RHEAS-DSSAT model simulation was conducted for Zambia. The maize outputs were then compared to the preharvest crop surveys. The source of data used was acquired from the Zambia Statistics Agency

The following were the findings:

The crop production datasets from the ministry of agriculture missed a number of years

Although with the missing datasets, preharvest crop surveys had start from 2012 to 2016

Preharvest surveys covered district to country levels with enough details such as small and large-scale holder farmlands.

It was possible to download only three years of post-harvest maize survey were available season

Post-harvest crop surveys only were available for 2

RHEAS was over-estimating the yields (metric tonnes per hactare) from the district to the country level.

Example district

Example province

What was done

What was done

The issues mentioned above necessitated for bias correction for the model. Before bias correction

After bias correction

Conclusion

The model can do better only if quality and sufficient datasets are be used. There is need to collect various datasets improve and enhance crop modeling work.