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POST-HARVEST HANDLING TECHNOLOGIES ON MARKETABILITY OF MAIZE OF SMALL-SCALE FARMERS IN NAWAMPITI SUB-COUNTY IN LUUKA DISTRICT

BY

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A DISSERTATION SUBMITTED TO THE DEPARTMENT OF AGRIBUSINESS AND EXTENSION IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF A BACHALOR'S DEGREE IN AGRIBUSSINESS OF BUSITEMA UNIVERSITY

DECLARATION

I, MUWANIKA IVAN hereby declare that this dissertation titled post-harvest handling technologies on marketability of maize of small-scale farmers in Nawampiti sub-county in luuka districtsmy original work and is neither a duplication of another research study nor has it been submitted to any university or institution for any award of academic qualification or publication.Allexisting pieces of work that were used in this research report have been accordingly

Acknowledged.

Signature: ..... Date: 17/02/2021

APPROVAL

I have supervised this research work titled *post-harvest handling technologies on marketability of maize of small-scale farmers in Nawampiti sub-county in luuka district*by Muwanika Ivan and I have found it worthy of submission for award of Bachelor's Degree in Agribusiness at Busitema University Arapai Campus).

SUPERVISOR: Mr. AMAYO ROBERT

Signature: ..... Date: 17/2/2021

DEDICATION

This dissertation is dedicated to my family, friends, course mates and workmates for thetireless efforts they put into supporting me.

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LIST OF ABBREVIATIONS

ACE Area Cooperative Enterprise

APHLIS African Post-harvest Losses Information System

DV Dependent Variable

EAC East African Community

ECA East and Central Africa

EUT Expected Utility Theory

FAO Food and Agriculture Organization of the United Nations

IV Independent Variable

MAAIF Ministry of Agriculture, Animal Industry and Fisheries

NGO Non-governmental organization

NCBA CLUSA National Cooperative Business Association Cooperative League of UnitedStates of America

PHHS Post-harvest handling and storage

PHHT Post-harvest handling Technology

PHLPost-harvest Loss

SSA Sub-Saharan Africa

SPSSStatistical Package for Social Scientists

UBOS Uganda Bureau of Statistics

USAID United States Agency for International Development

WFP World Food Programme

ABSTRACT

Maize is one of the most important cereal crops in the world, in agricultural economy both as food for human beings, feed for animals and other industrial raw materials. It is one of the world's leading crops cultivated over an area of about 142 million hectares with a production of 637 million tons of grain. However, its production in terms of quality and quantity has been hampered by losses due to poor harvesting methods, post-harvest handling procedures, distribution, sales and marketing policies (World Bank et al., 2011). According to Tyler (1982), the economic importance of the factors leading to high post-harvest losses varies from commodity to commodity, season to season, and the enormous diversity of circumstances under which commodities are grown, harvested, stored, processed and marketed in this study, a cross-sectional survey in the collection of data form the 151 respondents in two selected perishes from Nawampiti sub-county in Luuka district the survey had two objectives including: to determine the post-harvest handling technologies and to assess farmer's perception on the effect of post-harvest handling technologies of maize on farmers' income the study adopted mixed methods whereby a questionnaire survey, key informant interviews and document review were used to collect data. The data was collected from 151 respondents with93.3 per cent response rate. The data was analyzed using frequencies, percentages, means and standard deviations and regression analyses for quantitative data whereas for qualitative data, thematic analysis was used. The findings revealed: According to a regression analysis, training post-harvest handling technology was the greatest contributor to maize farmers' income as the of R Square 0.298 implied that the Independent Variable (PHHT) in this model and under the conditions of this study accounted for 29.8 per cent of the variation in the Dependent Variable (Maize farmer's income). Additionally, part (b) shows the Adjusted R Square of 0. 284.So the study calls for more investment in training of farmers in post-harvest handling technologies to increase their adoption of these technologies, hence increasing farmers' income. Future studies should explore more dimensions of post-harvest handling technology focusing ontraining and adoption and maize farmers' income a clear appreciation of the phenomena. Furthermore, research should be conducted to understand how weather conditions affect the rate of post-harvest loss in form of quality and quantity

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Maize is believed to have originated from Central America; a region which was dominated by wild maize, *Teosinte* and *Zea Mexicana* (ACDIVOCA, 2010: 2). An archaeological study of the bat caves in New Mexico revealed corncobs that were 5,600 years old by radiocarbon determination and most historians believe that corn was domesticated in the Tehuacan Valley of Mexico (Lance and Garren, 2002). Maize is one of the most important cereal crops in the world, in agricultural economy both as food for human beings, feed for animals and other industrial raw materials. It is one of the world's leading crops cultivated over an area of about 142 million hectares with a production of 637 million tons of grain. In Africa for instance the maize production in 2012 was 70 Million MT with leaders being South Africa (11.8 Million MT), followed by countries like Nigeria, Egypt, and Ethiopia who all doing above 6 Million MT per annum (FAO stat, 2012). Maize was introduced in Uganda in 1861 and has since become a major part of the farming system, ranking third in importance among the main cereal crops (finger millet, sorghum and maize) grown in the country (USAID, 2010). Uganda's small-scale farmers have traditionally cultivated maize for food and for income generation. But still the production is being hampered by post-harvest losses). Maize undergoes several procedures like harvesting, drying, threshing, winnowing, processing, bagging, storage, transportation, and ex-change before reaching the final consumer. The primary role of an effective post-harvest system is to ensure that the harvested food reaches the consumer, while fulfilling customer satisfaction in terms of quality, volume and safety. For the low-income countries, pre-harvesting management, processing, storage infrastructure and market facilities are either not available or are inadequate (World Bank et al., 2011) hence attributing to post-harvest losses of maize grain.

1.2 Statement of the problem

Post-harvest food loss in Africa represents a multi-faceted challenge that reduces the income of approximately 470 million farmers (The Rockefeller Foundation, 2014). Furthermore, Okoruwa*et al* (2012: 55) emphasized that post-harvest loss of grain caused by practicing of poor post-harvest technologies lower the farmers' income. The post-harvest losses represent more than 20 million metric tonnes of grain, valued at over $4b annually in Uganda which is enough to