
**THE IMPACT OF MECHANICAL POST HARVEST DAMAGES OF TOMATOES ON
PROFIT MARGINS IN SOROTI CITY WEST AND EAST**

BY

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DECLARATION

I Arinitwe Benex hereby declare that the work presented in this dissertation is my own and to the best of my knowledge has never been submitted to any institution of learning for any academic award. Where the work of others has been used acknowledgments have been made.

Signature Benex.....
Date 09/06/2023.....

APPROVAL

This is to certify that the research dissertation titled ” the impact of mechanical post-harvest damages on profit margins on tomatoes in Soroti city west and east” has been compiled under my supervision and now is ready for submission with my approval.

Sign.....
Date.....12/06/2023

RESEARCH SUPERVISOR

Mr. OGULLI FRANCIS

DEDICATION

I dedicate this work to my dear parents Mr Ndibalema Happiness and Mrs Asaba Clemensia, My children Arinitwe Lameck, Arinitwe Joshua Eyan for their love and prayers during my education.

ACKNOWLEDGEMENT

I am so grateful to the Almighty God for the gift of life, knowledge, and wisdom with which the completion of this research has become a reality. May his name be glorified forever! Amen I need to also acknowledge the role played by my supervisor Mr Ogulli Francis for his guidance, advice, time and efforts surrendered to supervise me.

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ABSTRACT

The study employed primary data using structured questionnaire to collect information from 80 respondents selected using census survey method. The impact of mechanical post harvest damages of tomatoes on profit margins, main objective was to impact of mechanical post-harvest damages and profit margin of tomatoes among retailers in Soroti city west. **The specific objectives was to** assess the effect of packaging methods on mechanical post-harvest damage of tomatoes, to assess the effects of mechanical post-harvest damage of tomatoes on profit. Data collected was analyzed using descriptive statistics, gross margin using Spss and excel version 20.0 The result of the analysis revealed that the best tomato transporting material that had minimal mechanical damages were woven baskets with the gross profit margins of 29.4%, 29.4%,29.9%,92.9% on bruises, cuts, scratches, pits respectively.

The operating profit margin of 35% indicated that the tomato retail business was feasible to tomato retailers and therefore they were able to recover expenses and generated profit with the gross margin of 35.9%.

In conclusion the lower the gross margin, the lesser mechanical post harvest damages of tomatoes and the higher the gross margin the less damages in the tomato transporting material.

The best transporting material for tomatoes among retailer should be woven.

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LIST OF ABBREVIATIONS

REG NO	Registration Number
Sign	Signature
Kgs	Kilograms
%	Percent
MAP	Modified Atmospheric Pressure
F1	First generation
Mr	Mister
F	Frequency
P	Percentage

CHAPTER ONE

1.0 Back ground of the study.

This chapter covers back ground, problem statement, research objective, specific objectives, research questions, justification of the study, significance of study, time of scope of study conceptual frame work.

Tomato (*solanum Lycopersicon*) is the second most important vegetable after potato that is produced for its edible fruits (Gatahi, 2020). In its fresh forms tomatoes are eaten as a fruit or salads, processed into paste, juices, soup (Deribe *et al.*, 2016). When ripe it is rich in health promoting compounds that are thought to promote health conditions (Gabriel, 2021).

It is estimated to be 186,821million metric tons produced globally on 5,051,983 hectares in 2020 (Edward, 2014).China is the world's largest producer of tomatoes with 64,768.16 million kilos of the world's total production, followed by India which produced 20,573 million tons of tomatoes from 812,000 hectares (Deribe *et al.*, 2016) .

Africa contributes 11.8% of the total tomato production. Trends show that Egypt was still leading tomato producer in Africa, followed by Nigeria (Arah *et al.*, 2015).

In East Africa 1.9 million metric tons of tomatoes are produced annually with Tanzania and Kenya as leading producers followed by Uganda which produces 40,124 tons of tomatoes from 6671 hectares (Arah *et al.*, 2015).

Its perish-ability and susceptibility to mechanical damage during handling and transportation most tomatoes do not reach their end use or they do with poor quality (Al-Dairi *et al.* 2021). Mechanical damage and bruising of tomatoes during transportation is due to a variety of forces subjected to the fruits during freight which include: vibration, abrasive forces, impact, compression and cutting forces. Post-harvest losses in tomatoes can reach up to 25-42% worldwide.

These losses result in poor performance of producers, processors and traders, as well as throughout the country suffering from the incomes of foreigners. Further losses in tomatoes can be quantitative or qualitative. Although the emphasis on crop research today differs more from quantity to product quality, there is little improvement in the quality of commercially grown tomato varieties (Shettima, 2022). However, the quantitative loss in tomato production may have a negative effect

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