

ABSTRACT

- Uganda, where agriculture is the backbone of the economy and the livelihood of many people, is vulnerable to climate change as most of the agriculture is rain-fed.
- In this study, historical datasets of daily rainfall and temperature from 37 representative stations across ten agricultural production zones of Uganda were analyzed to generate the characteristics of the seasons based on a monthly timescale.
- There was no evidence in the data that rainfall is increasing or decreasing on the annual timescale.
- However, on a monthly scale, there seems to be a decreasing trend in amount and the number of rainy days during the critical months of crop growth.
- A 50-year average maximum temperature-trend revealed an increase in temperature however, the minimums of the daily maximums changed faster than maximums.
- Farmers acknowledged to have experienced changes in the weather patterns as affirmed by the weather data. The majority of farmers perceive that rainfall onset is late, amounts variable, and mid season droughts are on the increase, but cessation is timely.
- Farmers therefore need to adjust their management practices to make efficient use of the limited rainfall for crop and livestock production.
- They also need expert advice regarding seasonal rainfall characteristics in order to fully exploit seasonal distribution to improve/ stabilize crop yields.
- Adaptation strategies mentioned by farmers included use of early maturing crops, crop diversification, early planting, embracing advisory services and management diversification.

RATIONALE

- Both climate change and variability pose adverse impacts on livelihoods, especially of the rural poor.
- The erratic onset and cessation of rains coupled with variable extremes of intensity make it difficult for farmers to plan when to plant crops.
- Poor rains severely affect crop and livestock production often resulting into migration of thousands of people and animals in search of water and food.
- On the other hand, excessive rains both in intensity and duration lead to water logging conditions that negatively affect crops and pasture.
- These conditions are also detrimental for post harvest handling and storage.
- It is envisaged that without appropriate and adequate interventions, climate change will have greater negative impacts on poorer farm households since they have the lowest capacity to adapt to changes in climatic conditions.
- Adaptation measures are therefore important to help these communities to better face extreme weather conditions and associated climatic variations.

