



The Department of Crop Sciences, Division of Agronomy is currently seeking for two

## Postgraduate Research Associate

### Project employment

(Reference code: 48)

Extent of employment: 30 Hours per Week  
Duration of employment: 01<sup>st</sup> of August 2015 to 31<sup>st</sup> of January 2018

Gross monthly salary and pay grade in terms of collective agreement  
for university staff (payable 14 times per year): B1, € 1.997,20

### Responsibilities

We offer two PhD positions within a tropical research project that investigates the phosphorus, potassium, sulfur and zinc uptake kinetics of plant roots. This project aims at identifying and evaluating and evaluating the effect of diffusion limitations on the determination of kinetic parameters through a set of well-controlled nutrient solution experiments. Furthermore, the exact localisation of nutrient efflux, as well as nutrient influx, will be determined using recently developed, highly innovative chemical imaging techniques. The obtained information will be used in numerical simulations to clarify whether root uptake kinetics need to be explicitly parametrised in mathematical nutrient uptake simulations, or whether roots can effectively be regarded zero sinks when growing in soil.

The experimental work will include radiotracer and autoradiography studies, as well as chemical imaging based on diffusive gradients in thin films (DGT). Renowned international scientists (Dr. Phillip White, The James Hutton Institute, Dundee, UK; Dr. Fien Degryse, University of Adelaide, Australia; Dr. Andrea Schnepf, Forschungszentrum Jülich, Germany) participate in this project.

Research tasks include conducting the diffusion limitation and influx/efflux localisation experiments, supporting the work on numerical simulation, and publishing the results in peer-reviewed scientific journals. The PhD students will be supervised by Dr. Walter Wenzel, Professor of Soil Science and Dr. Hans-Peter Kaul, Professor of Agronomy.

### Required skills and qualifications

- MSc in Agriculture, Biology, Plant Sciences, Soil Science, Chemistry or related fields

### Desirable skills and qualifications

- Excellent command of English
- Experience in scientific writing
- Stress resilience, reliability
- Social- and teamwork skills
- Knowledge of the applied techniques is an asset

Applications can be submitted until: 02<sup>nd</sup> of July 2015

University of Natural Resources and Life Sciences Vienna seeks to increase the number of its female faculty and staff members. Therefore qualified women are strongly encouraged to apply. In case of equal qualification, female candidates will be given preference unless reasons specific to an individual male candidate tilt the balance in his favour.

Please send your job application to Personnel department, University of Natural Resources and Life Sciences, 1190 Vienna, Peter-Jordan-Straße 70; E-Mail: [kerstin.buchmueller@boku.ac.at](mailto:kerstin.buchmueller@boku.ac.at). (**Reference code: 48**)

Questions relating to the positions should be sent to: Dr. Jakob Santner, [jakob.santner@boku.ac.at](mailto:jakob.santner@boku.ac.at).

We regret that we cannot reimburse applicants travel and lodging expenses incurred as part of the selection and hiring process.

**[www.boku.ac.at](http://www.boku.ac.at)**

**Vice Rector for Human Resource Management and Organisational Development:**  
Univ.Prof. DI Dr. Georg Haberhauer, MBA