



Deutsche
Gesellschaft für
Pflanzenernährung



Bilateral Conference of the German Society of Plant Nutrition (DGP) 2021

Germany meets Denmark -Challenges and Perspectives for Plant Nutrition in 2030

Wednesday, 22th September 2021



14:00

Welcome address

- Karl H. Mühling, Dean, Faculty of Agricultural and Nutritional Sciences, Kiel University
- Torsten Müller, University of Hohenheim
- Edgar Peiter, Chair DGP
- Simone Fulda, President, Kiel University

Session 1: NUTRIENT AVAILABILITY & CYCLING IN SOILS
Chair: Karl H. Mühling

14:15

Plenary Lecture: Experience of the new rules of fertilization in Denmark
Jan Kofod Schjorring (Copenhagen, Denmark)

15:00

Remote sensing methods for monitoring crop nitrogen and water status.
Mathias Neumann Andersen (Aarhus, Denmark),

15:30

Root growth and resource acquisition of crops
Kristian Thorup-Kristensen (Taastrup, Denmark)

16:00

Coffee Break and Posters Session

17:00

New Paradigm for Plant Nutrition
Achim Dobermann (Paris, France)

18:00

Annual Meeting of the German Society of Plant Nutrition (Members only)
Edgar Peiter

Thursday, 23th September 2021

Session 2: NUTRIENT ACQUISITION & HOMEOSTASIS

Chair: Edgar Peiter

- 09:00 **Synthesis and iron acquisition properties of coumarin-type siderophores**
Ricardo Giehl und Nicolaus von Wirén (Gatersleben)
- 09:30 **The role of ITPK1-dependent inositol pyrophosphates in controlling systemic phosphate signaling.**
Ester Riemer (Bonn), Ricardo Giehl (Gatersleben) & Gabriel Schaaf (Bonn)
- 10:00 **The role of DNA methylation in nutrient recovery during senescence.**
Emil Vátow, Ulrike Zentgraf & Uwe Ludewig (Hohenheim)
- 10:30 Coffee Break, Posters Session, and Meeting Photo

Session 3: NUTRIENT FUNCTION IN PLANTS

Chair: Sven Schubert

- 11:00 **Functional properties of P in plants and new ways to detect P deficiency in plants.**
Soren Husted (Copenhagen, Denmark)
- 11:30 **Boron efficiency in Brassica napus: New QTLs for old questions**
Thomas Alcock (München), Christian Flügge (Göttingen), Eva Heinrich (Göttingen), Benjamin Pommerrenig (Kaiserslautern), Astrid Junker (IPK), Thomas Altmann (IPK), Antje Schierholt (Göttingen) & Gerd Patrick Bienert (München)
- 12:00 **Calcium – the nutrient that rules the plant.**
Edgar Peiter (Halle)
- 13:00 Lunch

Session 4: PLANT NUTRITION, YIELD STABILITY & FOOD QUALITY

Chair: Christian Zörb

- 14:00 **Water-saving rice production: A heretic's point of view.**
Mathias Becker (Bonn)
- 14:30 **Leaf water homeostasis and apoplastic pH: Derivation of control parameters for a putative negative feedback-loop**
Hartmut Kaiser & Karl H. Mühling (Kiel)

15:00 **Nitrogen management for the quality of bread and wine**
Christian Zörb, M. Dier, A. Rekowski, C. Lang, N. Merkt & M. Wimmer
(Hohenheim)

15:30 Coffee break and Posters Session

Session 5: FERTILIZERS & FERTILIZATION
Chair: Klaus Dittert

16:00 **Closing phosphorus cycles in maize-based cropping systems**
Mehdi Nkebiwe, Tobias Hartmann, Yawen You, Daniel Wanke, Yuan Wang,
Huaiyu Yang, Xinping Chen, Fusuo Zhang & Torsten Müller (Hohenheim,
Beijing, Chongqing)

16:30 **GülleBest – Innovative liquid manure application techniques for use in
growing crops to mitigate ammonia and greenhouse gas emissions and to
improve nitrogen productivity**
Ten Huf, M., C. Buchen, C. Essich, H. Flessa, R. Fuß, T. Jorissen, G. Recke, T.
Reinsch, R. Ruser, F. Taube, R. Well, M. Zutz & H.-W. Olf (Osnabrück,
Braunschweig, Kiel, Hohenheim)

17:00 **Approaches to better adapt nitrogen fertilization to the demand of spinach
in open-field production.**
Christian Frerichs & Diemo Daum (Osnabrück)

17:30 **Awarding of the price for the best doctoral thesis in Plant Nutrition in
2021 of the DGP**

19:00 **Conference Dinner**

Friday, 24th September 2021

Session 6: TOXICITY & REMEDIATION
Chair: Christoph M. Geilfus

09:00 **Phytostabilization of heavy metal polluted soils: a case study for sewage
farm soil in Berlin.**
Liu Rui, Holger Bessler, Christof Engels (Berlin)

09:30 **Plants under salt stress: Is energy a limiting factor?**
Sven Schubert & Franzika Faust (Gießen)

10:00 **Abscisic acid priming induces long-term salinity resistance in *Vicia faba*:
Changes in key transcripts, metabolites, and ionic relations**
Amit Sagervanshi & Karl H. Mühling (Kiel)

10:30 Coffee Break and Posters Session

Session 7: PLANT NUTRITION &
ENVIRONMENTAL POLLUTION
Chair: Torsten Müller

11:00 **Adaptation of agricultural production systems to climate change**
Jorgen Eivind Olesen (Aarhus, Denmark)

11:30 **Nitrate uptake and C exudation – do plant roots stimulate or inhibit
denitrification?**
Pauline Sophie Rummel, Reinhard Well, Birgit Pfeiffer, Klaus Dittert,
Sebastian Floßmann & Johanna Pausch (Göttingen)

12:00 **Closing lecture**
**Reduction of nitrogen losses by an optimized N management system –
GreenWindows 4.0**
Urs Schmidhalter, Paul Heinemann & Maximilian Lösch (München)

13:00 **Prices for the best posters; Closing remarks**