OBJECTIVES AND ACTIVITIES

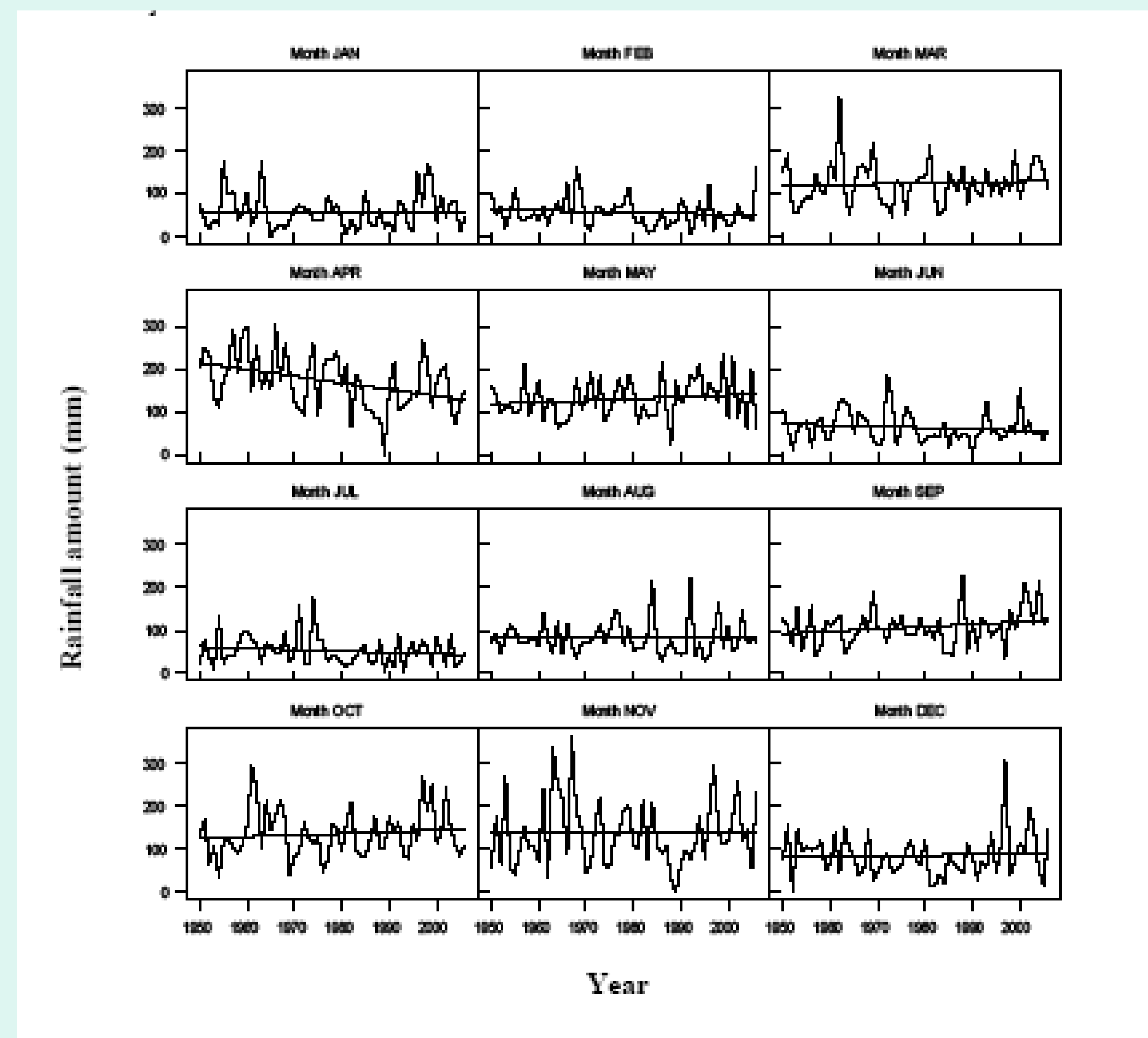
To generate inter- and intra-seasonal characteristics based on monthly and annual timescales

Activity – [Assemble climatic data (temp & rainfall) daily records for 37 representative stations across ten agricultural production zones and 14 rainfall zones for the period 1961 – 2000]

