



From skepticism to realism: unlocking productivity potential under small holder farmers in Babati, Northern Tanzania

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Abstract

Low productivity of agriculture is hampered by lack of/poor knowledge on improved soil management. As part of Africa RISING of the Feed the Future initiative and a follow-up scaling project, multi-faceted approaches were undertaken to introduce, refine and train farmers on new technologies over 4 years including demonstration trials, field days and agronomic surveys to assess farmer's experiences in use of improved practices in crop production in Babati. Use of improved practice (use of fertilizer and improved seed at recommended plant densities) resulted in high and profitable yield increases consistently over the years. As a result, the practice was introduced to 125 farmers among whom an agronomic survey was undertaken; each farmer had the improved practice alongside a local practice. The agronomic survey showed that 46% of farmers in the 4 villages did not use manure mainly due to scarcity issues and fields being far from source of the manure. Overall, 72% and 16% of the farmers grow maize with pigeonpea and common beans (mostly in the drier Sabilo village), respectively, as intercropped, i.e., only <10% grow maize as a monocrop. 63% are using rope planting for the first time and of these, 10% have extended this practice beyond the fields supported by the project. In the improved practice promoted, improved varieties are the most preferred (50% of the farmers) while fertilizer and optimized spacing have equal preference (ranked first by 25% of farmers each). Compared with the local practice, increased cob size, strong and taller plants and greener leaves were observed under the improved practice by at least 80% of the farmers. Only 30% of the farmers in our study population have used fertilizers before, mostly in agronomic activities conducted by Africa RISING project in the last 4 years. Nevertheless, >95% of farmers intend to continue using fertilizers to increase productivity although this needs to be further verified. Trends in yield over time as observed by the farmers are related with the presence or absence of soil and water conservation, farmer knowledge and management.

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