Plant Empowerment Workshop

July 9-10, 2020
10 a.m. to 2:30 p.m. (EDT)

We are using The Ohio State University's online platform. Visit go.osu.edu/plantworkshop for more information.

Advanced learning and discussion towards “an integrated approach based on physics and plant physiology, leading to a balanced growing method for high yields, quality, saving energy, and profitability in greenhouse controlled environments”

Instructor: Dr. Peter van Weel
Author of Plant Empowerment
Expert in greenhouse climate control
Former PI at Wageningen UR
The Netherlands

Host: Dr. Chieri Kubota
The Ohio State University
Ohio CEA Center
Contact: kubota.10@osu.edu

Register at go.osu.edu/plantregister or email white.1309@osu.edu.

Powered by Gotham Greens & Hort Americas
Plant Empowerment Workshop

July 9-10, 2020
10 to 2:30 p.m. (EDT)
Ohio State University's online platform

Program

Thursday, July 9: Part One
10 a.m. to 2:30 p.m.
“Introduction to Plant Empowerment, The Theories”

Friday, July 10: Part Two
10 a.m. to 2:30 p.m.
“The Practical Applications of Plant Empowerment”

NOW ONLINE

Register at go.osu.edu/plantregister
or email white.1309@osu.edu.

Powered by Gotham Greens & Hort Americas
The goal of this workshop is for growers to empower crop production through a balanced growing method, through an integrated approach based on physics and plant physiology, for high yields, quality, saving energy, and profitability in greenhouse controlled environments.

Textbook (optional) *Plant Empowerment* available at [www.plantempowerment.com](http://www.plantempowerment.com)

**10 AM–2:30 PM (EDT), Thursday, July 9: Introduction to Plant Empowerment, The Theories**

- Basic knowledge about physics and physiology that play an important role in a greenhouse and for plants
  - The interaction between the main resources: CO2, light, water, RH and temperature
  - The energy balance and stomata opening
  - The role of air movement and ventilation
  - The role of heat emission in the dark
- Plant empowerment, from experience-based control to sensor-based control
  - Controlling 6 balances instead of climate. Why are they important?
  - Why and how reduction of transpiration under intense light can increase photosynthesis
  - Why is transpiration control in the dark better than RH or VD control?
  - Prevention of fungal diseases with a better screen management
- Q & A
- Sponsor mini-presentations

**10 AM–2:30 PM (EDT), Friday, July 10: Introduction to Plant Empowerment, The Theories**

- Introduction to the sensors, the software tools, and the value of data analysis
  - Measure energy balance to control transpiration, stomata opening and water balance.
  - The RTR (ratio temperature to radiation) tool to control plant balance
  - Demonstration of the radiation monitor tool: the effect of energy screens on the greenhouse climate, transpiration, energy consumption, and plant conditions
  - Demonstration of the GPE (growing by plant empowerment) simulation tool: how can I use the hardware components such as screens, light, air tubes, air circulation or ventilation fans and windows in an integrated way?
- Q & A
- Sponsor mini-presentations

Visit go.osu.edu/plantworkshop for more information. Register at go.osu.edu/plantregister or email white.1309@osu.edu.