

**The design of manually operated electric chapatti making machine to curb the
deforestation in Nagongera Town Council, Tororo district**

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BU/UG/2019/0010

SUPERVISOR

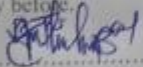
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**A project Report submitted to the Department of Physics in Partial Fulfillment of the
Requirements for the Award of the Degree of Bachelors of Science Education at
Busitema University**

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DECLARATION

I MUDAMBO ROGERS Reg. No. BU/UG/2019/0010 Hereby declare that this Project Report is my original and has not been published and/or submitted for other degree award to any University before.

Signature 


Date: 22nd/02/2023

APPROVAL

This Project Report titled *the design of manually operated electric chapatti making machine to curb the deforestation in Nagongera Town Council, Tororo district*

Has been submitted for examination with the approval of the following supervisor(s)

Signed



Date

23/05/2023

MR. OWALU JOSEPH ANTHONY

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DEDICATION

This project work is dedicated wholesomely and wholeheartedly to my parents **GONZA TABISA** and **WERE JOHN**, my elder brother **MUDAMBO RONARLD** my mentor and my sister **KATOOKO LOY** for the extraordinary love, care, guidance and support towards my education journeys from childhood up to date and finally to my spiritual mentor **ORD. JOHN OFUMBI** . Thank you, so much may the Almighty God bless, you abundantly.

ACKNOWLEDGEMENT

I would like to thank the Omniscient God for the unconditioned love, provision, protection, kindness and favor showed to me which made it possible to finish this research project.

I also give a vote of thanks to the chapatti vendors, canteen owners, restaurant owners, and cantering services providers for genuinely rendering their time and feedback towards this cause while I was interviewing them.

In a special way, my heartfelt gratitude goes to my dear supervisor as well as the coordinator of the projects Mr. Owalu Joseph Anthony, and the lab technicians (Mr. Atakyetise Edward and madam Mary) for the patience, guidance and wisdom given unto me which facilitated the success of this project, the HOD physics for the advice rendered to me

Lastly, s would to appreciate in a special way my friends Mukoya Firidausi and Kooko Ryan, the entire physics comrades of 2019/2020 intake (team Next Year in Tent) for giving the words of hope courage and being there for me in times of hardship even when I felt like giving up.

May the Almighty God bless us all abundantly in all our endeavors!

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ABSTRACT

This document was written to report about the design and effectiveness of the manually operated chapatti making machine. It consists of six chapters with their different sub sections which include; the introduction to the project (the problem statement, objectives, justification), literature review which involves the deep explanation of each objective of the project, the methodology (design of the machine itself, its effectiveness, and different components do work, thermostat plays a great role in temperature regulation), results and discussion and recommendation with the conclusion.

CHAPTER ONE: INTRODUCTION

1.1 Background

Chapatti is the thin pancake of unleavened whole bread cooked on a griddle from wheat flour, water, salt, cooking oil and other ingredients which brings flavor to chapatti like onions, tomatoes amongst others. In India, chapatti is one of the traditional food stuffs after Rice.

Chapatti is a significant food which has been and being consumed by many Ugandans ranging from hotels to kiosks and mostly the youth in urban areas who mix beans with the chapatti (kikomando) which is a cheap meal hence making the youth live a simple lifestyle.

Adults and children all enjoy the chapatti as a meal more so when used as breakfast and dinner greatly when it has been well prepared and it has become a very big income generating activity by the unemployed youth and many people dealing in the food industries and places like kiosks, canteens restaurants and hotels.

The frying of the chapatti hinges on the charcoal as the source the source of energy which causes a lot of the environmental changes in form of deforestation and environment degrading in form of burning charcoal and on the other hand, deforestation has been as a result of the increasing population which has increased the demand for forest products in this perspective charcoal demand both domestically and businesses wise.

So it's of great importance and relevant to conserve both the natural and artificial forests in Uganda particularly in Nagongera sub county Tororo district for the convenient existence and living of the inhabitants so that hopefully that deforestation might be minimized because the forests are slowly being cleared and disappearing and this has negatively and still impacting the livelihood of the local communities because the forests in Nagongera Sub county have a great importance to the inhabitants. The overall contribution of the forest is about 6% of the GDP. Forests should be conserved such that people around can be able to benefit in form of rain formation and study center for many research projects for example, most of the drugs which treats cough comes from research being done on plants in many forests in Uganda like Tazcov which is used in the treatment of some diseases. Therefore, it's on this background that there is need to substitute the use of charcoal by chapatti making businesses, restaurants, kiosks, catering service providers by electric manually operated chapatti making machine in Nagongera TC Tororo district. The chapatti making while using charcoal is always carried

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