A statistical report of an agricultural survey for more than 9,500 African households.

A summative assessment for AIIP 2018

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Introduction

The report is written after analyzing the given inputs and it addresses the following elements:

1. Identification and evaluation of the study design for this agricultural survey. How was the population sampled? Is the method used appropriately for the application? Are there any sources of bias?

2. Development of 2 key questions that can be studied based on the dataset provided.

3. Development of a plan for a statistical analysis of the data in response to one of 2 key questions developed. Creating a null and an alternate hypothesis? Choosing tests that would be used and why? Why are they appropriate? How do I determine significance?

4. How I would interpret my results if: 1) a significant effect resulted or 2) the results were not significant? What conclusion can I make about the population and your research question?

Identification and analysis of the study design for the survey.

The study design for this agricultural survey is observational type. The population was sampled using multistage stratified random sampling. In my opinion, the method used was appropriate for the application but with few possibilities of biases as the process involved sampling of data based on submission of formal expression of interest from respective institutions within countries which introduces non-response bias. Non-response bias may happen if the institutions that submitted expression of interest were not perfect fit for the study.

Two questions that can be studied from the data set are:

1. How many farmers have access to extension services?
2. Do farmers keep cattle for milk or for meat?

A plan for a statistical analysis of the data in response to the question, “How many farmers have access to extension services?”

My null hypothesis is - the farmers receive extension services regularly

My altenate hypothesis is -