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BENEFITS OF POST HARVEST HANDLING TECHNOLOGY ADOPTION ON CASSAVA PRODUCTION AMONG SMALL-SCALE FARMERS IN BUYENDE DISTRICT. CASE STUDY NKONDO SUB-COUNTY.

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DECLARATION

I **TIBAKWENDEZA ANNALUSIA** declare that this research report is my original work and is submitted for the award of the degree of Bachelor of Science and Education of Busitema University. This report has never been submitted to any university for any award whatsoever.

Signature ..... Date 04/04/2023

APPROVAL

This research report has been submitted to Busitema University examination under my approval as the University academic supervisor.

Signature ..... Date 08/08/2023

Mr. Ongua Fanuel

DEDICATION

I dedicate my work to my lovely brother Mr okumu Emmanuel, Mr Kyaligonza Wilson, MS kyazike Proscovia, Kirya Michael, Cyrus and Joshua and FAWE (U) for endless effort and support towards my education.

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Contents

LIST OF ABBREVIATIONS

PHH	Post harvest handling technology
RTC	Rational choice theory
EUT	Expected utility theory
FAO	Food agriculture organization
UBOS	Uganda bureau of statistics
PHL	Post harvest losses
FC	Fixed cost
GR	Gross revenue
TR	Total revenue
CE	Cost effectiveness
PHT	Post-harvest technology
CBA	Cost benefit analysis
CVI	Content validity index
SPSS	Statistical package for the social science

ABSTRACT

Cassava is an important food an income security crop that supports livelihood of millions of small scale farmers in Uganda and is among the dominant staple food crop in Buyende District. The study was conducted in Nkondo sub-county on the benefits of post-harvest handling technology on cassava production among small scale farmers in Nkondo sub-county, Buyende District.

The study was to assess the benefits of post-harvest handling technology on cassava production among small scale farmers with specific objectives of assessing the percentage losses resulting from the use of indigenous Post-harvest handling technologies by small scale cassava farmers in Nkondo sub county, identifying the key post handling technologies practiced by small scale cassava farmers in Nkondo sub county, and identify the best and cost effective post-harvest technology that can be recommended for up scaling in Nkondo sub-county. A sample of 32 respondents were selected through random sampling and purposive from selected parishes. Data was collected by the use of questionnaires and the key interviewed. Data was analyzed by use of micro soft excel on the key post-harvest technology adopted by small scale farmers

From the study findings, the highest percentage of respondents reported sun drying leads to high losses especially during rainy season, followed by those said grinding, packaging and lastly least percentage loss was reported by respondents who adopted chipping.

Therefore, the level of percentage loss was high and this calls for immediate intervention in order to reduce on the losses incurred by small scale cassava farmers. The study thus made the following recommendation;

The government should come up with agricultural loan schemes to help farmers get income to adopt modern technologies that are profitable since an increase in the technology results into increase in the number of bags of cassava

There is need for the government to empower the agriculture extensional officers through training such that they are able to train the cassava farmers on the better post harvesting technologies as training courses and extension visits positively influenced technology use.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

Cassava (*Manihot esculenta* crantz) also referred to as yucca in Spanish, mandioca in Portuguese and tapioca in French, belongs to the Euphorbiaceae family (opera 1999; Burrell 2003).

It has been reported that the crop originated from South America and was domesticated between 5000- and 7000-years B.C. (Olsen and schaal2001). The first import of cassava to Africa was by the Portuguese from Brazil in the eighteenth century, but now cassava is cultivated and consumed in many countries across Africa, Asia, and South America (Nhassico *et al*. 2008; FAO 2013).

Cassava has drought-resistant roots, which offer it a low-cost vegetative propagation with flexibility in harvesting time, and seasons (Haggblade *et al*. 2012). Cassava can be cultivated throughout the year between altitudes 30º N and 30º S, in different soil types except hydromorphic soil with excess water (Iyer *et al*. 2010). The stem grows to about 5-m long with each plant producing between 5 to 8 tubers with firm, homogenous fibrous flesh covered with a rough and brownish outer layer of about 1-mm thick.

The root can be stored in the ground for over 2 years, and this serves as a means of food security for the farmer in West African Countries such as Nigeria. However, during in-ground storage of the roots, there is a risk of rodent and insect attacks or microbial infestation (Nhassico *et al*. 2008; Falade and Akingbala 2010).

Cassava is a subsistence crop in Africa. It supplies about 200-500 cal/day for households in developing countries (Sanchez *et al.* 2006; Omodamiron et al 2007). In its early years' cassava was neglected because of its low protein content (<2 %) and high cyanide concentration (120–1945 mg HCN A. D. Uchehukwu –Agua: O.J. Caleb: U.L. Opara equivalent/kg) (Iglesias et al. 2002; Charles et al. 2005), but it is considered the fourth most energy-rich food source due to the high (>70%) carbohydrate content (Falade and Akingbala 2010). The leaves of cassava plants are higher in protein (3– 5 %) and some macronutrients and therefore are consumed as vegetables in some countries (Salcedo et al. 2010; Burns *et al*. 2012). Cassava serves as a source of food

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