



SOCIETA' ITALIANA DI CHIMICA AGRARIA

PhD Winter School

Feeding the world: the contribution of research in agricultural chemistry to sustainable development

9-12 February 2015, Piacenza, Italy

Organizing committee: Gian Maria Beone, Luciano Cavani, Stefano Cesco, Claudio Ciavatta, Tanja Mimmo, Roberto Terzano, Marco Trevisan

The aim of the School is to bring together in a friendly environment experienced researchers and young scientists in order to share their ideas and solutions about issues related to sustainable development in agriculture. Many different aspects regarding soil, plant and environment will be covered including field applications and methodological approaches. At the end of the day, working group activities will try to provide answers to specific research and practical problems raised by the participants.

Final program

9 February 2015

afternoon: arrival and registration

15.00-15.15 Introduction of the School

15:15-16:15 Presentation of the participants (Roberto Terzano, DiSSPA, University of Bari, Italy)

16:15-16:30 Break

afternoon session: **THE SOIL-PLANT-MICROORGANISMS SYSTEM**

Chair: Gian Maria Beone (UCSC, Piacenza, Italy)

16.30-17.10 Claudio Zaccone (SAFE, University of Foggia, Italy) Introduction to the Soil System

17:10-17.50 Gianpiero Vigani (DiSAA, University of Milan, Italy) Understanding plant nutrition for a sustainable agriculture

17.50-18.30 Youry Pii (FaST, University of Bolzano, Italy) An underground tale: contribution of microbial activity to plant nutrients acquisition

18:30 Get together: wine party and poster exhibition (sponsored by "Azienda Vitivinicola La Celata" and "Salumificio La Rocca")

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10 February 2015

morning session SUSTAINABLE AGRICULTURAL PRODUCTIONS

Chair: Vito Armando Laudicina (DiSAF, University of Palermo, Italy)

9.00-9.45 Matteo Spagnuolo (DiSSPA, University of Bari, Italy) - **Adriano Sofo** (SSAFAA, University of Basilicata, Potenza, Italy) Sustainable farming systems: compromises and advantages in horticulture

9.45-10.30 Maria Martin - Daniel Said Pullicino (DiSAFA, University of Torino, Italy) Sustainable rice cropping systems: linking soil processes to functions

10.30-11.00 Break

11.00-11.45 Daniele Del Buono (DSA3, University of Perugia, Italy) - **Elga Monaci** (D3A, Polytechnic University of Marche, Ancona, Italy) Agrochemicals: some generalities, plant metabolism and sustainable uses

11.45-12.30 Luciano Cavani (DipSA, University of Bologna, Italy) - **Chiara Manoli** (ILSA S.p.A.) The use of biostimulants in agriculture: a collaborative overview

12.30-13.00 Open discussion (*under supervision of the chair*)

afternoon session: Keynote lecture and WORKING GROUPS

14.30-15.30 Keynote lecture: Andrea Carminati (Div. Soil Hydrology, Georg-August University of Goettingen, Germany) Root water uptake: roots and rhizosphere traits that increase plant drought tolerance

15.30-16.30 Poster Session

16.30-18.30 Working group activities (under the supervision of speakers and coordinators)

Working group 1 "Sustainable agricultural productions" - Coordinator: V.A. Laudicina

Working group 2 "Environment and waste management" - Coordinator: M. Spagnuolo

Working group 3 "New methods in agricultural research" - Coordinator: G. Renella

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11 February 2015

morning session INNOVATIONS IN AGRICULTURE FOR A SUSTAINABLE DEVELOPMENT

Chair: **Matteo Spagnuolo** (DiSSPA, University of Bari, Italy)

9.00-9.30 Stefania Astolfi (DAFNE, University of Tuscia, Viterbo, Italy) Sustainable strategies for the biofortification of crops with essential micronutrients

9.30-10.00 Nicola Tomasi (DiSA, University of Udine, Italy) New solutions to improve soilless productions

10.00-10.30 Vincenza Cozzolino (CERMANU, University of Naples Federico II, Italy) Sustainable agriculture: the key role of arbuscular mycorrhizas in agroecosystem services.

