

# Enhancing food and income security along agricultural commodity chains

held September 8<sup>th</sup> – September 15<sup>th</sup> 2015 in Witzenhausen / Germany  
at the University of Kassel solar experimentation & demonstration plant "Am Sande"

**The concept:** With view to ensuring food security, especially in the so-called developing countries, the reduction of postharvest losses and the addition of value along agricultural food value chains is of major importance. According to FAO estimates about one third of the world food production is lost due to improper handling, storage or processing. This underlines the need for research on postharvest handling.

Consumption patterns in developing countries are changing due to a growing middle class in the rapidly growing urban areas. This offers the rural agricultural population to take part in a growing food market if improved decentralized food processing and preservation technologies can be developed cost effectively and with low requirement for capital investment. In this context access to energy and clean water is an indispensable prerequisite. The challenge for research and development professionals is to design and create locally adapted technological solutions for the specific requirements of different value chains.

Transdisciplinary and actor-oriented research methods as applied in social-ecological systems identity potentials for innovation and change, considering different knowledge and value systems. Integration of actors in system analysis and the development of solutions leads to a better fit.



The group visited the community supported agriculture (CSA) farm and garden Freudenthal. The guided tour around the fields and the discussions afterwards provided insights into the idea of CSA, an alternative, locally based economic model of farming and food distribution.

**The participants:** A total of 25 alumni from 14 countries in Asia, Africa and Latin America spent an intensive week of theoretical debate, practical demonstration, experimentation and scientific exchange to gain deeper insight into working concepts for enhancing postharvest technologies at the solar demonstration plant "Am Sande" in Witzenhausen.

**The programme:** The Department of Agricultural Engineering of the University of Kassel together with the Department of Plant Product Quality of the Georg-August University of Göttingen set up a program to present the participants with a range of topics concerning the seminar title and involving them in different activities.

After the participants' introductory presentations on the current state and perspectives of food and income security along agricultural commodity chains in their home countries, the interactive work programme addressed the following thematic fields:

- Rural postharvest processing
- Solar technologies suitable for developing countries
- Social ecological systems and transdisciplinary research
- Participatory video
- Community Supported Agriculture (CSA)
- Quality aspects of postharvest processing
- Nutritional quality and quality assessment of agricultural products

**Theory and practice amalgamated:**

Besides lessons and talks, practical presentations and demonstrations enabled the participants to get insights into agricultural food value chains in Germany. Several excursions provided practical insights into farming and processing practices, marketing concepts and alternative, community based approaches to food security, safety and sovereignty (CSA Freudenthal, Biolandhof Max Weiland).

Applied research on tropical cropping systems was demonstrated at the Greenhouse for Tropical Crops of the University of Kassel and historical aspects of food production and consumption were discussed at a trip to the Burgruine Hanstein.

**Networking and social events:**

A welcome dinner and informal group activities gave room for intensive discussions and networking during the time in Witzenhausen. An intercultural evening with contributions from every country represented by the participants wrapped up the scientific part and enabled to learn more about the home countries of the other participants.

In order to give the participants a chance to have a very personal insight into German history and architecture, a visit to the Grenzuseum Schifflersgrund was offered followed by a visit to the historical city center of Bad-Sooden-Allendorf.



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