

Water-efficient greenhouse

Ambition: Emissions of fertilisers and plant protection products from all greenhouse horticultural businesses to be virtually zero by 2027.

Fact 5 6

More and more growers are collecting rainwater to prevent flooding.

Greenhouse growers' rainwater reservoirs are ideal for temporarily storing large quantities of rainwater. By reducing water levels in the reservoirs over time, they can make more space to collect rainwater in heavy downpours, thus preventing roads from flooding.

Dutch growers make extremely efficient use of the water they need to grow their vegetables, flowers and plants.

By optimising the reuse of irrigation water and increasingly recovering water from the air, they are vastly reducing the amount of water they need. As a result, the Dutch greenhouse horticulture sector has one of the most water-efficient cultivation systems in the world.

Responsible Greenhouse Horticulture: Growing for tomorrow today

Key Figures 2022-2023
Greenhouse Horticulture Sector



3,137 specialist* greenhouse horticultural businesses in the Netherlands, 1,239 of which grow greenhouse vegetables and 1,898 ornamental plants



10,555 ha of greenhouse horticulture in total, including arboriculture, perennial plants and fruit grown under glass, producers of starting material under glass and non-specialised greenhouse growers

Innovation is the norm in the Dutch greenhouse horticulture sector. Greenhouses are becoming closed production ecosystems, or circular greenhouses. Society benefits from the innovations being developed by entrepreneurs in the greenhouse horticulture sector.

- Growers are investing in geothermal energy, which also indirectly heats homes, swimming pools and factories
- Greenhouses collect rainwater to prevent flooding
- The greenhouse horticulture sector provides jobs, economic growth and technological momentum
- With healthy, tasty vegetables and beautiful, high-quality flowers and plants, the greenhouse horticulture sector contributes to everyone's health and wellbeing



8.589 ha glass at specialist businesses, of which 5,008 ha greenhouse vegetables and 3,581 ha ornamental plants (1,705 ha pot and bedding plants, 1,876 ha cut flowers)



Greenhouse horticulture contributes **€7.9 billion** to the Dutch economy, or 1% of our GDP (Gross Domestic Product)

Greenhouse horticulture is an important economic sector for the Netherlands.

- Westland is by far the largest greenhouse horticulture municipality in terms of area (approx. 24%, Lansingerland is #2 at approx. 7%, Zaltbommel #3 at approx. 3%).
- The top 3 provinces with the largest greenhouse horticulture area are: South Holland (1), North Brabant (2) and North Holland (3).



Export value:
€9.2 billion



Production value:
€7.1 billion

*) What constitutes a specialist greenhouse horticultural business is determined using the 'Standard Output' as the economic standard. Specialist greenhouse horticultural businesses are businesses whose standard output amounts to more than two-thirds of their total output from all product groups.

ENERGY

Climate-neutral greenhouse

Ambition: To make the Dutch greenhouse horticulture sector climate-neutral by 2040.



Fact 1

The Dutch greenhouse horticulture sector is the first and largest user of geothermal heat.

Greenhouse growers save around 200 million m³ of natural gas per year by using geothermal heat. That's 6% of all the gas used in the sector. By 2040 greenhouse horticulture will be using significantly less heat than today.



10.4% of the energy greenhouse growers use comes from **renewable sources** (total share of renewable energy in the Netherlands: 11.1%)



20 geothermal sources

Fact 2

The Dutch greenhouse horticulture sector has vastly reduced its CO₂ emissions.

Total CO₂ emissions from greenhouse horticulture are 14.9% lower than in 1990, while CO₂ emissions from growing are a massive 37.8% lower. Greenhouse growers have been able to reduce their CO₂ emissions by using renewable energy and energy-saving measures.



Energy consumption for ornamental plant and greenhouse vegetable production per unit of product has **halved** since 1990



Natural gas used to grow crops: **2.4 billion m³**, supplied from the public network: 1.0 billion m³



CO₂ emissions from growing crops: **4.6* megatons**

LABOUR

Decent employer

Ambition: To raise the profile of the greenhouse horticulture sector as an attractive employer. The sector offers a wide range of flexible job opportunities.

Fact 3

Horticulture regions provide employment.

Greenhouse horticultural businesses are characterised by a combination of green fingers and production work. With upscaling, mechanisation, robotisation and internationalisation, demand for people in senior and middle management roles in areas including technology, logistics and HR policy is growing strongly.



2,200 horticultural businesses (2,720 establishments) have permanent staff



82,120 people work in greenhouse horticulture. At peak times this rises to **113,730** employees, temporary workers and freelancers



The wage bill amounts to **€652 billion** excluding payroll taxes, **€1.3 billion** including temporary workers

PLANT HEALTH

Healthy crops

Ambition: By 2030 greenhouse growers will be growing healthy vegetables, flowers and plants in an ecosystem in a circular greenhouse using the most sustainable integrated cropping method. Strong crops, prevention, biological controls and virtually zero environmental emissions are the ingredients that will make this possible.

Fact 4

Vegetables and flowers from Dutch greenhouses are the cleanest in the world.

The Netherlands is the birthplace of biological crop protection. Every year the greenhouse horticulture sector uses more than 15 billion insects and mites to eliminate harmful pests. These natural predators replace the majority of chemical pesticides.



Natural predators are used to control pests across the entire production area of greenhouse vegetables. For flowers they are used across more than 90% and for pot plants around 80% of the area



The environmental impact on water of the use of plant protection products has been **reduced by 90-95%** in 15 years

*) Figures temperature corrected (degree-day method)