10.30-11.00 Break

11.00-11.45 Giuliana D'Imporzano - Andrea Schievano (RICICLA Group, DiSAA, University of Milan, Italy) Agroenergy, energy crops and renewable fertilizers.

11.45-12.30 Claudio Cocozza (DiSSPA, University of Bari, Italy) - **Marco Grigatti** (DiSA, University of Bologna, Italy) Compost and digestate production and their safe re-utilization in agriculture

12.30-13.00 Open discussion (*under supervision of the chair*)

afternoon session: Keynote lecture and WORKING GROUPS

14.30-15.30 Keynote lecture: Johan Six (DESS, ETH, Zurich, Switzerland) Soil carbon sequestration: from mechanisms to predictions

15.30-16.30 Selected presentations by PhD students

16.30-18.30 Working group activities (under the supervision of speakers and coordinators)

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12 February 2015

morning session: INNOVATIVE METHODS IN AGRICULTURAL CHEMISTRY RESEARCH

Chair: **Giancarlo Renella** (DiSPAA, University of Florence, Italy)

9.00-9.30 Luigi Lucini (UCSC, Piacenza, Italy) High resolution mass spectrometry based metabolomics: from data acquisition to mining and chemometrics

9.30-10.00 Bhakti Prinsi (DiSAA, University of Milan, Italy) Proteomic approaches to study plant biochemistry

10.00-10.30 Tanja Mimmo (FaST, University of Bolzano, Italy) Methods applied in the authentication and traceability of agricultural products

10.30-11.00 Break

11.00-11.30 Anita Zamboni (Dept. of Biotechnologies, University of Verona, Italy) Plant genomics as an essential component of green system biology

11.30-12.00 Maria Teresa Ceccherini (DiSPAA, University of Florence, Italy) Soil Metagenomics: a history of conquests

12.00-12.30 Michele Suman (Barilla S.p.A., Parma) Food safety issues from the industrial perspective: an *helicopter* view & a focus on analytical strategies devoted to mycotoxins risk prevention

12.30-13.00 Open discussion (*under supervision of the chair*)

13.00-13.30 Poster prize ceremony and conclusions

lunch and departure

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Location

Summer School will be held at the Università Cattolica del Sacro Cuore - Campus of Piacenza
For the web site: <http://www.unicatt.it>.

How to reach the Campus of Piacenza

by CAR

- Motorway A1 (Milano-Bologna): Exit "Piacenza Sud".
- Motorway A21 (Torino-Brescia): Exit "Piacenza Sud".

Follow for Piacenza centre. Turn left at round-about, after the overpass go straight ahead for 500 meters, the University is on the right.

by TRAIN

For train visit <http://www.ferroviedellostato.it/> The railway station Piacenza (Piazza Marconi), which is an important railway hub for the entire northern Italy, is reachable by train railway lines:

- Milan - Bologna
- Turin - Piacenza

by BUS from the railway station (Piazza Marconi)

- Bus n.2 direction "S.Lazzaro Università", with stop in via E. Parmense
- Bus n. 3 or 7 direction "Capitolo", with stop in via E. Parmense

by AIRPLANE

- from Milan: Airports "Linate" or "Malpensa" (www.sea-aeroportoimilano.it)
- from Bergamo: Airport "Orio al Serio" (www.sacbo.it) At the terminals are available shuttle bus connecting the airport to the train station in Milan.
- from Parma: Airport "Giuseppe Verdi" (www.aeroporto-parma.it)
- from Bologna: Airport "Guglielmo Marconi" (www.bologna-airport.it)
- from Brescia: Airport "Gabriele D'Annunzio" in Montichiari (www.aeroportobrescia.it)
- from Verona: Airport "Valerio Catullo" in Villafranca (www.aeroportoverona.it)

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Registration Fee

The number of School participants is limited to 30 PhD students/post docs.

