

Plant Empowerment Basic & Advanced Course

The course contains of various in-depth knowledge sessions about the philosophy and how to apply it in practice.

Basic course

The basic course is dedicated to the basics of Plant Empowerment. We start with a general introduction, the rest of the course is devoted to uniformity. For optimal results, uniformity is needed in the root zone, climate and data. Experts address this in detail during several courses. Topics discussed are:

- **Climate**: temperature, humidity, CO2, homogeneous climate
- **Rootzone**: Substrates, optimum dose size, drain, and dry back, big 6, minerals, microbiome
- **Data**: Weather stations, aspirator boxes, and plant sensors, bringing data alive, data-driven growing

Advanced course

The advanced course contains of the following in-depth knowledge sessions:

- Do's and Don'ts in Absolute Humidity

Absolute humidity is still a difficult parameter in greenhouse climate control. During the session we will explain what it tells you and how you can use it.

- Leaf temperature is more important than greenhouse temperature Within Plant Empowerment, we always try to listen to the plant. One of the measurements we have is plant temperature. In this session we discuss the difference between greenhouse and plant temperature and what plant temperature tells us.
- Substrate properties (big 6) with a focus on oxygen What is all happening in the rootzone? Water-content and EC are often discussed. In this presentation we will discuss the big 6 and dive more in depth to what oxygen is doing for the plant.
- How to get the maximum output of your crop (genetics) using data (cucumbers & tomatoes)

At BASF they want to get the most out of our genetics. In order to do this they are already applying the principles of Plant Empowerment for a couple of years in lettuce, tomatoes and cucumbers. During the session they will explain what they did and what they achieved the last couple of years.

- Screens, screen gaps, air movement and insulation values Screens have a great impact on the climate in the greenhouse. During the session we will explain how to get the best out of your screen, when to apply screen gaps and how to use air movement to bring extra activity to the crop. And due to increasing energy costs, we see the interest of better isolating screens increasing. But what are the influences on climate and the plant with "closer" screen?
- Increase the value & performance of your greenhouse via data Generate and collect data is essential for increasing the performance of your facility. Which sensors do I need and how to

visualize data in order to create a helicopter view of my greenhouse will be some of the questions answered during this session.

• **Supporting the irrigation strategy with sensors & artificial light** Stirring your strategy by numbers is easily said. But what type of sensors are available and what do those figures tell us? And do we need more than only wet sensors in the rootzone? We will also discuss the different types of artificial light and different ideas about irrigating when using artificial light. Which strategy is the right one? What are the attention points?

Everything you need to know about water quality

Water quality is a primary condition for a good and healthy crop. But what is water quality exactly and how can you steer it? In this session we discuss salts, carbonates, oxygen and other factors that influence water quality.

Climate effects when changing HPS to LED

When an artificial lighting installation is changed from HPS to LED, a lot changes for the plant. What is exactly changing and what to do to maintain the optimal climate for the plant.

 From fertilizer schedule to healthy plants & the (non)sense of biostimulants

What are the rules of a fertilizer schedule and how do those rules influence plant health? Do we supply what a plant needs or are we always under or over-supplied? During this session, we will also discuss the main ingredients of bio-stimulants and the optimum timing in order to get a good result

Increase plant performance via coatings

The current market has multiple coatings available. During this session we discuss different coatings, how they effect the growth of the crop and how you as a grower choose the optimal coating for

your situation.

How to create a crop, climate & irrigation strategy (high wire crops)

The most important process before you start your new crop cycle is to create your goals regarding climate, crop and irrigation. Can I create accurate goals by spending less than 1 hour?

Plant Empowerment in Floriculture

Floricultural products always have to be beautiful and of spotless quality, to avoid trial and error mistakes we will share some learned lessons that floriculture growers already experienced while applying the principles of Plant Empowerment. This will save you time and cost in avoiding any possible mistakes.

Plant Empowerment in Propagation

During the propagation stage plants a plant are really vulnerable to the given growth conditions. Create he best possible head start by joining this session. We wil focus on the both warm or cold propagated plants, grown on floors and/or tables.

Strawberries in organic substrates & growing strawberries without mildew

Strawberries are often grown in an organic substrate. What is the best mix for a strawberry crop? How to irrigate the crop? And how to supply the right minerals? A lot of interesting questions that are discussed during this session. We will also discuss mildew, since this is an increasing problem in strawberries. Besides the right climatical conditions, a susceptible host is also necessary for successful infestations. Can we influence both processes?