. **Antonio Sola**, our Director General, shares the journey of implementing these 100% reusable trays.

"The transition began with the challenge of reducing waste without compromising the quality Dümmen Orange is known for. Traditional polystyrene trays were effective but had significant environmental drawbacks — they couldn't be reused, broke easily, and were difficult to recycle. We realized a better solution was needed. **This led us to embrace a circular economy approach**, partnering with a supplier to develop the durable Almáciga trays.

Built-in ventilation ensures optimal plant conditions

These new trays feature an octagonal shape that reduces stress on plant cuttings, promoting healthy growth. **They are built with ventilation to maintain optimal plant conditions and are designed for long-term use.** When the trays eventually wear out, they are recycled into new ones, ensuring zero waste and a significant reduction in our environmental footprint.

The trays also comply with UNE-EN 13429, a European standard for reusable packaging, which guarantees they are designed for multiple life cycles. This aligns with Spain's Royal Decree 1055/2022, which promotes eco-design and circular economy practices.

Implementing the trays was not without its challenges. It required careful planning, training, and an upfront investment in new materials.
However, the trays' durability means we will need fewer over time—cutting costs and reducing resource consumption. This shift is a valuable investment in the future.

100% reusable trays ensuring **zero** waste

These trays have redefined our approach to materials, waste, and innovation

While the trays are a major step in addressing waste, we're also looking for ways to tackle other challenges, such as recovering trays from customers and finding alternatives to peat-based substrates.

In the end, these trays have redefined our approach to materials, waste, and innovation. **They represent our commitment to balancing quality with environmental responsibility.** At our farm in Spain, we continue to bring beauty to the world sustainably, proving that even small changes can lead to significant environmental progress in our industry."



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Human rights

Our goal
100% compliance with the median living wage benchmark by 2030

100%

Living Wage pilot launch

In 2024, we launched a pilot project on our African farms. We initiated valuable discussions with partners, including the Floriculture Sustainability Initiative (FSI), about the Living Wage concept and the factors it must include in ensuring fair and equitable wages for all our workers.
As a result, we have temporarily paused the pilot to allow these fruitful discussions to continue. We will share more concrete updates as soon as possible.



Sponsoring the **Gift of Love** charity event in Japan

Dümmen Orange Japan proudly supported the Gift of Love charity event by the Ichigo Kototumugi no Mori Association, spreading festive cheer to children in social care.
We donated hundreds of J'adore Poinsettias to decorate the venue and share as gifts. We also donate potted flowers year-round to child welfare facilities, hoping to bring a little brightness to their lives.



Enabling 300 girls to attend school in Kenya

In partnership with the **NGO Binti Mwangaza**, **Keep Her in School** is transforming the lives of 300 girls across five schools. By providing reusable, eco-friendly menstrual products and essential hygiene education, the initiative ensures girls can stay in school, focus on their studies, and embrace brighter futures.

Keep Her in School initiative

"For many girls, attending school isn't as simple as it should be. A lack of access to basic menstrual hygiene products often forces young women to miss classes — or even drop out altogether.
Our company believes education is a right, not a privilege; such barriers should hold back no one.
That's why we're proud to support the Keep Her in School initiative in Embu.

At the heart of this effort is the Binti Kit, a thoughtfully designed package containing reusable cotton pads, underwear, bar soap, and educational materials. Made from 100% biodegradable cotton, each kit lasts up to two years, offering a sustainable and dignified solution to an everyday challenge.

It's about creating opportunities that restore dignity and open doors

The results are evident: with fewer absences and growing confidence, the girls at schools like Yoder Karwigi Primary and Secondary, Rianguu Primary, and Kangeta Primary are benefiting and keep coming to school. This initiative goes beyond hygiene — it's about creating opportunities that restore dignity and open doors. At our farm in Embu, **we're proud to support this initiative that empowers our communities and ensures lasting change."**

Jan Molenaar, Managing Director, **Embu**

Located 150 km north of Nairobi, at the foothills of Mount Kenya, our farm in Embu is a vital part of the rural community. **Access to clean water has been a key challenge** for the local community, particularly impacting schools where many of our colleagues' children attend.

