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Climate Change and Uncertainty in Local Agriculture in Kenya: Do Farmers Have Options?

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Abstract

Climate change sets an unprecedented challenge for humanity in the 21st century. Communities in developing countries will be the most vulnerable as they have the weakest adaptive capacity to cope with this change, including farmers in Kenya. Much scientific work on climate change has focused on the global and regional levels, with little emphasis on the local context, yet, climate change impacts will be most felt at the local levels; specifically for small-scale agriculture, which forms the base for most livelihoods in Kenya. If sustainable agricultural development is to be realised in Kenya, climate change responses need to be harmonised with national development strategies. This paper highlights climate change induced challenges of smallholder agriculture and presents options and opportunities to deal with drier climates as seen by farmers. It spotlights the plight of smallholder farmers in Laikipia District, Kenya, and their deteriorating agricultural production under current experiences of climate variability and change. Data was collected between October 2010 to May 2011. Qualitative data includes results from 20 focus group discussions and 34 key informant discussions with male and female farmers. Quantitative data comprised results from 200 questionnaires. Qualitative data was analysed using Atlas-ti, quantitative data was analysed using SPSS software. Results indicate smallholders identify with climate variability and change in form of reduced rains, increasing temperatures, increasing prevalence of animal and crop diseases and change in wind directions. Smallholder agricultural activities depict uncertainty manifested in planting diverse crops' varieties in seasons to reduce risks of crop failure. These results provide a platform for discussing farmers' plight in the wake of a changing and challenging climate. The results are important to decision and policy makers in agriculture to develop and improve agricultural support measures for smallholders in Kenya.

Keywords: Agriculture, climate change, options , smallholders, uncertainty