

# PLANT NUTRITION IN GLOBAL CHANGE

*57<sup>th</sup> Annual Conference of the German Society of Plant Nutrition*

**LOCATION:** Justus Liebig University Giessen, Ludwigstrasse 23, 35390 Giessen

**DATE:** September 29 – October 1, 2025

## Preliminary Program

Organizing committee at the Justus Liebig University Giessen:



***Institute of Plant Nutrition***

Jakob Santner, Birgit Hütsch, Tabea Selzer



***Department of Agronomy and Crop Physiology***

Michael Frei, Linbo Wu, Johanna Krippner

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## General information

### Registration

The registration desk is located in the entrance hall of the university main building (Ludwigstrasse 23). Please register before attending the conference. Registration will be open throughout the conference.

### Conference language

The conference language is English. Only the members' meeting of the German Society of Plant Nutrition (DGP) will be held in German.

### House rules

We kindly ask for your understanding that no food and drinks are allowed in the lecture hall ('Aula'). Please use the breaks to refresh yourself. Thank you for your understanding and cooperation!

## Early Arrival - Sunday, September 28

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18.00 h	Icebreaker Cocktail
	Location: to be announced

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## Day 1 - Monday, September 29

9.00 h	<i>Registration open</i>	
10.30 h	Welcome address	
10.50 h	<b>K1</b> <b>Winfried Winiwarter</b> <i>International Institute of Applied Systems Analysis (Austria); University of Zielona Góra (Poland)</i>	<b>Global impacts of nitrogen in the environment: the need to improve nitrogen use efficiencies in food production and beyond</b>
11.30 h	<b>T1</b> Wiebke Reymann	Soil organic carbon to clay ratios as determinant of nitrogen retention and fertilizer use efficiency
11.50 h	<b>T2</b> Markus Weinmann	Integrating soil biodiversity and rhizosphere processes for climate-resilient, nutrient-efficient cropping systems: Insights from Four EU Projects
12.10 h	<b>T3</b> Benjamin Neuhäuser	Phospho-switch from potential driven $\text{NH}_4^+$ accumulation to gradient dependent $\text{NH}_3$ transport
12.30 h	Light Lunch	
13.30 h	<b>K2</b> <b>Yiyong Zhu</b> <i>Nanjing Agricultural University (China)</i>	<b>Plasma membrane <math>\text{H}^+</math>-ATPases in plant nutrition and crop improvement</b>
14.00 h	<b>T4</b> Oriana Mariani	Endoplasmic reticulum-localized cation transporters - crucial for plant development, fertility, and nutrition
14.20 h	<b>T5</b> Dhirendra Fartyal	Exploring the role of inositol pyrophosphates in rice phosphate homeostasis
15.00 h	<b>T6</b> Tobias Reineke	Phosphorus deficiency affects early root development in <i>Triticum turgidum</i> ssp.
15.30 h	Coffee break	
16.30 h	<b>P</b> Poster session - even numbers	
17.00 h	<b>K3</b> <b>Rivka Elbaum</b> <i>Hebrew University of Jerusalem (Israel)</i>	<b>Formation pathways of biosilica in sorghum</b>
17.20 h	<b>T7</b> Stefan Hanstein	Slow-release mineral fertilizers with compostable plastic coatings
17.40 h	<b>T8</b> Maarten Everaert	Novel slow-release seed coatings for improved micronutrient supply to crops
18.00 h	<i>End</i>	
18.30 h	Members' meeting of the German Society of Plant Nutrition (DGP) <b>- members only -</b> Location: Ludwigstrasse 23, Biologie-Hörsaal (2 <sup>nd</sup> floor, room 232) <i>Snacks and drinks will be provided</i>	

## Day 2 - Tuesday, September 30

8.15 h	Registration open		
8.30 h	Gold sponsor presentations		
9.00 h	<b>K4</b>	<b>Sandra Schmöckel</b> <i>University of Hohenheim (Germany)</i>	<b><i>Chenopodium quinoa</i> - a minor crop for future marginal soils</b>
9.30 h	<b>T9</b>	Matthias Wissuwa	Development of Zn-biofortified rice for Madagascar
9.50 h	<b>T10</b>	Andriele Wairich	Discovering the hidden power of wild rice: A key to mineral disorders tolerance
10.10 h	<b>T11</b>	Sabine von Tucher	Wheat as an early indicator for the shortage of phosphorus in soil
10.30 h	Coffee break		
11.00 h	<b>P</b>	Poster session - uneven numbers	
12.00 h	<b>T12</b>	Thomas Alcock	Fine mapping quantitative trait loci controlling boron efficiency in Brassicaceae by combining genetic and phenotypic information from natural and generated populations
12.20 h	<b>T13</b>	Klea Lami	NUDIX-Type hydrolases in <i>Arabidopsis thaliana</i> target specific inositol pyrophosphates and modulate nutrient signaling
12.40 h	<b>T14</b>	Jóska Gerendás	Defining plant nutrient elements from the plant's perspective
13.00 h	Light Lunch		
14.00 h	<b>K5</b>	<b>Mohsen Zare</b> <i>Technical University of Munich (Germany)</i>	<b>From soil to root: the role of mucilage in facilitating nutrient and water uptake</b>
14.30 h	<b>T15</b>	Raphael Tiziani	Root exudate responses to combined phosphorus deficiency and microplastic stress
14.50 h	<b>T16</b>	Miriam Chishala Chibesa	Characterization of polyacrylamide ZrOH hydrogels for sampling root-exuded carboxylates from soil-grown plants
15.10 h	<b>T17</b>	Britta Pitann	Understanding waterlogging tolerance: Mitigation strategies to cope with excess water
15.30 h	Coffee break		
16.00 h	<b>P</b>	Free poster session	
16.30 h	<b>T18</b>	Shayam Pariyar	Mineral nutrients composition and leaf surface wetness of atmospheric aerosols collected from Germany and Israel
16.50 h	<b>T19</b>	Uwe Ludewig	Positive interactions between plant-beneficial inoculants and members of the resident soil microbiome improve plant performance under stress
17.20 h	End		

## Day 2 - Tuesday, September 30

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19.00 h      Conference Dinner

- **registered participants only** -

**Location: Bootshaus, Bootshausstrasse 12, 35390 Giessen**

How to get there?

- a. **Walking distance** : 1.5 km (approximately 20 min)
  - b. **Public transport**:
    - Walk to Berliner Platz (550 m)
    - Take bus line 2, 3, 7, 801 or 802 until "Gießen Oswaldsgarten"
    - Walk to the restaurant (400 m)
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## Day 3 - Wednesday, October 1

8.15 h	<i>Registration open</i>		
8.30 h	Gold sponsor presentations		
9.00 h	<b>K6</b>	<b>Yoshiaki Ueda</b> <i>Japan International Research Center for Agricultural Sciences (Japan)</i>	<b>Integration of nutrient signals in plants: Mechanisms, genotypic differences, and modeling</b>
9.30 h	<b>T20</b>	Franziska Daamen	Conducting stress signalling: Impact of organellar calcium dynamics on salt tolerance
9.50 h	<b>T21</b>	Marion Deichmann	Detection of nutrient deficiencies in barley from RGB images, hyperspectral images, and hyperspectral point sensor data
10.10 h	<b>T22</b>	Naser Atu Qasim	Profitability of digestate application strategies - results from parcel and field trials
10.30 h	Coffee break		
11.15 h	Poster Awards & Doctoral Award Presentation by the recipient of the Doctoral Award		
12.00 h	Farewell address		
12.30 h	<i>End</i>		

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