Funding water connections to three schools in Embu

Over 600 students now have reliable access to clean, safe water

We partnered with EWASCO, the local water supplier, to bring municipal water to the area, focusing on the schools. We fully funded water connections for three schools and took on the responsibility of covering the water bills, ensuring that over 600 students now have reliable access to clean, safe water. This initiative allows the students to focus on their education without the concerns of water contamination or shortages.

Scan the QR code to watch the video and learn how we made clean water accessible to more than 600 students.



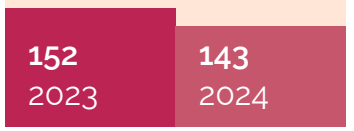
Our goal
Less than 1% **Lost Time Accidents (LTA)** for employees and contractors

<1%

Health and safety

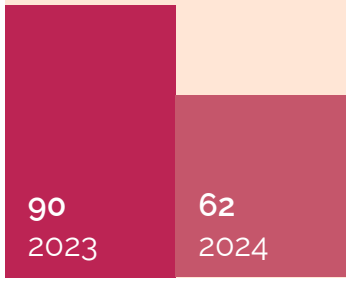
The health and safety of our people has always been our top priority, and this remains so. The number of worker hours monitored for health and safety rose from 9.2 million in 2023 to 10.3 million in 2024, highlighting our commitment to this topic. Additionally, we are proud to report significant global progress, with a reduction in LTAs across nearly all farms.

Reportable incidents



Reportable incidents decreased from 152 in 2023 to 143 in 2024.

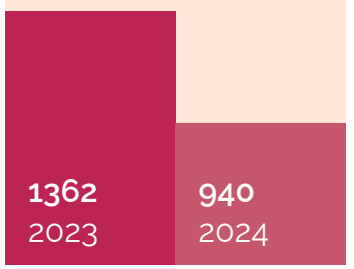
Lost Time Accidents



LTAs dropped from 90 in 2023 to 62 in 2024.

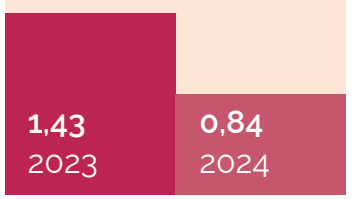
All trends in Health & Safety show a positive development

Days lost to injury



Days lost to injury fell from 1,362 in 2023 to 940 in 2024, saving 422 days

Safety Incident Rate



The Safety Incident Rate decreased from 1.43 in 2023 to 0.84 in 2024.



Many of our farms proudly display signs showing the number of days without accidents.

Our goal
Over 70% global engagement score

70%

Employee Engagement Survey results **2024**



The overall results for 2024 are well above target

We began implementing the Occupational Health Index (OHI) survey in 2020, first gathering responses from wired employees (desk workers). Later, we included non-wired colleagues (non-desk workers). After significantly improving our scores, we paused the survey in 2023. In 2024, we reintroduced it with an enhanced tool covering additional engagement categories. The overall results for 2024 are well above target. Moreover, given the major organizational changes in 2024, including new owners, management shifts, and divestitures, we are proud of these scores and see them as very positive.

80%
Global response rate

75%
Global engagement score (average across all engagement categories)









2025 An opportunity for employees to thrive

"When I think about employee engagement at Dümmen Orange, **one word comes to mind for 2025: opportunity.** During 2024, we've been on an inspiring journey to understand what drives our people — what makes them feel valued, connected, and excited to grow. Now, it's time to put that knowledge into action.

Our recent engagement survey revealed an average 75% engagement score across all engagement categories, with 79.5% of employees showing a strong commitment to their roles. This is a solid foundation, yet it also highlights room to grow, particularly among those still deciding how they feel about their workplace experience.

As we continue to act on feedback, prioritizing recognition, learning, and community-building, we turn insights into actions that spark joy, foster loyalty, and create a work-place where everyone thrives.

For me, this represents a big opportunity to make meaningful changes. We've shifted focus from systems and structures to the human experience, exploring questions like, "Do employees feel supported? Do they see a future here?" These insights guide initiatives like leadership training programs that prioritize empathy and curiosity. By building stronger relationships, we're on track to create a culture where employees feel heard and valued."

