

Space for circular greenhouse horticulture

Ambition: By 2040, vegetables, fruit, flowers and plants will be grown in greenhouses located in future-proof greenhouse horticulture areas and other innovative locations in the Netherlands. These facilities will be integrated into the landscape and will help to address societal challenges in circularity, sustainability and improving soil and water quality.



Added value:
€8.9 billion
(1% of our GDP)

This represents the greenhouse horticulture sector's contribution to the Dutch economy. Of this, €0.4 billion is generated through the processing, supply and distribution of imported products. Primary production contributes €4.8 billion, while a further €3.7 billion comes from processing, supply and distribution activities.



Total horticulture under glass: **10,637 ha**
Incl. supporting glass and tunnels in outdoor production.



Greenhouse horticulture uses **0.5%** of the total land area of the Netherlands.



Specialist greenhouse horticulture	No. of businesses	Area
Greenhouse vegetables (incl. strawberries)	745	4,799 ha
Cut flowers	876	1,731 ha
Pot plants and bedding plants	667	1,903 ha
Fruit under glass <i>redcurrants, blackberries, raspberries and other fruits (excl. strawberries)</i>	23	57 ha
Total	2,311	8,490 ha

Specialist greenhouse horticultural businesses are businesses that obtain at least two-thirds of their annual revenues from greenhouse products. This figure does not include other greenhouse horticultural businesses – mainly producers of propagation materials and growers of young flowers, plants and vegetables – as it is not possible to calculate their degree of specialisation. This group comprises 254 businesses (708 ha).



Export value:
€11.3 billion



Production value:
€7.9 billion

Sources: Wageningen Social & Economic Research | Eurostat | Statistics Netherlands
Bestrijdingsmiddelenatlas | Geothermie Nederland | Colland Arbeidsmarkt | Rainlevelr



Key Figures 2026
Greenhouse Horticulture Sector

Responsible Greenhouse Horticulture: Growing for tomorrow today

Dutch greenhouse growers grow flowers, plants, fruit and vegetables in circular greenhouses as a basis for a healthy and happy society. Innovations in greenhouse horticulture also contribute to solutions for societal challenges.

- Healthy, tasty fruit and vegetables can reduce healthcare costs
- High-quality flowers and plants help create a green living and working environment that impacts positively on people's well-being
- Growers are working hard on the energy transition by investing in LED, geothermal heat, residual heat, solar panels and heat networks that also provide heat for local residential districts and buildings
- Our greenhouses are equipped with technologies that enable sustainable water usage and collect rainwater to prevent local flooding
- Plants are grown in a natural ecosystem in which pests and diseases are tackled with natural enemies wherever possible

Towards autonomous growing

✔ Ambition: By 2050, robotics, digitalisation and artificial intelligence will have made manual labour in Dutch greenhouses largely redundant. Vegetables, fruit, flowers and plants will be grown largely autonomously. In these green, high-tech environments, growers will offer rewarding and meaningful careers for both people with practical skills and those trained for knowledge-intensive and complex roles.

Dutch greenhouse horticulture sector offers meaningful careers

Workers in greenhouse horticulture contribute to solutions for major societal challenges such as the energy transition, the climate challenge and human health. Greenhouse horticulture offers a wide range of careers in which people can make a real difference.



2,018 horticultural businesses
(2,610 establishments)
have permanent staff



58,300 people work in greenhouse horticulture. In peak periods this rises to **91,920** permanent staff, temporary workers and freelancers

Biological ecosystem in the circular greenhouse

✔ Ambition: By 2030, vegetables, fruit, flowers and plants in Dutch greenhouses will be grown within a robust and resilient ecosystem, with virtually no residues on products and almost zero emissions to the environment. The guiding principle is resilient, sustainable production that maintains financial returns. This approach makes full use of the growing system's self-regulating capacity, with a focus on prevention, natural balance and optimal circularity.

Plants in Dutch greenhouses are the healthiest in the world

The Netherlands is the birthplace of biological crop protection. Every year, growers use billions of biological control agents that eliminate harmful pests and replace chemical crop protection products. This strategy results in the healthiest and most resilient plants in the world.



Biological control agents* are used to manage pests across **94%** of the total greenhouse production area.

Microbial products, such as beneficial bacteria targeting insect pests, are used across **67%** of the sector.

Nematodes are used in **12%** of the greenhouse area.

All greenhouse vegetable growers use biological control agents to control pests. Among strawberry growers the figure is **97%**, for flower growers **98%** and for pot plant growers **81%**.

**Biological control agents include predatory mites and thrips, parasitoid wasps and gall midges, predatory bugs, lacewings, hoverflies, predatory beetles and nematodes.*

Climate neutral greenhouse

✔ Ambition: By 2040, vegetables, fruit, flowers and plants in Dutch greenhouses will be grown climate neutrally, thanks to a combination of energy efficiency and the use of renewable energy and CO₂. In the main greenhouse regions, growers will make extensive use of geothermal energy and residual heat, with CO₂ for crop production supplied from external sources. Growers in more isolated locations and smaller greenhouse areas will increasingly turn to all-electric systems and bio-based resources.

Dutch greenhouse horticulture CO₂ emissions significantly lower

The greenhouse horticulture sector now emits significantly less CO₂ than in 1990. Total CO₂ emissions stand at 5.2 megatonnes [25% lower than in 1990]. CO₂ emissions from crop cultivation have fallen to 3.5 megatonnes [49% lower than in 1990].



Natural gas consumption in the greenhouse horticulture sector

- Crop heating: 1.97 billion m³
- Supplying electricity to the national grid: 0.97 billion m³

Total natural gas consumption: **2.94 billion m³**

With its total electricity production, the Dutch greenhouse horticulture sector supplies more than 8% of the total electricity consumption in the Netherlands (119 billion kWh). The greenhouse horticulture sector supplies electricity during green electricity off-peak hours.



Around **15%** of the energy greenhouse growers use comes from **renewable sources**

Growing in sustainable harmony with the environment

✔ Ambition: By 2030, vegetables, fruit, flowers and plants in Dutch greenhouses will be grown in harmony with the natural environment. Water recycling will prevent emissions into the environment, while waste streams will be treated and properly managed. Irrigation systems will be climate resilient, environmentally friendly and will help prevent flooding. Light emissions from greenhouses will be minimised over the next 15 years, and biodiversity around greenhouses will be enhanced.



Water quality improved by **70%**
between 2015 and 2021

Over 120 growers in Westland help keep local feet dry. In periods of extreme rainfall they create extra storage capacity in their reservoirs.



The Dutch greenhouse horticulture sector is the largest user of geothermal heat in the Netherlands. 17 geothermal sources provide geothermal heat to 237 greenhouse growers (1,746 ha). In total, greenhouse growers use **7.1 Petajoules** of geothermal heat, of which 3.6 Pj are sourced internally and 3.5 Pj are purchased from external suppliers.