

Impact of climate variability on banana yields in Isingiro district, Uganda

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Introduction

The study determined the impact of climate variability on banana yields in Isingiro district, Uganda.

Study Objectives

- 1) To analyze the rainfall and temperature changes over Isingiro District between 2012 and 2017;
- 2) To assess the levels of banana yields in Isingiro District between 2012 and 2017
- 3) To examine the influence of rainfall and temperature changes on banana yields in Isingiro district.

Methodology

The study used a descriptive case study design. Qualitative and quantitative approaches were used. The study involved 300 farmers, 35 agricultural extension officers and 15 local leaders. Monthly average gauge rainfall, maximum and minimum temperature data was obtained from the UNMA for Mbarara synoptic station, statistical data for banana output was obtained from UBOS. Findings were determined using correlation and regression analysis.

Key study findings

The trend observed in annual rainfall amounts for the period 1988 to 2017 in Isingiro District varied from 1160mm-1808mm averaging to 1484mm. The findings revealed that the area experiences a linear increase in annual maximum temperatures ranging from 27^oC to 35^oC averaging to 31^oC. There was an increase in 2014 and 2015 but later a drop in 2016 and 2017 which affected suckers from 4.6 metric tonnes in 2012 to 3.6 metric tonnes / hectare in 2017. Climate variables were found to affect the yield growth of bananas.

Recommendations

The study recommends that programs working to minimize impact of climate change like droughts, flooding on food crops production should first consider the crop, that is being most affected by the higher temperatures relative to the other food crops

References

District Planning Unit. (2016). Isingiro District 5 yr.Government Development Plan II 2015/ 2016-2019/ 2020 vision.