



WAGENINGEN
UNIVERSITY & RESEARCH

Masterclass

Soilless Culture

The global market for vegetables and flowers ask for cultivation methods that are sustainable. Soilless Culture systems play an important role in fulfilling this requirement. Growing horticulture plants on a soilless culture is a complex subject. In this global playing field the latest knowledge on growing media, plant physiology and water & nutrition management are important to make well-founded choices.

Target group

This Masterclass is designed for professionals working in horticultural companies, consultants and technical suppliers with an interest in technical-, process- or crop related topics. For instance managers, supervisors, business operators and owners involved in making decisions and managing cultivation systems.

Results

The aim of this course is to learn the basics of soilless culture and understand how to apply horticultural principles in the cultivation, use and management of plants in various soilless production situations. Examples for different horticultural crops are on the agenda.

Date 6 - 10 November 2023

Location WUR Greenhouse Horticulture Bleiswijk, the Netherlands

Course leader Jim Ruijven, WUR Greenhouse Horticulture

Outline and topics

The course gives participants an in-depth understanding of:

- Growing systems incl. technical lay-out in relation to required crop demands
- Growing media and its applications in practice
- Water quality and plant nutrition; learn to analyse reports and act accordingly
- Calculation of nutrient solutions and translate into fertilizer recipes
- Manage (execute, report and evaluate) water and fertilisation strategies

The course offers an attractive mix of lectures, greenhouse and laboratory visits and practical experiments/assignments. There is ample time to interact with the experts from WUR and other participants.



Programme

World renowned scientists from Wageningen University & Research, Greenhouse Horticulture such as Jim Ruijven, Chris Blok, Tommaso Barbagli and others will share their knowledge. Participants will learn to identify cultivation systems and to make choices about the required technical lay-out. They will also learn about chemical, physical and biological properties of growing media and how to characterize growing media. Cultivation aspects will be discussed in addition.

The basics of plant nutrition and related plant physiology will be discussed thoroughly. Attention will be paid to the principles of nutrient solutions, how to make calculations, how to make adjustments for water quality, growing media, crop stages, and the conversion of nutrient solutions into fertiliser quantities. Various aspects of salinity problems will be discussed as well as practical methods to deal with salinity in soilless culture.

During the 5 days course excursions will be made to commercial companies and to the greenhouses of the research facility. In parallel to the sessions, participants will be challenged to make their own soilless culture crop design.

There will be an online preparation module before the start of the course. Each course day starts at 9.00h and finishes at 17.00h (local time). Besides the lectures and excursions there is time to work on your casus, the design of a soilless cultivation system for a specific crop.

Practical information



€ 2.945.- per person and covers tuition, excursion day-trip, course materials, lunch and refreshments during the day and one network dinner. Hotel accommodation is not included in the course fee. We offer pick-up services from a selected hotel nearby.



Max. 30 participants.



Based on your attendance you will receive a certificate after the programme is finished.

Registration

[Register](#)

Wageningen Academy

We develop and organise courses for professionals, based on Wageningen University & Research expertise.

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