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Abstract

Smallholder farmers in sub-Saharan Africa (SSA) rely mainly on rain-fed agriculture, which is vulnerable to climate variation. This calls for adaptation of production systems and practices to climatic variations to secure household food, nutrition and income security. Variations in seasonal rainfall in terms of amount, timing, consistency, and seasonal temperature changes, have often caused crop failures, reduced crop productivity or reduced areas suitable for growing certain crops in SSA. Several studies have documented how climate variability has affected crop productivity especially yield in agricultural production systems in SSA. However, there is limited information on how smallholder farmers in SSA select their crops and varieties as a coping mechanism to climate variability. Using south-western Uganda as a case study area, this study investigates whether smallholder farmers' perception of climate variability influences their crop choices. Through probability sampling procedures, a household survey was conducted with 583 smallholder farmers in three districts in south-western Uganda, between January and March, 2024. The survey was complemented with 21 key informant interviews. Data were collected on demographic and socio-economic profiles of households, smallholder farmers' opinions about variations in rainfall and temperature variables in the past 12 months and the trend in the past 10 years. Crop types and varieties selected or abandoned by smallholder farmers and the reasons for adoption or abandonment were explored. In this contribution, we will report on the preliminary results of the analysis of the survey dataset, highlighting how crop choices of smallholder farmers are influenced by their perception of climate variability.

Keywords: Smallholder farmers, crop choices, perception, rainfall variability

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