Dana Valley, Head of Human Resources, **North America**





At Dümmen Orange, we aim to develop flowers and plants that are aesthetically appealing, more sustainable, and resilient to diseases and pests.

Transitioning our product portfolio to resilient genetics

R&D Innovation for disease-resistant plants

Our R&D program focuses on creating new varieties better equipped to withstand diseases and harmful insects. These developments bring significant sustainability benefits, as our varieties require less chemical crop protection and have a longer lifespan, reducing the environmental footprint. We have already achieved several key milestones in our research and development efforts. We developed the world's first TMV-resistant Petunia series and introduced the eco-friendly Senecio hybrid series Mandala.

Improved varieties are more robust

Moreover, we successfully developed Powdery Mildew resistance for Kalanchoe, resistance to White Rust and Fusarium for Chrysanthemum, and Fusarium resistance for Carnation. Improved varieties are more robust, which not only extends their lifespan but also contributes to more sustainable cultivation practices.



Our goal
Ensure 100% of major crop portfolios include varieties resistant to diseases and pests by 2030

100%



Our R&D program is progressing well, and we continue to work on new developments that will take the horticulture industry to the next level. Our key achievements so far, and the expected timelines for 2025 and 2026:

Kalanchoe	> Powdery Mildew resistance
Chrysanthemum	> White Rust resistance
Petunia	> Tobacco Mosaic Virus resistance
Chrysanthemum	> Fusarium resistance
Rose	> Powdery Mildew resistance
Carnation	> Fusarium resistance

Rose	> Agrobacterium resistance, expected 2025
Perennials	> Insect friendly, expected 2026



"We're dedicated to building on this work by expanding our range of insect-friendly plants and improving our breeding methods. **With sustainability at the core of our strategy, this is just the start of creating vibrant gardens that support a healthier planet."**

Ellen van Sambeek,
Breeding Manager

Behind the buzz
Winning the Plantum Sustainability Award

Dümmen Orange's research into insect-friendly plants won the prestigious **Plantum Sustainability Award 2024.** Plantum is the Dutch trade association representing 300 companies involved in breeding, propagation, and cultivation of seeds and young plants. In this interview, Ellen van Sambeek, Breeding Manager, shares the story behind this achievement and why it matters

Q: Congratulations on winning the Plantum Sustainability Award! What does this recognition mean to Dümmen Orange?
Ellen: **Thank you!** This award is a huge honor for us and reflects our team's hard work and collaboration with the Naturalis Biodiversity Center. We're proud of it because it validates the impact of our insect-friendly breeding program. **For us, sustainability is about creating tangible benefits for biodiversity,** and this award highlights how our plants contribute to restoring pollinator populations.

Q: What inspired the focus on breeding insect-friendly plants?
Ellen: Pollinators like bees and hoverflies are essential to our ecosystems, but their numbers have declined alarmingly over the past 30 years. While many people are planting gardens to help, not all plants are equal when attracting pollinators. **We saw an opportunity to develop plants beyond beauty — they provide the nectar, sugar, and other traits pollinators need to thrive.**

Q: What makes a plant insect-friendly? How do you determine this?
Ellen: Not all flowers naturally attract pollinators. Together with Naturalis, **we identified four key traits: nectar volume, sugar concentration, flower quantity, and color.** We rigorously test plants for these characteristics, analyzing which combinations are most attractive to pollinators. and found not only differences between different crops but also within a crop in attractiveness. **By blending science and innovation,** we've created plants that are irresistible to insects like bees and hoverflies.

Q: The jury praised your collaboration with Naturalis. How did this partnership shape the project?
Ellen: **The partnership with Naturalis was invaluable.** They brought deep scientific expertise, particularly in understanding what pollinators need to survive and thrive. This collaboration allowed us to apply their research directly to our breeding programs. **It's a perfect example of how industry and knowledge institutions can collaborate to create real-world solutions with societal impact.**

Q: What kind of impact does this project have on biodiversity?
Ellen: Pollinators are vital for the health of our ecosystems and even our food supply, but they're under immense pressure. **By developing plants that provide them with essential resources, we're helping to reverse their decline.** These plants also empower gardeners to make a difference in their own backyards, creating spaces that genuinely support biodiversity.

