

ABSTRACT

Agricultural production all over the world has been affected by continuous climatic changes. Although most developed nations constantly update their farmers with current climate change information that enables them to devise appropriate adaptive strategies, farmers in developing countries only learn about the same after its effects have been noticed. Most households in rural areas of Kenya still face food insecurity. However, there is no evidence on whether Kenyan farmers have reliable information necessary for adoption of appropriate farming practices to cope with climate change effects. Equally, challenges that face Kenyan local farmers in adapting to climate change remain unknown. The general objective of the study was to investigate farmers' knowledge and adaptation practices to climate change in Lower Nyakach Division. Specific objectives were to: examine the level of awareness; explore the indigenous adaptation practices, and to identify challenges faced by farmers in adapting to climate change. Capability theory (Sen, 1992) which focus upon the significance of individuals' capability of achieving the kind of lives that they value, guided the study. Descriptive cross sectional design was used on a target population of 2504 households stratified in 4 sub locations. The sample size comprised 10% of the target population as recommended by Gay & Diehl (1992), representing 250 households. Data was collected using structured questionnaire from household heads; Key Informants Interview from three agricultural officers and five CBO officials; and one focus group discussion from each of the 4 sub locations. Instrument validity and reliability were checked through expert consultation and split half during pilot study. Descriptive statistics were used to analyse quantitative data using Statistical Package for Social sciences (SPSS) version 20. Thematic analysis was used to analyse qualitative data. It was found that farmers were aware of common short and inconsistent patterns of rainfall, and floods in the recent past accompanied with strange diseases like *Miguna Miguna* and invasion of army worms. Radio is the main source of weather information, implying that radio broadcast is a better avenue for passing weather information. Multi cropping, intensive weeding, planting early maturing crops, and applying manure on the farms are some of the indigenous adaptation practices. However, there are inadequate extension services, lack of financial resources, lack of government subsidies, poor farming practices, small sizes of land, and late preparation of farms. This implies that adapting to climate change depends upon individual capabilities. It is recommended that extension officers should use village *barazas* to disseminate climate change information, and that capital support be availed to farmers to enhance their capabilities. Further studies should be done on contribution of radio broadcasts on adaptation to climate change, and effect of climate information flow on adaptation practices to climate change.