

12 PhD positions (UNIVERSITÄT HOHENHEIM)

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The German Research Foundation (Deutsche Forschungsgemeinschaft, DFG) has funded the **Sino-German International Research Training Group AMAIZE-P** (DFG GRK 2366/1) since October 2018, with the topic of „**Adaptation of maize-based food-feed-energy systems to limited phosphate resources**“ at the University of Hohenheim (Stuttgart) in cooperation with the China Agricultural University (Beijing).

Starting from 01 October 2021, the Sino-German International Research Training Group AMAIZE-P offers **12 positions for doctoral researchers (PhD students, all genders welcome)** at the University of Hohenheim for candidates with above-average graded master degrees or corresponding qualifications. The positions are limited to a maximum of 3 years. The salary is in accordance with the German public service pay scale TV-L E13 65%. The following research subjects (RS) are available for doctoral researchers:

1. Genetic potential of maize:

- RS 1.1 Dissecting the genetic architecture of phosphate-use efficiency in maize (Prof. Dr. Tobias Würschum)
- RS 1.2 Importance of root architecture and rhizosphere-related processes for improving phosphate use efficiency (Prof. Dr. Uwe Ludewig)
- RS 1.3 Regulatory modules of carbon resource allocation under different phosphate availabilities (Prof. Dr. Waltraud Schulze)

2. Management at field and farm level:

- RS 2.1 Genotype to phenotype modelling of phosphate acquisition and related yield and quality traits of maize (Prof. Dr. Simone Graeff-Hönninger)
- RS 2.2 Rhizosphere manipulation to optimize phosphate fertilizer efficiency and soil phosphate availability (Prof. Dr. Torsten Müller)
- RS 2.3 Detecting phosphate status in soil and in maize canopies by non-invasive methods (Prof. Dr. Joachim Müller)
- RS 2.4 Heavy metals from phosphate fertilizers in maize food-feed energy systems - Do ecophysiological and root traits affect cadmium uptake in different maize germplasm? (Dr. Jürgen Franzaring & Jun.-Prof. Dr. Andreas Schweiger)

3. Nutrition and recovery:

- RS 3.1 The impact of reduced phosphate availability on essential micronutrients in maize for human consumption (Prof. Dr. Jan Frank)
- RS 3.2 Inositol phosphates and microbiome in the digestive tract and phosphate utilisation of farm animals fed maize (Prof. Dr. Markus Rodehutschord & Jun.-Prof. Dr. Amélia Camarinha da Silva)
- RS 3.3 Deployment of phosphate resources for nutrient recycling via anaerobic digestion systems (Dr. Hans Oechsner & Prof. Dr. Joachim Müller)
- RS 3.4 Scale-up of hydrothermal phosphate recovery (Prof. Dr. Andrea Kruse)

4. Economic evaluation and synthesis:

- RS 4.1 Economic analyses at plot, farm enterprise, regional and sectoral levels (Prof. Dr. Enno Bahrs)

Detailed information about the Sino-German International Research Training Group AMAIZE-P and about the single research subjects (RS) may be found on the project website: <https://amaize-p.uni-hohenheim.de> The project involves extended research stays in China. With equal qualifications, preference will be given to candidates with disabilities. The University of Hohenheim seeks to increase the proportion of women in research and teaching and therefore strongly encourages female scientists to apply. Applications in English language indicating preference for at least one of the above mentioned topics as field(s) of own interest, letter of motivation, current CV, copies of certificates and proof of very good skills in English language (corresponding to TOEFL ibt 90 or IELTS grade 6.5) are expected to be sent via e-mail as one entire pdf document by **May 15th, 2021** to the coordinator (German side) of the Sino-German International Research Training Group: Dr. Marco Roelcke, University of Hohenheim (763), 70593 Stuttgart, Germany Phone: +49 711 45923984, e-mail: marco.roelcke@uni-hohenheim.de