

DGP 2022

PROGRAM

“From Molecules to Traits – How Plants Feed the Future”

Tuesday, 04 October 2022

TUM AKADEMIEZENTRUM RAITENHASLACH - A103 AULA MAIOR

Welcome addresses

13:00 – 13:20 Patrick Bienert (Local Organizing Committee)

13:20 – 13:30 Edgar Peiter (President of the DGP)

OPENING PLENARY LECTURE

13:30 – 14:05 Søren Husted (Copenhagen University, Denmark)

Dissecting the functional properties of phosphorus (P) in plants to develop a fast and accurate procedure for detection of latent P deficiency directly in the field

Session 1 – Soil Fertility, Fertilizers and Fertilization (Chair: Torsten Müller; University of

Hohenheim)

14:05 – 14:25 Alicia Hernandez Mora (University of Hohenheim)

Relating phosphorus extractability to plant bioavailability in a set of recycling and conventional P fertilizers

14:25 – 14:45 Sabine von Tucher (Technical University of Munich)

Shoot biomass phosphorus content as an early indicator of P shortage in soil

14:45 – 15:05 Jakob Klein (University of Hohenheim)

Effect of inhibited urea-ammonium-sulfate to increase the nitrogen use efficiency and to reduce nitrous oxide losses caused by mineral fertilization

15:05 – 15:25 Hans-Werner Olf (Hochschule Osnabrück)

Evaluation of the Stenon FarmLab for in-situ measurements of plant available soil P, K and Mg as well as pH values based on soil samples from farmers' fields and long-term experiments

Tuesday, 04 October 2022 – continued ...

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15:30 – 16:40 Coffee Break (Gewölbehalle) & Poster Viewing (Gewölbesaal)

Session 2 – Genetics and Plant Nutrition (Chair: Uwe Ludewig; University of Hohenheim)

16:40 – 17:00 Sheng Huang (Okayama University)

Role of ZIP family transporters in zinc uptake and distribution in rice

17:00 – 17:20 Zhaojun Liu (Technical University of Munich)

A global transcriptome analysis in Brassica napus identified a yet uncharacterized boron-deficiency responsive gene

17:20 – 17:40 Minh Hoang (Martin Luther University Halle-Wittenberg)

Functional characterization of chloroplast-localized BICAT proteins in sugar beet (Beta vulgaris) and barley (Hordeum vulgare)

17:40 – 18:00 Melissa Mang (University of Hohenheim)

Contrary to Flint lines, modern European Dent lines lost their phosphate and nitrogen starvation response under low Pi Availability

18:00 – 18:20 Moritz Sexauer (Julius Maximilian University of Würzburg)

A micro RNA mediates shoot control of root organ formation

18:30 – 20:30 Light Dinner (Gewölbehalle) at Posters (Gewölbesaal)

20:30 Bus Shuttle to Hotels in Burghausen

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Wednesday, 05 October 2022

TUM AKADEMIEZENTRUM RAITENHASLACH - A103 AULA MAIOR

PLENARY LECTURE

09:00 – 09:35 Jian Feng Ma (Okayama University, Japan)

Cadmium accumulation in cereal crops – from molecular mechanisms to breeding

Session 3 – Nutrient Signaling, Homeostasis and functions (Chair: Monika Wimmer; University of Hohenheim)

09:35 – 09:55 Gabriel Schaaf (University of Bonn)

Inositol polyphosphates regulate crosstalk between auxin signaling, plant immunity and phosphate-starvation responses

09:55 – 10:15 Santiago Alejandro (Martin Luther University Halle-Wittenberg)

*Characterization of metal tolerance proteins in *Beta vulgaris* reveals diversity of micronutrient homeostasis mechanisms in dicotyledons*

10:15 – 10:35 Philipp Meyer (Hochschule Geisenheim University)

*A salt stress-induced, anion-specific transient alkalization of the leaf apoplast correlates spatiotemporally with stomatal closure in *Vicia faba**

10:40 – 11:45 Coffee Break (Gewölbehalle) & Poster Viewing (Gewölbesaal)

Session 4 – Root Development and Functioning (Chair: Klaus Dittert; Georg-August-University of Göttingen)

11:45 – 12:05 Nicolaus von Wirén (IPK Gatersleben)

Nitrogen nutrition as versatile determinant of root plasticity

12:05 – 12:25 Peng Yu (University of Bonn)

Genetic basis of root functioning and biotic interaction with rhizosphere microbes for nitrogen foraging

12:25 – 12:45 Lukas Kehm (Justus-Liebig University of Giessen)

Changes in root morphology, nutrient- and water-utilization efficiency of maize subjected to drought stress and a paclobutrazol treatment

12:50 – 14:15 Lunch & Snacks (Gewölbehalle) - Poster Viewing (Gewölbesaal)

Wednesday, 05 October 2022 - *continued ...*

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Session 4 (continued) – Root Development and Functioning (Chair: Karl H. Mühling; CAU Kiel)

14:15 – 14:35 Tino Kreszies (Georg-August University of Göttingen)

Salt stress enhances apoplastic barriers in seminal roots of different barley species

14:35 – 14:55 Mirriam Chishala Chibesa (University of Natural Resources and Life – BOKU-Vienna)

Root exudation patterns of rapeseed, rice, and wheat in response to external Si concentrations

Session 5 – Crops for a Healthy Future: Nutrition, Food Quality and Health

15:00 – 15:20 Xudong Zhang (University of Hohenheim)

Mineral nutrients and crop grain quality

15:20 – 16:40 *Coffee Break & Snacks (Gewölbehalle)*

Virtual Closing Lecture

16:40 – 17:05 Dale Sanders (The John Innes Centre, Norwich, UK)

TBA

Poster Award

17:05 – 17:35

Dissertation Award Lecture

17:35 – 18:05 Lecture of the DGP Dissertation Award winner 2022

Closing Remarks

18:10 – 18:20 Patrick Bienert (Local Organizing Committee)

Transfer to Hotel Glöcklhofer for the Conference Diner

18:30

BURGHAUSEN - HOTEL GLÖCKLHOFER

19:30 Conference Diner at Hotel Glöcklhofer

PROGRAM

Mitgliederversammlung der DGP

Thursday, 06 October 2022

BURGHAUSEN - HOTEL GLÖCKLHOFER - ROOM AVENTINUS

9:00 – 12:00 *Annual Meeting of the Members of the German Society of Plant Nutrition*
[9:15 Weißwurstfrühstück]

