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## Assessment of Post-Harvest Handling Practices and Associated Losses and Limitations in the Value-Chains of Sweetpotato (*Ipomoea batatas* L. Lam) Root: A Case Study from SNNPR, Ethiopia

ADITYA PARMAR, OLIVER HENSEL

*University of Kassel, Agricultural Engineering, Germany*

### Abstract

Significant post-harvest losses take place during handling and due to marketing systems of sweetpotato in Ethiopia, but little information is available in current literature with regard to occurrence in the value chain, type and causes of these losses. A field survey was conducted in the months of February and March, 2015 in the ambit of RELOAD (Reducing losses and adding value) project funded by BMBF (Federal Ministry of Education, Germany), BMZ (Federal Ministry of Finance, Germany) and DAAD (German Academic Exchange Service).

Ethiopian sweetpotato production and consumption is primarily limited to SNNPR (Southern Nations, Nationalities, and Peoples' Region) region, which is the supplier of the fresh roots to several major cities. Semi-structured interviews, load tracking, measurement and drying experiments at farm, retail and wholesale level were conducted to gather relevant information. In total 60 stakeholders were interviewed; comprising farmers, retailers, wholesalers and collectors. Additionally talks were organised with local researchers at agricultural research centre, Awassa, Ethiopia.

A detailed understanding of the flow of product from farm to market was obtained and key constraints and challenges were identified. Some of the important factors which are contributing to post-harvest losses are numerous mechanical damages during harvest and post-harvest handling; lack of curing and storage facilities; poor conditions at the retail market. The results from the survey also elaborate the activity calendar, value chain map, margins of profits for stakeholders and seasonal variations in post-harvest losses due to supply and demand imbalances. Retail and storage simulation experiments gave a good insight of various kinds of decay and losses which are taking place at market level. Fungal diseases such as Foot rot, *Fusarium* surface and root rot were major causes responsible for decay and rotting during storage at ambient conditions.

Converting fresh sweet potatoes into sun and solar dried products has the potential to create a marketable value added product for commercial use in various forms of composite flours. Dried products are easy to handle, have superior shelf life and can insure food availability throughout the year.

**Keywords:** Drying, post-harvest handling, shelf life, sweetpotato, value chain