

POSTHAVERST LOSSES DURING MARKETING OF TOMATOES AND TECHNOLOGIES
USED TO MITIGATE THEM IN MBALE CITY, EASTERN UGANDA.

BY

KIMWERA IVAN MASABA

BU/UP/2020/1333

Email: ivankimwera4@gmail.com

SUPERVISOR:


MR SSEMUKASA EDWARD

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DECLARATION

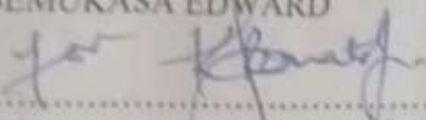
I Kimwera Ivan Masaba, hereby declare that the work presented in this attachment report is out of my personal commitment and effort and has never been submitted anywhere else by any other student for an award of Bachelor's degree in agribusiness.

Name: Kimwera Ivan Masaba Sign:  Date: 13th / 05 / 2024

APPROVAL

This research was under supervision of ACADEMIC SUPERVISOR

MR SSEMUKASA EDWARD

Sign: 

Date: 19/3/2024

DEDICATION

I dedicate this research to my dear friends and family for endless love for me. I also dedicate this research to all my friends at BUSITEMA UNIVERSITY and other universities who will find It a benefit for their academic life.

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ABSTRACT

Tomato is a major vegetable crop that is used widely throughout the different strata of the population over the last century in Mbale city .It is one of the most important ‘protective foods’ because of its special nutritive value and also an important source of antioxidants in the human diet.it has lycopene(an antioxidant) which removes cancer causing free radicals. This study therefore examined the postharvest losses in tomatoes and determine the relative interventions to mitigate them It involved data collection using simple random sampling technique where three divisions northern, wanale and industrial division were chosen and respondents were randomly selected from every division. Questionnaires were employed during data collection and data was analyzed using Excel and SPSS version 20 .The results showed that males dominated females 39(53%) and 34(46%) respectively .Most farmers who were engaged were having between 20 – 30 years (47.9%). The farmers experience losses during harvest (15.5%) and after harvest (25.5%) however farmers and traders have technologies to minimize the losses which included use chemicals this has a negative impact on the health of consumers, use wooden boxes, basins with banana leaves, spread their tomatoes on the floor covered with grass, keeping them in holes to prolong the shelf life, dusting them with ash and keeping them in woven baskets. The study also revealed that tomato ansal f1 was the most grown variety. This study therefore concludes that despite the interventions used by the farmers, traders and significant research investment, there are still high loses of tomatoes during postharvest and this has resulted into negative effects on farmer’s income and household food security in Mbale city. Therefore the study concludes by recommending Coating tomatoes with alvera gel as its proven organic and effective by researchers(“Strategies to Reduce Post-Harvest Losses for Fruits and Vegetables,” 2019) Construction of feeder roads to the market areas to avoid scratches and damages, constructing large rooms in market areas for storage, creating more market for tomatoes to avoid over pilling by establishing more processing plants and empowering tomatoes farmers skills of adding value to tomatoes, sensitizing farmers on proper postharvest handling practices, value addition in tomatoes, constructing cold rooms and improving varieties that can stay longer, harvest tomatoes when they are ready, proper harvesting and storage, sensitization on planned production, training farmers on post-harvest techniques, breeding tomatoes with long shelf life.

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LIST OF ABBREVIATIONS AND ACRONYMS

CASA Commercial Agriculture for Smallholders and Agribusiness

CGIAR Consortium of International Agricultural Research Centers

CIAT International Centre for Tropical Agriculture ECABREN East and Central African
Bean Research Network

FAO Food and Agriculture Organization

MAAIF Ministry of Agriculture, Animal Industry and Fisheries

NARO National Agricultural Research Organization

SPSS Statistical Package for Social Sciences

UBOS Uganda Bureau of statistics

CHAPTER ONE

1.1 INTRODUCTION

Agriculture is the backbone of the Ugandan economy. More than 65% of the country's population depends on agriculture as the major source of income. Agriculture contributes about 46% of the total export earnings (MAAIF, 2008). Tomato (*solanum lycopersicum*) is a major vegetable crop that is used widely throughout the different strata of the population over the last century (Tiwari et al., 2020). It is one of the most important 'protective foods' because of its special nutritive value and also an important source of antioxidants in the human diet. It has lycopene (an antioxidant) which removes cancer-causing free radicals (Arah et al., 2016). The fruit can be eaten raw or processed into other forms such as paste, powder, purees, sauces and juices (Kitinoja et al., 2019).

China, India, the United States of America, Turkey, and Egypt are the five leading tomato producers in the world (Tiwari et al., 2020). Total world tomato production for both processing and fresh consumption in 2021 amounted to just over 189.1 million metric tons, up 2% from the 184.8 million MT grown in 2020 and 4% from the average (182.7 million MT) of the previous three years (FAO 2022). In East Africa, 1.9 million tons of tomato are produced annually with Tanzania and Kenya leading as producers followed by Uganda. In Uganda, 40,124 tons of tomato are produced from 6,671 hectares (Gabriel, 2021).

In Uganda, there has been a shift from production of traditional staple food crops to high value quick maturing crops like tomatoes (Okiror et al., 2017). Although tomatoes are a crucial commodity in Uganda they are highly perishable, leading to substantial losses if proper post-harvest handling and marketing strategies are not employed.

Post-harvest losses in the marketing of tomatoes have significant economic and food security implications for farmers, traders, and consumers. (Watuleke, 2014). Post-harvest losses in tomatoes range from 20% to 50% in various regions (Abera et al., 2020) (Tiwari et al., 2020).

5.3 RECOMMENDATIONS

Promoting the adoption of better storage practices, such as cold rooms, could be a key intervention

Coating tomatoes with alvera gel as its proven organic and effective by researchers (McKenzie *et al.*, 2017).

Tomatoes farmers and retailers should engage careful offloading and lading of tomatoes to minimize damages caused by rough handling 1

Its therefore recommended that policies that will provide enabling environment of efficient and cost effective technologies of tomatoes should be promoted in the study area so that prospective farmers and traders can be encouraged to invest in tomatoes business in the study area.

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