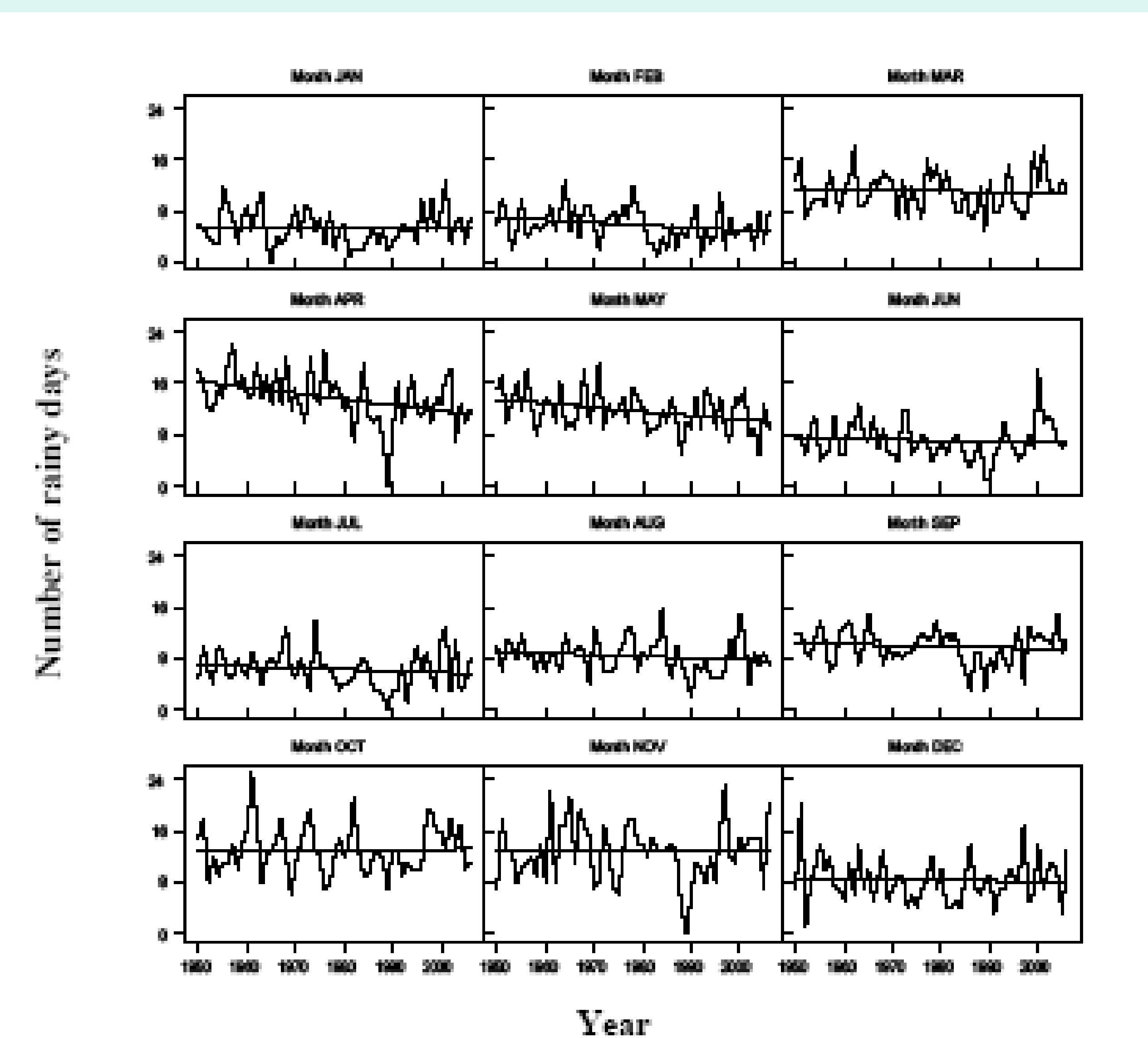
To assess farmer perceptions of climate change and identify coping strategies used in response to climate change in the southern and eastern Lake Kyoga AEZ

Activity – [Participatory Rural Appraisal to establish farmer perceptions of climate change; their coping methods to changing/ unreliable onset of rains, rainfall intensity, quantity and seasonal distribution. Overall, 117 respondents were interviewed]

