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Organic Farming to Cope with Climate Change — Raising Awareness for the Management of Systemic Interfaces

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Abstract

The aim of this project is to identify and implement climate change coping strategies in smallholder farms (including household and farm). The project is funded by KEF and BMLFUW, from Austria and BMU from Germany, within the framework of EU ERA ARD. The partners are the Division of Organic Farming / BOKU, Austria; University of Hohenheim, Germany; Bahar Dar University, Ethiopia; ARARI, Ethiopia; Egerton University, Kenya; and KARI, Kenya. The project commenced in January 2013 and will continue until 2016. The project consists of three components that are field trials, the development of farm specific innovation plans to cope with climate change and a collaborative learning community between farmers and researchers.

We observe that many adaptations toward climate change are already well known in scientific literature, but neither communicated by advisory services, nor established at farm or household level.

Positive impact of organic methods in our field trials is already visible, while it is to keep in mind that the whole potential of implemented clover fodder legumes, farmyard manure and green manure from alley shrubs on yields will first only fully materialize after in minimum three years. Innovative ideas to increase organic matter and to add protein fodder, e.g. with tree lucerne, fail, when farmers finally cut all branches, let them dry and burn the whole material. Farmers are also not motivated to produce more milk with e.g. alfalfa or clover, if there is no processing unit and no access to markets.

Our preliminary conclusion is that farmers' adaptation of farms and households strategies to cope with climate change with organic farming methods is a long-term process. Instead of sector specific advice, the whole advisory strategy must change into a systemic approach that includes household and farm activities. The teaching system should orient itself toward site specific selection and implementing a broad range of climate change adaptation techniques. While this is already the case at some sub Saharan universities, we observe that education continues to predominantly follow a mainly top-down, disciplinary approach, with mainstream agriculture training, excluding organic and agroforestry methods.

Keywords: Awareness, climate change, organic farming, smallholder farmers