

Adaptation of crop portfolios to perceived indicators of climate variability by smallholder farmers in south-western Uganda

Nabasumba, Dina; Kagoro, Grace; Bukenya, Hakim; Twongyirwe, Ronald; Lejju, Julius; Nakintu, Justine; Wangalwa, Raphael; Sekajugo, John; Muzira, Robert; Nakazibwe, Immaculate; Vranken, Liesbet; Kervyn, Matthieu

Publication date:
2024

[Link to publication](#)

Citation for published version (APA):

Nabasumba, D., Kagoro, G., Bukenya, H., Twongyirwe, R., Lejju, J., Nakintu, J., Wangalwa, R., Sekajugo, J., Muzira, R., Nakazibwe, I., Vranken, L., & Kervyn, M. (2024). *Adaptation of crop portfolios to perceived indicators of climate variability by smallholder farmers in south-western Uganda*. 392. Poster session presented at International conference on research in tropical and subtropical agriculture, natural resource management and rural development, Vienna, Austria.

Copyright

No part of this publication may be reproduced or transmitted in any form, without the prior written permission of the author(s) or other rights holders to whom publication rights have been transferred, unless permitted by a license attached to the publication (a Creative Commons license or other), or unless exceptions to copyright law apply.

Take down policy

If you believe that this document infringes your copyright or other rights, please contact openaccess@vub.be, with details of the nature of the infringement. We will investigate the claim and if justified, we will take the appropriate steps.

Adaptation of crop portfolios to perceived indicators of climate variability by smallholder farmers in south-western Uganda

DINA NABASUMBA^{1,2}, GRACE KAGORO², HAKIM BUKENYA², RONALD TWONGYIRWE³, JULIUS LEJJU², JUSTINE NAKINTU², RAPHAEL WANGALWA², JOHN SEKAJUGO⁴, ROBERT MUZIRA⁵, IMMACULATE NAKAZIBWE², LIESBET VRANKEN⁶, MATTHIEU KERYVN¹

¹Vrije Universiteit Brussels, Dept. of Geography, Belgium, ²Mbarara University of Science and Technology, Dept. of Biology, Uganda, ³Mbarara University of Science and Technology, Dept. of Environment and Livelihoods Support Systems, Uganda, ⁴Mountains of the Moon University, Dept. of Environmental and Natural Resources, Uganda, ⁵Mbarara Zonal Agricultural Research and Development Institute, Crop and Natural Resources Research Program, Uganda, ⁶KU Leuven, Division of Bio-economics, Dept. of Earth and Environmental Sciences, Belgium

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

Contact Address: Dina Nabasumba, Vrije Universiteit Brussels, Dept. of Geography, Brussels, Belgium, e-mail: dina.nabasumba@vub.be