



ISHS Symposium 2016

Sensing Plant Water Status - Methods and Applications in Horticultural Science

Potsdam, October 5 - 7, 2016

The present symposium will provide a platform to exchange findings on established and new methods in sensing plant water status - considering the fundamentals of the methodology as well as helpful hints achieved in applications.

Background

In horticulture, water has always been important and, in many cases, a rare resource. Improved methods to evaluate water use efficiency but also the actual water needs of plants are essential for better understanding of horticultural production.

Also in postharvest, water is an important aspect. Excessive water losses may lead to unnecessary loss of freshness, increased waste and hence economic and social problems. Again, comprehensive understanding of basics of plant water status may help to better optimise postharvest condition during harvest, in storage and also during processing. Certainly, the precise knowledge of the physiological basics of all aspects of plants water status is essential but also knowledge and experiences on measuring techniques are targets for the agricultural community.

Organization

The symposium will be organized by Prof. Dr. Manuela Zude and Dr. Werner B. Herppich of the Leibniz Institute for Agricultural Engineering Potsdam in close collaboration with colleagues from the University of Potsdam, Humboldt University Berlin and Beuth Hochschule für Technik Berlin. It will be held in Potsdam from October 5 to 7, 2016, at the Campus Griebnitzsee (<https://www.uni-potsdam.de/studium/en/potsdam/campus-and-faculties/campus-griebnitzsee/>).

Important dates and deadlines

Registration for the symposium is open. Early registration will end at June 30, 2016.

Deadline for abstract submission is March 15, 2016.

For detailed information about the symposium please visit www.spws2016.atb-potsdam.de

Topics

Methods

- Water potential and its components (pressure bomb, psychrometry,..., cell pressure probe,..., pressure volume analysis, ...)
- In situ measurements (dendrometry, sap flow,, thermography, gas exchange, eddy correlation,)
- Hydraulic conductance (cavitation, embolism,)
- Tomographic measurements (MRI, CNT,)
- Soil water status (soil water potential, TDR,)
- Modelling (up scaling from cell to tissue, from leaf to canopy, from canopy to orchard)

Applications

- Physiological processes (soil–plant interactions, water uptake, water status, water flow in plants, modelling vs. measurements)
- Quality/Process control (water status as indicator of produce quality / of process quality)
- Stress detection (drought stress indication, heat stress, ...)
- Irrigation (new approaches for phytomonitoring, controlling deficit irrigation, ...)
- Financial aspects of efficient irrigation management
- Irrigation and landscape – lowering the relevant blueprint