**Tropentag, September 14-16, 2022, hybrid conference**

"Can agroecological farming feed the world?
Farmers' and academia's views"

# Tomato - harnessing of efficient vegetable and fruit production, processing and marketing systems in Ethiopia through practice based education and participatory research

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**Abstract**

Ethiopia has good competitive advantages to become a vegetable and fruit exporter, considering its climate conditions. In addition, despite the current low level of vegetable consumption, the national market also has a large potential to flourish and sustain vegetable and fruit farming. There are several challenges affecting the performance of the fruit and vegetable value chain and contribute to the high percentage of post harvest losses, lack of technical knowledge and skills, lack of practice-oriented education and trainings of farmers and processors and lack of appropriate processing, storage and packaging facilities.

Via a survey which is done with face-to-face interviews of 400 selected vegetables and fruit farmers in three Ethiopian regions – Amhara, Sidama and Oromia, smallholder farmers' characteristics and farm practices, with special emphasis on the production, harvest and storage of perishable fruit and vegetables are mapped. Among the vegetable crops tomato, potato, onion and avocado and mango fruits have each been selected based on their consumption in the region and their economic importance. This information will serve as a foundation for education, entrepreneurial and community activities, all aiming to reduce post-harvest losses and thereby improving food and nutrition security. The project also aims to map farmers' aspirations and explore the influence of their aspirations on their choices of livelihood strategies and their resulting livelihood outcomes. In addition, a choice experiment questionnaire combined with statistical techniques, such as mixed logit and endogenous switching regression models will be used to answer the research questions and to achieve the research aims. The key outputs of the research will be assessment and characterisation of post-harvest losses for key vegetables and fruits, documentation of existing production, processing and marketing challenges and opportunities, and at least post-harvest technology gaps will be identified. Research results will be incorporated into curricula and into teaching materials of three Ethiopian universities.

**Keywords:** Ethiopia, food value chains, fruit and vegetable production, post-harvest losses

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