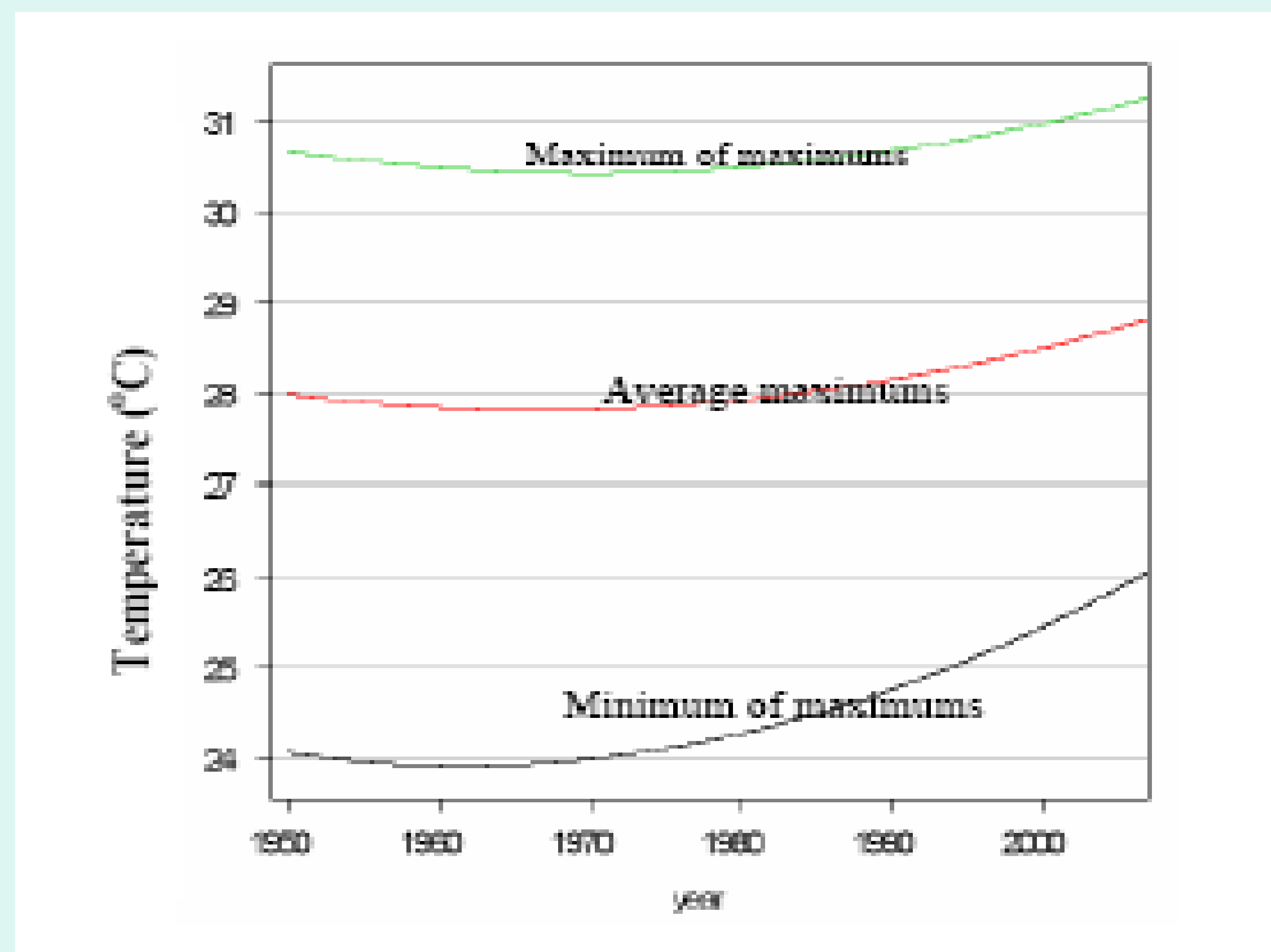
Trend in rainfall amount from 1950-2008 [data source: Namulonge Station]



