SMALLHOLDER FARMERS' ADAPTATION TO CLIMATE VARIABILITY IN NAKASONGOLA DISTRICT

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ABSTRACT

Climate change and variability are among the biggest contemporary threats to agricultural production and livelihoods in Sub Saharan Africa. As climate variability continues to manifest, the scale of the necessary adaptation evolves in response to extreme climatic events. In Uganda, agricultural production and livelihoods are largely at the mercy of climate variability due to erratic rainfall, rising temperatures resulting in prolonged droughts which have devastating effects. The frequency and severity of such extreme climactic events, seasonal patterns and distribution of pests and diseases are on increase. Smallholder farmers are increasingly challenged to anticipate, prepare, cope, recover and adapt to impacts of climate variations, however their capacity is low.

This study was conducted to examine smallholder farmers' adaptation to climate variability in Nakasongola District as a case study. The research design was cross-sectional survey. Data was collected using; questionnaires in 240 households, focus group discussions and key informant interview guides. Quantitative data was entered in Epidata software and analysed using Statistical Package for the Social Sciences (SPSS-version17) and Micro Soft office Excel 2007. Descriptive statistics were generated. Binary logistic regression model was run to assess the perceived effect of climate variability on crop production. A non –parametric chi-square test was run to check the relevance of adaptation strategies to climate variability at 95% confidence level.

The results revealed that, climate variability is a reality in Nakasongola District as almost all farmers (99%) attested having experienced climatic variations and the most severe events experienced were: droughts, crop pests and diseases, human diseases and livestock epidemics. The common perceived causes of climate variability were tree cutting for charcoal making and timber, continuous cultivation and bush burning. Findings further revealed that common crops like cassava, bananas, coffee and maize had reduced over the past ten years. In response, farmers had devised adaptation strategies to climatic variability mainly by changing cropping patterns, practicing mixed farming, using resistant crop varieties and diversification of livelihood activities. The study recommends that, apart from the provision of improved seed and related innovations, timely and accurate information should be readily available and accessible to smallholder farmers through awareness campaigns and extension services at sub county and district level. There is need to support the communities in Nakasongola District through sensitization and training using community based adaptation approaches on climate variability, its effects on crop production and creation of alternative community livelihoods activities so as to enhance community adaptation capacity and resilience.