
**ASSESSING TECHNOLOGIES FARMERS USE TO MANAGE POST-HARVEST
LOSSES IN TOMATOES IN BUMALIMBA SUB-COUNTY, SIRONKO DISTRICT**

BY

NASIYO LOYCE

BU/UP/2020/1352

Email: nasivoloyce@gmail.com

SUPERVISOR

MR. SSEMUKASA EDWARD

**A SPECIAL PROJECT REPORT TO BE SUBMITTED TO THE DEPARTMENT OF
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DECLARATION

I NASIYO LOYCE, declare that this study has never been published or submitted by any other person as a degree award for any other university as I actively participated and carried out this study myself and the information given here is true as it's direct from the respondents found in my area of study.

Signature.....Date.....

Name.....

APPROVAL

This special project report has been submitted to the department of agribusiness and extension with the approval of the university supervisor.

Signature.....date.....

Name of the supervisor.....

DEDICATION

I dedicate this work to my mzee Mr. Munga Stephen. W, mother Mrs. Betty Munga and my elder brothers Munga Nathan and Kisolo William, my elder sisters; Peace Neumbe, Leah Nagudi, Lovisa Nafuna, Christine Kawola and Scovia Muzaki. I also dedicate this report to Mr. Nangoli Godfrey and his family.

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I thank God for the resilience he has given me as student to come to the end of this course and mostly during the time I was meant to carry out this study till the time it was a success.

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LIST OF ACRONYMS.

BAB: Bachelors of Agribusiness.

BAUC: Busitema University Arapai Campus.

CAP: Controlled Atmospheric Packaging.

FAO: Food and Agricultural Organisation.

KG: Kilograms

MAP; Modified Atmospheric Packaging.

PHHT: Post-Harvest Handling Technology

SPSS: Statistical Package for Social Sciences.

QMSS: Quality Monitoring and Sorting Systems.

ABSTRACT

This report is about assessing the modern post-harvest handling technologies that tomato farmers use to minimise pre and post-harvest losses with introduction giving an over view about pre and post-harvest losses, the problem statement of the study, objectives, research questions, significance, justification, scope and limitations of the topic under study. It further gives detailed information about tomato production, pre and post-harvest losses from global production to regional production of tomatoes and their importance. It also describes the study area which was Bumalimba sub-county found in sironko district where, study approaches of data collection where used both qualitative approach which was used through interviews and observation to find out other theoretical data which was needed to carry out this study and quantitative approaches which was used to collect numeric data which can measured using different scales like ratio and ordinal scales, study design where cross sectional survey design was used to collect both qualitative and quantitative data which involved random sampling of respondents from the recommended sample size of 90 respondents, both men and women were interviewed using a semi-structured questionnaire and analysis of the field data collected from the respondents for the three objectives was analysed through SPSS using descriptive statistics where different frequencies and percentages were reported in tabular form. This report contains the findings of the study where more youths, male in gender with lower levels of education engage more in tomato production. It further reports about the three objectives where the findings indicates that the respondents level of awareness about modern PHHT, rate of their application is moderate and major factors limiting the use of these technologies was absences, lack of awareness of some of these technologies and high costs of purchase and maintenance of the available technologies. Finally, this reports tells us about the conclusions of the study which is that there is still a knowledge gap about modern PHHT amongst farmers which needs to be covered through increasing on the levels of sensitization, recruiting more extension officers and policy makers to reduce on the taxes charged on during the importation of these technologies so as to keep their prices low so that farmers can easily purchase them.

CHAPTER ONE

1. INTRODUCTION

1.1 Background

Tomato (*Solanum lycopersicum L.*) is one of the most widely cultivated and extensively consumed horticultural crops worldwide (Harriet, 2019). The crop is believed to have its origin from Peru, Ecuador and other parts of tropical America and its economic importance and the nutritional nature have resulted into its global production (I. Arah, 2015). Tomatoes rank second after potatoes in world production of all horticultural crops (I. Arah, 2015). China is the leading producer of tomatoes accounting for about 31% of the world's production (Cost, 2019). Additionally, the United States is the leading processor of tomatoes (Singh & Malhotra, 2013).

Tomatoes are widely cultivated in many African countries and the continent contributes significantly to global tomato production (Ddamulira, 2021). Countries such as Nigeria, Egypt, Morocco, and South Africa are among the top tomato producers in Africa (Ddamulira, 2021). Africa alone produces 21 million tonnes from 1.3 million hectares and the crop is grown both for local consumption and export purposes (Ddamulira, 2021). Nigeria, produces approximately 10%, Egypt 9%, Morocco, 7%, South Africa, 5% and Tunisia, 4% of total tomato production in Africa (FAO, 2022). In East Africa, 1.9 million tons of tomato are produced annually with Tanzania and Kenya as leading producers followed by Uganda (Ddamulira, 2021).

In Uganda, tomatoes are among the most important and prominent horticultural crops grown for both domestic consumption and export to other neighbouring countries like Kenya (Tusiime, 2014). The country produced 40,124 tons of tomato from 6,671 hectares as of 2021 (Ddamulira, 2021) and tomatoes contribute 4.1% of total vegetable production in Uganda (Khokhar & Rolania, 2021). They are grown in districts like Sironko, Kamuli, Bulambuli and other areas which have the factors that support their growth like fertile soils, reliable rainfall and many other factors and its production has increased employment and improved farmer's livelihoods (Tusiime, 2014).

Due to increasing demand for tomatoes, on the local and export markets, there is a growth of commercial tomato growing and the vegetable has become a cash crop for many farmers in Uganda (Dijkxhoorn, 2019). However, the tomato production is affected by various challenges which are majorly centred around poor pre-harvest practices like poor production practices such as ineffective pest and disease control measures, poor varieties and shortage of

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