

Your partner in research

#### A world of difference

Wageningen UR Greenhouse Horticulture has an excellent reputation for ensuring that technologies are applied in harmony with the local situation, while disseminating valued expertise at the same time. Research is carried out in many countries where our broad range of expertise sets us apart from local institutes. Another distinguishing factor is the opportunity offered by an integrated approach to research issues; from market studies to the development of greenhouses designed for specific meteorological conditions.

Wageningen UR Greenhouse Horticulture is a reliable partner in operational development. Thanks to our combined knowledge of local situations and intensive cooperation with the supply industry in the Netherlands and abroad, we can serve as the ideal link between local supply and demand.



#### Your partner in research

Wageningen UR Greenhouse Horticulture is an independent international research institute that offers genuine quality and reliability. With 120 employees, we have access to a wide range of knowledge and expertise in all relevant fields, as well as research facilities and demo greenhouses that are unique in the world.

As a result of our intensive cooperation with other departments at Wageningen UR, we can also utilise the wealth of additional knowledge, expertise and facilities that are available within the university and research centre.

# Wageningen UR Greenhouse Horticulture

*Innovations on behalf of and in partnership  
with the greenhouse horticulture industry*

#### For more information, contact Wageningen UR Greenhouse Horticulture:

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**WAGENINGEN UR**  
*For quality of life*

Wageningen UR Greenhouse Horticulture is the research institute for greenhouse horticulture, deeply rooted in both industry and science. As a leader in the development and implementation of innovations, on behalf of and in partnership with the greenhouse horticulture sector, we carry out dedicated research into the issues that determine successful business. Our ultimate goal is to make long-lasting contributions to sustainable and competitive greenhouse horticulture.

## Climate and energy

Wageningen UR Greenhouse Horticulture develops new sustainable concepts for crop production as well as innovative technologies for greenhouse construction, climate control, energysaving and efficient energy conversion. Greenhouse climate and energy consumption are inexorably interconnected. The slightest changes in greenhouse climate will affect energy consumption and vice versa. Moreover, all climate changes, whether related to lighting, temperature or humidity, will impact crop growth, yield and quality of the product. Our advanced computer models calculate new cropping concepts and study the effects of changes in climate and energy consumption. We also study innovations in climate and energy control in practice, working in close cooperation with growers and the supply industry.



## Sustainable crop protection

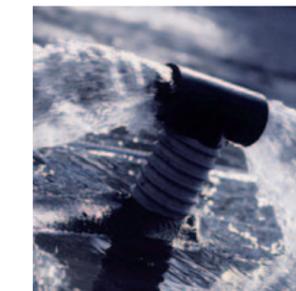
Every company has its own method to prevent and control crop disease and pests. In addition to controlling the disease or pest involved, these methods also have an impact on predators as well as crop production and quality.

Wageningen UR Greenhouse Horticulture develops strategies and technologies for sustainable crop protection. We perform research in order to optimise organic pest control, the conscious use of crop protection products, and utilisation of soil and crop resistance, individually and as a whole system. Our experts cooperate with commercial growers and scientists from many other disciplines in a joint approach to ensure that innovations take both the very latest scientific knowledge as well as crucial practical issues into account.



## Water and emissions

As water is the foundation for plant growth, sufficient high-quality water with the right amount of nutrients is essential for successful crop growth. Wageningen UR Greenhouse Horticulture designs systems and technologies for monitoring and improving water quality, nutrients and plant health. These innovations, developed in cooperation with the end users, ensure that water and nutrients are efficiently deployed. They also improve plant growth and prevent emissions into surface and ground water, for instance via automated systems that warn growers to take action in undesirable situations.



## Advanced breeding and production systems

From total concepts to minor improvements, innovations in breeding and production systems save on labour, increase turnover and support operational management. Wageningen UR Greenhouse Horticulture develops new total concepts and integrated designs for production systems, including mobile cropping systems, revolutionary greenhouse designs and systems for the early detection of plant pathogens. We also develop components for production and selection systems such as innovative sensors, vision systems and robots. In designing new concepts we look beyond the level of individual greenhouse horticulture companies. This reflects our core conviction that the clustering of companies, combinations with other functions and integration within (urban) environments can also lead to sustainable innovations.



## Quality of plant and product

Making a sound financial profit depends on the quality and timing of the final product. Good plant material results in high-quality plants and healthy products. The best possible seed and seedlings combined with sound production management ensures the best quality is supplied at the right time.

Wageningen UR Greenhouse Horticulture supports breeding companies in selecting new and better varieties, for instance by rapidly and carefully evaluating the taste of large numbers of samples. Our crop experts are greenhouse horticulture specialists with a broad knowledge of breeding and research. They support the greenhouse horticulture industry by providing advice on a wide range of issues, including how to best use innovative breeding management techniques.

