

Announcement for a PhD scholarship on

“Processing and preservation of green leafy vegetables in Sub-Saharan Africa”

at the Department of Crop Sciences in cooperation with the Department of Agricultural Economics and Rural Development, University of Göttingen, Germany

Background

The FruVaSe project will start in September 2018 to work on “Fruits and vegetables for all seasons: Improved resource-efficient processing techniques and new market solutions for surplus fruits and vegetables for rural development in Sub-Saharan Africa”. The three-year project will be led by University of Göttingen in collaboration with Erfurt University of Applied Sciences in Germany, Nelson-Mandela African Institution for Science and Technology in Tanzania, Makerere University in Uganda, University of Nairobi, and University of Eldoret in Kenya. FruVaSe will (i) select the nutritionally most promising varieties of the target fruits and vegetables, focussing on cashew apple, guava, jackfruit, and the green leafy vegetables cowpea leaves, cassava leaves, and African nightshade, (ii) develop new and evaluate traditional technologies for processing and prolonged shelf-life without degrading the nutritive value, taste and presentational characteristics, and (iii) possibly commercialize products. An integrated systems’ approach (water-energy-food-waste nexus) shall be followed, aiming at (iv) the model development of an energy autonomous, resource-efficient processing procedure embedded in a business model empowering rural women. In a life-cycle approach, all parts of the plants will be used, for human nutrition, animal feed and/or biogas production, the sludge being used as fertilizer, thereby reducing greenhouse gas emissions. Additionally, (v) a water re-use concept will be established as well as an analysis and innovative purification of drinking water for juice production.

For the work package on **“Processing and preservation of green leafy vegetables, nutrient-retention and shelf-life period”** we are looking for one PhD student who is highly motivated to work on the above-mentioned topic in a multi-disciplinary and international team.

Responsibilities/research tasks

In consultation with the supervisors at University of Göttingen and Makerere University in Uganda, the PhD student will

- analyse the trend of utilization of selected vegetables, traditional preservation techniques and determine the nutritional value of vegetable species
- determine the most appropriate processing technologies on different levels of processing (house-hold, woman group for own consumption and marketing, local enterprises)
- determine the retention of important vitamins and minerals in the processed foods

Educational qualifications, skills and experience

- MSc with distinction/ honours in agricultural or horticultural sciences, food technology, food sciences or related fields
- Very good command of English is required
- Work experience in Sub-Saharan Africa is preferred
- Experience in the field of vegetable processing and/or analytical methods is preferred
- Team player; willingness to assume responsibility and work on own initiative
- High interest in other disciplines and willingness to work in a multi-disciplinary team
- Proficiency in relevant statistics is essential
- Willingness to travel and spend several months alternately in East Africa and Germany

What we offer

- Scholarship according to the German Academic Exchange Service (DAAD) regulations in Germany or in the relevant country
- International and interdisciplinary project to work in together with several other PhD and MSc students from different disciplines in all participating countries

Duration and preferred dates: 1st September 2018 – 31st August 2021

Contact: Prof. Dr. Elke Pawelzik, University of Göttingen, Department of Crop Sciences, Quality of Plant Products, Carl-Sprengel-Weg 1, 37075 Göttingen, Germany

Please submit your application (CV, a one-page motivation statement and a synopsis of your proposed research [maximum four pages]) in one pdf file online to: epawelz@gwdg.de. Deadline for applications is **July 20, 2018**.