Tropentag, September 17-19, 2018, Ghent

"Global food security and food safety:
The role of universities"

Crop Production Upgrading Strategies and their Role for Household Food Security in Chamwino District, Tanzania

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Abstract

Food insecurity is still a challenge affecting many people in the world, whereby the majority live in developing countries in Southern Asia and Sub-Saharan Africa. In Sub-Saharan Africa, many who are food insecure are poor smallholder farmers in rural areas who depend on rain-fed agriculture for food and income. In Tanzania, the Trans-Sec project was implemented 2013–2018 to promote site-specific and adapted upgrading strategies (UPS) in crop production to improve rural agricultural systems along the food value chains to improve smallholder farmers' food security. This study assesses the roles of such strategies for food security among smallholder farmers relying on rain-fed agriculture in two villages in semi-arid Chamwino district in central Tanzania. We draw on data from four gender-segregated focus group discussions as well as interviews with both women and men in 33 purposively selected households that have adopted UPS for enhancing soil water management and crop production. The two UPS considered in this paper are rainwater harvesting using intercropping on tied-ridges as well as kitchen gardens. Our findings show that farmers are still food insecure although they report improvements in terms of food stocks on average now lasting for eight months instead of six months, enhanced consumption of vegetables, and higher incomes. The limited impact on food security from tied-ridge UPS can be traced to low and erratic rainfall, especially during the sowing period in December, as well as limited expansion of the tied-ridges beyond the testing plots due to the tedious work involved in making the ridges using hand hoes. We argue that this upgrading strategy would have had a more positive impact on the food security of these households if rainfall had been enough for crops to mature. To achieve long-term successes in semi-arid, upgrading strategies like tied-ridge should integrate irrigation practices using additional water sources than rainwater.

Keywords: Agriculture-nutrition pathway, food security, Food value chain, Tanzania. , Upgrading strategies

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