

Venue

The workshop will be hosted at the X° ESA Congress - European Society for Agronomy – which will be held on 15-19 September 2008 at the Faculty of Agriculture of Bologna – Italy, in Viale Fanin 40-50, near the “Bologna Agrifood Center” (CAAB).

The audience

The workshop is addressed to scientists and technicians interested or involved in the development and implementation of methods to improve crop irrigation and N fertilization management and efficiency.

Registration

Registration fee is 30 euro and include

- Admission to WS
- WS kit including program and abstracts of presentation
- Coffee break

Fee must be paid at the ESA Congress desk.

Language

English

How to reach the Workshop Venue



From the highway (Autostrada)

From the A13 route (from Padova)

Take exit “Bologna Arcoveggio”. Proceed for “Tangenziale - San Lazzaro direction”. **Take exit 8 bis. At the end of ramp, turn right following CAAB indication.**

From the A14 route (from Ancona)

Take exit from A14 route. After the toll, proceed for “Tangenziale - Casalecchio direction”. Take exit 8 bis. **At the end of ramp, turn right following CAAB indication.**

From the A1 route (from Milano)

Take exit from A1 route. After the toll, proceed for “Tangenziale - San Lazzaro” direction. Take exit 8 bis. **At the end of ramp, turn right following CAAB indication.**

From the A1 route (from Firenze-Roma)

Take exit from A1 route. After the toll, proceed for “Tangenziale - San Lazzaro direction”. **Take exit 8 bis. At the end of ramp, turn right following CAAB indication.**



From the railway station

Take the bus No. 35 (direction AGRARIA) at the Railway Station in Bologna to the last stop (**AGRARIA** stop).

For those wishing a more comfortable service taxi is of course the best way; taxi service from **railway station** costs about € 20,00 – tel. 051 372727.

For more information:

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Or visit the X° ESA congress website:

http://www.avenuemedia.eu/source/congressi/congressi_2008/Congress_ESA/



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA



X°  Congress

- European Society for Agronomy –
“Agriculture as a Resource for Energy and
Environmental Preservation”
Bologna, Italy 15-19 September 2008

Workshop

Improvement in nitrogen and water use efficiency: interest of assessment tools in vegetable crops



16th September 2008

Faculty of Agriculture
Viale Fanin, 40-50, Bologna - Italy

This Workshop is under the aegis of SOI-Italian Society of Horticulture, and supported by CRPV-Centro Ricerche Produzioni Vegetali and MAE (*Ministero degli Affari Esteri*) in the frame of a bilateral cooperation project between the Walloon Region – Belgium and Italy



Context

With the increasing cost of mineral N and reduced availability of water for irrigation as well as for environmental constraints, efficient use of both N-fertilizer and irrigation is more and more evident to farmers for profitable and friendly environmental crops production. It is then essential to match N and water supply and needs all along the growing season for each crop within the rotation.

According to this objective, quick assessment of in-season crop and/or soil N and water status can supply significant help in decision on management of N fertilization and irrigation.

Different methods or tools for crop or soil N and water status measurement have been or are still studied all over the world. For crop N status, it can concern for instance either invasive measurements of nitrate or nitrogen concentrations within plant sap, or indirect assessment of leaves chlorophyll content through non invasive measurements based on optical canopy properties such as light absorbance or reflectance. Soil water content can be directly or indirectly determined by means of gravimetric, volumetric and tensiometric methods.

All the methods can give a good estimate of crop N and water status but their specificity, sensitivity, accuracy, low labour intensive and low cost implementation, as well as their frame of use and implementation have to be clearly defined, so that it can confidently be linked or integrated into Decision Support System (DSS) for an optimal and efficient management of crop N fertilization and irrigation.

The aim of this workshop is to give a scientific and technical overview of the State of the Art in this specific field. International

scientists with expertise in the use of methods or tools for the assessment of field crop N and water status will share their knowledge with the audience.

Participants to the workshop are also invited to briefly present their research work and results through a short oral contribution (5 min. max). Please inform directly [Giorgio Gianquinto](mailto:giorgio.gianquinto@unibo.it) if interested (giorgio.gianquinto@unibo.it)

Agenda

- 8.30 [Welcome and Introduction](#)
Giorgio Prosdocimi Gianquinto
Università di Bologna, Italy
- 8.45 [The nitrogen use efficiency: meaning and sources of variation](#)
Paolo Benincasa
Francesco Tei
Università di Perugia, Italy
- 9.15 [Sensing of crop N status: opportunities, tools, limitations and supporting information requirements](#)
Nicolas Tremblay
Agriculture et Agro-alimentaire Canada
Station de recherche de St-Jean-sur-Richelieu, Québec, Canada
- 9.45 [The use of diagnostic optical tools to assess the N status and to guide fertilization of processing tomato](#)
Paolo Sambo
Università di Padova, Italy
Giorgio Prosdocimi Gianquinto
Università di Bologna, Italy

- 10.15 [Use of crop N status assessment in a DSS for N fertilization management for potato crop and prospect for other crops in Belgium](#)
Jean-Pierre Goffart,
Sophie Renard
Crop Production Department
CRA-W, Belgium
- 10.45 Coffee Break
- 11.00 [Increasing Water Use Efficiency: from crop to irrigation management](#)
Luisa Dalla Costa
Università di Udine, Italy
Stefania De Pascale
Università Federico II, Napoli, Italy
- 11.30 [Measuring soil water content: methods, limitations and future challenges](#)
Marco Bittelli
Università di Bologna, Italy
- 12.00 [Traditional and new approaches to irrigation scheduling in vegetable crops](#)
Alberto Pardossi
Luca Incrocci
Università di Pisa, Italy
- 12.30 Global discussion and/or exchange of experiences with participants (short oral contribution)
- 13.00 Closure of workshop