



**BUSITEMA
UNIVERSITY**
Pursuing Excellence

FACULTY OF ENGINEERING

DEPARTMENT OF TEXTILE AND GINNING ENGINEERING

FINAL YEAR RESEARCH PROJECT

**DESIGN OF A MECHANICAL DELINTER MACHINE FOR HIGH REMOVAL
OF LINTERS**

BY

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ABSTRACT

Cotton seed, following separation from the long cotton fibers in the ginning process, is covered with short lint, also known as linters. This short lint, here in after referred to simply as lint, is desirably removed from the seed to facilitate the further use of the seed for planting, or the production of cotton seed oil, and to permit collection of the lint for various commercial uses.

The lint we get from cotton delinting has wide application in making bullets, sweat shirt, paper board industry and cotton pulp, etc. Therefore, the cottonseed delinter is very essential in cotton processing.

Brush delinting is the removal of linters from the cotton seeds using the brushes. It can also be defined as a mechanical way of removing linters from the cotton seeds using the brushes.

Brush delinting is a mechanical method, many cotton industries are using this method to remove linters from the cotton seeds. It uses brushes with bristles to rub the seeds on the perforated cylinder or drum that is fixed.

It is the best way to remove the linters compared to the use of saws and acid delinting. This is because it does not destroy the seeds and linters thus can be maximumly utilized by other industries for further production. For example, linters can further be used in the paper making industries after treatment and seeds can be used for planting and oil milling industries.

Therefore, this research project is aimed at tapering the brushing system to increase the delinting percentage to about 80% to 95% of the linters.

If implemented shall greatly reduce the excessive losses, improve quality, avail a cheaper way of delinting cotton seeds and the project would promote agricultural entrepreneurship among the youth in Uganda.

DECLARATION

I **Turinawe Chricent**, do hereby declare to the best of my knowledge, that this research project report is an outcome of my original work and that it has not been presented to any institution of learning for an academic award. All the work contained in this report is as a result of my research except where cited.

Signature.....

Date.....

APPROVAL

This research project report is submitted to the Faculty of Engineering for examination with approval from the following supervisors

Supervisor

Mr. Tumusiime Godias

Signature.....

Date.....

DEDICATION

This report is dedicated to my beloved Father, Tusiime Deus, my mother, Ngabirano Jane, and my guardians Micheal and Dinavance in appreciation for their selfless care and unwavering support provided to me since childhood, and for the spirit of hard work, courage and determination instilled into me and have indeed made me what I am today.

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Lastly my sincere thanks go to all my fellow students **Ndyamusiima Seresi, Namatovu Ramizah, Ikee Selestine and Mujuni Cirus** who were willing to give me the necessary information about delinting process and towards the completion of this research project

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