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**The contribution of cassava production to food
security of smallholder farmers in the regions of
Dodoma and Morogoro, Tanzania**

Thesis in the study program Agricultural Economics (M.Sc.)

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Chapter 6

Summary

This study addresses the contribution of cassava cultivation to food security. As this research is embedded into the Trans-SEC project, surveyed regions are Morogoro and Dodoma (Tanzania). Due to certain beneficial characteristics of cassava regarding its robustness and versatility for multiple uses, the impact of cassava production on food security is being discussed scientifically. At the same time, in the face of population growth and climate change, scientists and organizations seek solutions on how to enhance food security. The objective of this study is to find out whether and how cassava cultivation benefits smallholder farmers in the regions of Dodoma and Morogoro, although present data show that only a small share of surveyed households are cassava cultivators. Moreover, the study was aimed at finding out main factors that are benefiting or threatening food security of smallholder farmer households in the survey region and to analyze whether cassava cultivation could counteract to that.

By applying a mixed methods approach, both quantitative and qualitative data have been taken into consideration. While quantitative data were provided by the Trans-SEC household survey, the author of the thesis collected qualitative data by conducting eleven semi-structured interviews in the villages Idufu and Ilolo (Dodoma region). Making use of the mixed data collection an extensive analysis was conducted to answer the research questions. First, to meet the complexity of the chosen food security definition, three approaches for household food security measurement were applied. These approaches covered the defined food security components of food availability, food access, and food utilization. Thereby, dependent variables for regression models were constructed. Chosen on basis of the literature review and

extracted from the household survey, different socioeconomic and agricultural variables were integrated in the regression models as independent variables. Based on the regression results, factors affecting the three levels of food security have been worked out. In addition to this, semi-structured interviews supplemented data by analyzing the contribution of cassava to food security in detail.

Regression results showed that in terms of food availability, drought; the use of own livestock products; the ability of saving parts of the income; millet and/or sorghum cultivation are factors impacting on the food security of 899 households of the survey. Regarding food access, drought; the share of infertile land; high food prices; the total annual income per nucleus and gender are factors that influence food security. The use of own livestock products; the number of household members; the use of water conservation methods; literacy, and the number of assets impact on food security in terms of food utilization. In the regression models cassava cultivation was expected to be no significant factor in terms of food security. Main beneficial characteristics of cassava revealed by the literature review are drought resistance, tolerance to poor soils and versatility in uses like feed for livestock, firewood, and starch production. By linking aforementioned food security factors with these cassava characteristics, the potential to enhance food security by means of increased cassava cultivation turned out to affect food security on every level. Nevertheless, qualitative interviews found out that cassava is relevant and important for cassava cultivators but it mainly enhances their food security in terms of food availability. Missing markets, limited processing, and low and unstable prices impede a significant contribution of cassava regarding food access. Moreover, the perception of cassava as a poor man's crop highly influences cassava production and consumption.

To sum up, cassava cultivation has a positive impact on food security, mainly on the level of food availability. Nevertheless, the study shows that achieving food security through cassava cultivation is still highly constrained by several factors like pests, missing markets and poor processing, social perception and lacking knowledge.