School fee: **70 Euros**, including lunch from 10 February to 12 February.

PhD students are requested to send a document attesting their status (e-mail: luciano.cavani@unibo.it; fax 051-2096203)

Accommodation

For the accommodation during the school, the participants must provide their own for the reservation of the rooms.

You can book the Gasparini Residence with the special rate of **43 Euros** per night in BB (<http://educatt.unicatt.it/educatt-residenza-gasparini-il-collegio> +39 0523-621111).

For Gasparini Residence, you can book directly at this link:

<https://docs.google.com/spreadsheets/viewform?fromEmail=true&formkey=dG9mM2hLS25pcKtvMUg2b01UMjJBN0E6MQ>

An alternative close to the University is the hotel City (www.hotelcitypc.it; +39 0523-579752; during the reservation specify that you are going to the University to have a special deal)

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Registration procedure

Registration deadline: **15 January 2015**.

For registration, please follow this three-steps procedure:

1) payment of **70 Euros**, by bank transfer, to:

Account holder: Società Italiana di Chimica Agraria

Account number: 1000/12263

Bank: Banca Prossima, via Manzoni ang. Via Verdi, 20121 Milano

IBAN: IT64 V 03359 01600100000012263

All banking costs must be paid by the participant.

The name and address of the participant as well as the details of the payment should be clearly indicated when completing the bank transfer.

2) **send a scanned copy** of your payment (JPG or PDF format) by e-mail to luciano.cavani@unibo.it

3) **send your registration form** to luciano.cavani@unibo.it

Once you have completed this three-steps procedure, we will confirm your registration by e-mail.

Poster and abstract presentation

All the participants are asked to prepare a poster (approx. size: 80 (w) x 100 (h) cm) about their current research activities and are kindly requested to submit an abstract before **15 January 2015**. Four abstracts selected by the Organizing Committee will be presented by their applicants (12 min presentation + 3 min of discussion). Applicants will be informed about the selection at least one week before the starting of the school.

In addition, three poster prizes will be awarded by the Organizing Committee for the best poster presentations.

Abstract format: abstract should not exceed 250 words (excluding title, names and affiliations, arial 12 pt) and all the authors names and affiliations should be indicated. Abstract should be sent as word file to roberto.terzano@uniba.it.

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General information

Contacts

For any questions or doubts regarding School organization, please contact organizers at

gian.beone@unicatt.it

roberto.terzano@uniba.it

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Organizing committee:

Beone Gian Maria - UCSC

Cavani Luciano - UniBO

Cesco Stefano - UniBZ

Ciavatta Claudio - UniBO

Mimmo Tanja - UniBZ

Terzano Roberto - UniBA

Trevisan Marco - UCSC

Chairmen and Coordinators of the Working Groups:

Beone Gian Maria - UCSC

Laudicina Vito Armando - UniPA

Renella Giancarlo - UniFI

Spagnuolo Matteo - UniBA

Terzano Roberto - UniBA

Speakers:

Astolfi Stefania - UniVT

Cavani Luciano - UniBO

Carminati Andrea - UniGoettingen

Ceccherini Maria Teresa - UniFI

Cocozza Claudio - UniBA

Cozzolino Vincenza - UniNA

Del Buono Daniele - UniPG

D'Imporzano Giuliana - UniMI

Grigatti Marco - UniBO

Lucini Luigi - UCSC

Manoli Chiara - ILSA S.p.A.

Martin Maria - UniTO

Mimmo Tanja - UniBZ

Monaci Elga - UnivPM

Pii Youry - UniBZ

Prinsi Bhakti - UniMI

Said Pullicino Daniel - UniTO

Schievano Andrea - UniMI

Six Johan - ETHZ

Sofo Adriano - UniBAS

Spagnuolo Matteo - UniBA

Suman Michele - Barilla S.p.A.

Tomasi Nicola - UniUD

Vigani Gianpiero - UniMI

Zaccone Claudio - UniFG

Zamboni Anita - UniVR

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