



Starting 01 October 2018, the German Research Foundation (Deutsche Forschungsgemeinschaft (DFG)) will fund a **Sino-German Research Training Group** (GRK 2366/1) with the topic

## "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 2018, the Sino-German Research Training Group offers

# 12 positions for doctoral researchers (TVL E13 65%)

at the University of Hohenheim for candidates with above-average graded master degrees or corresponding qualifications. The following research topics are available for doctoral researchers:

### Genetic potential of Maize:

- Genetic variation, genetic architecture and genomic prediction of phosphate-use-efficiency traits in European and Chinese maize (Prof. Dr. Tobias Wüschum)
- Importance of root architecture and rhizosphere-related processes for improving phosphate use efficiency (Prof. Dr. Uwe Ludewig)
- Regulatory modules of carbon resource allocation under different phosphate availabilities (Prof. Dr. Waltraud Schulze)

### Management at field and farm level:

- Genotype to phenotype modelling of phosphate acquisition and related yield and quality traits of maize (Prof. Dr. Simone Graeff-Hönninger)
- Increasing soil phosphate availability and phosphate fertilizer efficiency (Prof. Dr. Torsten Müller)
- Detecting phosphate status in soil and in maize canopies by non-invasive methods (Prof. Dr. Joachim Müller)
- Heavy metals from phosphate fertilizers in maize based food-feed-energy systems (Prof. Dr. Andreas Fangmeier)

### **Nutrition and Recovery:**

- The impact of reduced phosphate availability on essential micronutrients in maize for human consumption (Prof. Dr. Jan Frank)
- Inositol phosphates in the digestive tract and phosphate utilisation of farm animals fed maize (Prof. Dr. Markus Rodehutscord)
- Deployment of phosphate resources for nutrient recycling via anaerobic digestion systems (Dr. Hans Oechsner & Prof. Dr. Joachim Müller)
- Hydrothermal conversion of biomass to carbon materials with phosphate recovery (Prof. Dr. Andrea Kruse)

### Economic evaluation and synthesis:

- Economic analyses at plot, farm enterprise, regional and sectoral levels (Prof. Dr. Reiner Doluschitz)

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) are expected to be sent via e-mail as one entire pdf document by **July 01**<sup>st</sup> **2018** to the **German spokesman of the Sino-German Research Training Group** 

#### Prof. Dr. Torsten Müller, Universität Hohenheim (340i), 70593 Stuttgart, Phone: + 49 (0)711 459-22345, e-Mail: torsten.mueller@uni-hohenheim.de

This call stays open until all positions are filled.