



Announcement of a Master's thesis on

Most efficient energy and water consumption techniques for postharvest handling, processing and preservation of African leafy vegetable

in the framework of the project

“Fruits and vegetables for all seasons - FruVaSe: Improved resource-efficient processing techniques and new market solutions for surplus fruits and vegetables for rural development in Sub-Saharan Africa”

Background

The FruVaSe project works 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 is led by University of Göttingen in collaboration with other German partners, Nelson-Mandela African Institution for Science and Technology in Tanzania, Makerere University in Uganda, University of Nairobi, and University of Eldoret in Kenya. Among others FruVaSe will select the nutritionally most promising varieties of green leafy vegetables of cowpea leaves, cassava leaves, and African nightshade and develop new and evaluate traditional technologies for processing and prolonged shelf-life without degrading the nutritive value, taste and appearance. In addition, the processing technologies will be evaluated in terms of water and energy needs. More details: <http://www.user.gwdg.de/~uaac/fruvase01.htm>

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

Responsibilities/research tasks

- determine the most efficient energy and water consumption techniques that are appropriate for postharvest handling of African leafy vegetables prior to processing
- document energy and water consumption during processing and storage of African leafy vegetables and their products
- optimise energy and water consumption during processing and storage of the African leafy vegetable sauces

Main research questions are

- What are the appropriate postharvest handling practices for the African nightshade, cowpea and cassava leaves prior to processing?

- How much water and energy are necessary for processing and which processing techniques are the most efficient regarding energy and water consumption?

Educational qualifications, skills and experience

- At least two semester master studies in agricultural sciences or related fields
- At least basic knowledge and high interest in laboratory work
- Good command of English as the thesis has to be written in English
- Team player, willingness to assume responsibility and work on own initiative

Preferred timeline

Start in November 2019 or later

The thesis will be jointly supervised by Prof. Elke Pawelzik and Prof. Frank Beneke (Division of Agricultural Engineering).

Contact

Prof. Dr. Elke Pawelzik (epawelz@gwdg.de) or Amina Ahmed (aahmed1@gwdg.de)