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**FACULTY OF ENGINEERING**  
**DEPARTMENT OF AGRICULTURAL MECHANISATION AND IRRIGATION**  
**ENGINEERING**  
**FINAL YEAR PROJECT REPORT**  
**DESIGN AND CONSTRUCTION OF A COMBINED MANUAL MAIZE PLANTER**  
**AND FERTILIZER APPLICATOR**  
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A final year project report submitted in partial fulfillment of the requirement for the award of the  
Bachelor of Agricultural mechanization and irrigation

Engineering of Busitema University

# Abstract

Small scale farmers in Uganda are faced with challenges during planting maize and fertilizer application and the traditional methods deployed during planting and apply fertilizer in the field is costly and involve non uniformity. In order to provide a better alternative to the traditional method for operation, manually operated maize planter and fertilizer applicator was design and developed. Objective of the equipment was to uniformly plant and apply fertilizer in the farm.

The material used for fabrication were then selected while considering their properties such as strength, corrosiveness, availability, toughness, as well as economic aspect which was followed with series of the following activities; measurement, cutting, welding and finishing process.

After fabrication of the manually operated maize planter and fertilizer applicator, it was tested and results indicate the application rate of 24.6kg/ha of maize, 26.7kg/ha of fertilizer with efficiency of 76.8%. It achieves all its design purpose hence it is recommended for adoption to the farmers.

## Declaration

I, KOMAKECH ROBERT, do hereby declare that this final report compiled is my original work and to the best of my knowledge, it has never been published or submitted for the award of any academic qualification in any higher institution of learning

# Approval

This is to certify that KOMAKECH ROBERT is the original author of this report to be submitted for examination for partial fulfilment for the award of a Bachelor of Science in Agricultural Mechanization and Irrigation engineering, Busitema University under the approval of my supervisors.

## **Main Supervisors**

Mr. kilama George

Signature.....

## **Co-supervisor**

Mr. Samuel Odong Atochon

Signature.....

## Dedication

I dedicate this report to my dear family, my parents Mr. & Mrs. OPIRA ANEK, and finally to my friends for the unsparing support that made this report writing a success. Love, God bless you all.

# Acknowledgement

Glory to God Almighty for life situations. Special thanks go to the department of Agricultural mechanization and irrigation Engineering, the head of department, and all the lectures of Agricultural mechanization and irrigation department Busitema University.

I sincerely thank my supervisors Mr. Kilama George and Mr. Samuel Odong Atochon for tireless commitments and dedications throughout the study period and even during this report writing.

I also want to thanks my fellow colleagues for all the sharing they had with me and for motivating me each day for better progress.

And finally, my sincere appreciation goes to my family and friends for the financial support extended to me throughout the report writing, may the Almighty reward you abundantly.

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