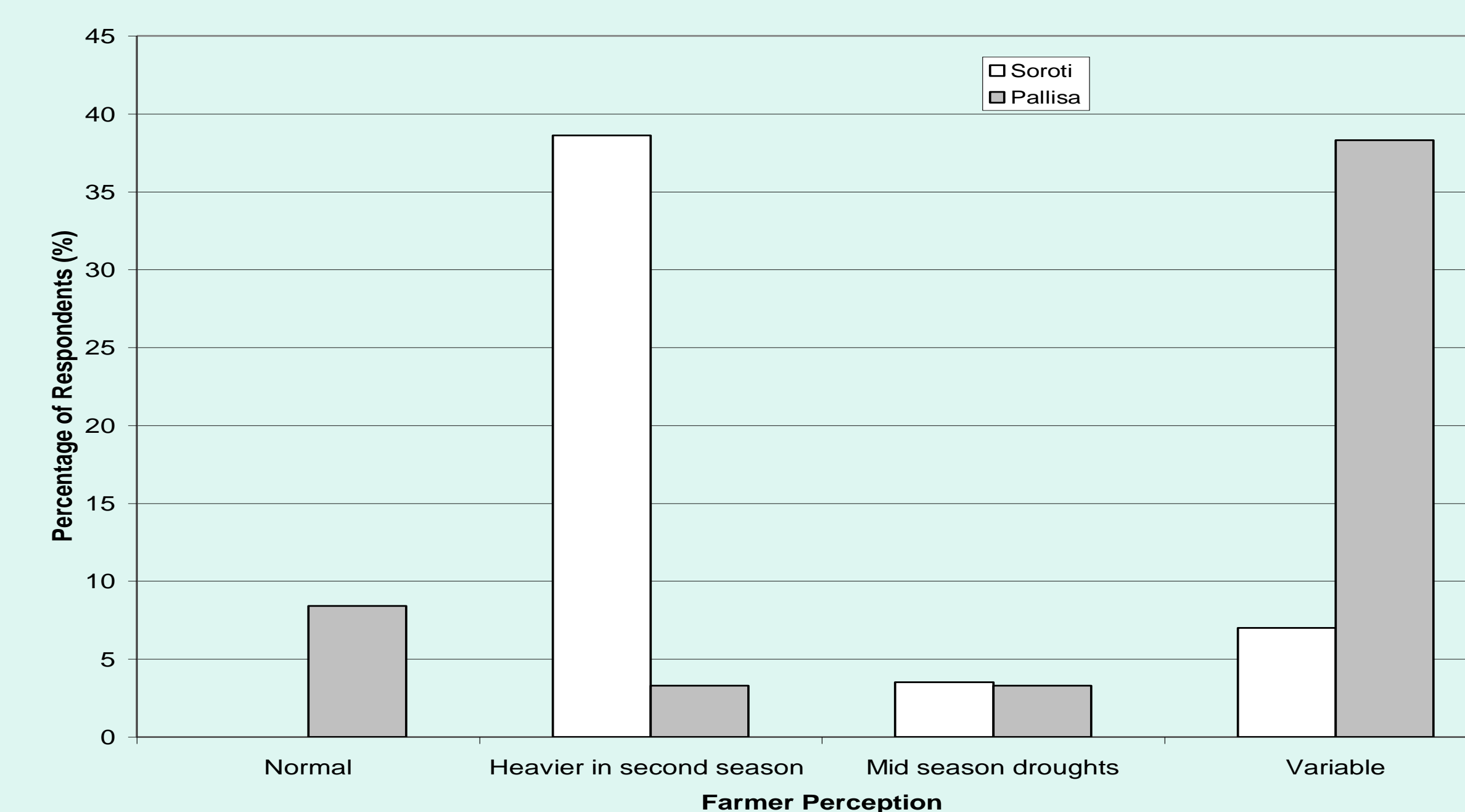
Trend in number of rainy days from 1950-2008 [data source: Namulonge Station]



The trend of maximum temperatures from 1950 to 2000



Farmers' perceptions of rainfall seasonal distribution



DISCUSSION AND CONCLUSION

- There was no evidence in the data that rainfall is increasing or decreasing on the annual timescale.
- However, on a monthly scale, there seems to be a decreasing trend in amount and the number of rainy days during the critical months of crop growth.
- A 50-year average daily maximum and minimum temperature-trends revealed an increase in temperature however, the minimums of the daily maximums and minimums changed faster than maximums. The implication of this is that the day and night temperatures are becoming warmer.
- Farmers acknowledged to have experienced changes in the weather patterns as affirmed by the weather data. The majority of farmers perceive that rainfall onset is late, amounts variable, and mid season droughts are on the increase, but cessation is timely.
- Farmers therefore need expert advice regarding seasonal rainfall characteristics in order to fully exploit seasonal distribution to improve/ stabilize crop yields