Intrinsa®

Teaming up in our industry

The ornamental industry is constantly evolving, and at Dümmen Orange, we're proud to contribute to this progress through our **Intrinsa® genetics**. This innovation represents years of research and development to incorporate advanced traits like disease resistance into ornamental plants.

Our collaboration with **Selecta One**

By offering Intrinsa® as a licensed product, we aim to support breeders across the industry in addressing key challenges and improving sustainability. Our collaboration with Selecta One is one example of how Intrinsa® genetics can be applied to create tangible solutions.
By licensing Intrinsa® varieties, we're helping to introduce TMV-resistant Petunias, which reduce reliance on traditional chemical methods and promote more sustainable ornamental horticulture.
"This partnership is about more than just plants. At Dümmen Orange, **we're committed to advancing innovation and sharing the benefits** of our breeding breakthroughs with the wider floriculture industry," says Tosca Ferber, Chief Technology Officer and member of the Executive Committee.

> "At Dümmen Orange, we believe that innovation is most impactful when shared. By making Intrinsa® accessible to others, we can work together to address the industry's challenges and achieve our shared sustainability goals."

"Our work with Selecta One highlights the importance of resistant varieties in ensuring sustainable ornamental production worldwide. We look forward to seeing the TMV-resistant Petunia portfolios that both companies will develop."

Plants that fight back

Intrinsa® genetics represent a new chapter in breeding. **By developing plants that are naturally resistant to diseases**, we help reduce the need for excessive chemical treatments.
TMV-resistant Petunias are a great example of this progress, offering growers access to stronger, healthier plants. These plants can reach even more growers worldwide through collaborations like the one with Selecta One.

What it all means

Intrinsa® genetics reflect our commitment to supporting sustainability and innovation in the floriculture industry. **By making Intrinsa® available to breeders everywhere, we hope to enable the development of healthier plants, reduce environmental impact, and contribute to a more sustainable future for ornamental horticulture.**





Preventing genetic erosion in ornamental crops

Our goal
Maintain 80% biodiversity by 2030

80%

At Dümmen Orange, we are proud to protect the genetic diversity of crops and their wild relatives. We recognize genetic erosion as a real and pressing threat.

To address this challenge, we introduce valuable traits from wild species into our plants and carefully track genetic variation over time.

While food crops often receive the spotlight, ornamental plants play an equally critical role. **Although they comprise 75% of all crops, only 1.5% of EU agricultural land is dedicated to floriculture.** Preserving their genetic diversity is just as important as it is for food crops.

We actively evaluate wild species for disease resistance and stress tolerance, integrating these traits into our plants. Using innovative tools, we monitor diversity to ensure the resilience of our crops. Our in-house germplasm bank, supported by collaborations with botanists, helps us conserve rare species and keep their genetics virus-free for future generations.

Our goal is to integrate new genetic resources into 80% of our crops while respecting biodiversity and local communities through responsible sourcing practices. This isn't just about creating beautiful flowers — it's about building plants that thrive in an ever-changing world.

Together, we can preserve biodiversity for generations to come.

Biodiversity is at the heart of everything we do. In 2024, we successfully preserved 99% of our species in-house.

This milestone highlights our commitment to plant biodiversity and promoting sustainable horticulture. By protecting the genetic material of our species, we ensure their long-term vitality, contributing to a more sustainable future for both our industry and the planet.

We are dedicated to preserving biodiversity throughout our breeding programs and operations through practices such as:

Active Breeding Program

We grow many different plants, ensuring that a diverse range of plants is continually developed and preserved.

Saving Seeds

Our breeding stock is carefully preserved to provide diverse seeds for future planting and breeding.

Low-Temperature Tissue Culture

We use cutting-edge techniques to preserve and store plants for a long time.

Seed Vaults

We're building secure places to store seeds for many years to come.

99%

99% of our species were successfully preserved in-house in 2024.



About the Nagoya Protocol

The Nagoya Protocol, adopted in 2010 under the Convention on Biological Diversity, ensures fair access to genetic resources. Nearly 140 countries require Prior Informed Consent (PIC) and equitable benefit-sharing. We fully comply, adapting our company's policies to regional laws and maintaining detailed records to meet regulatory obligations.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ORANGE®