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**FACULTY OF SCIENCE AND EDUCATION**

**NAGONGERA CAMPUS**

**DEPARTMENT OF AGRICULTURE**

**ASSESSING THE MAJOR CAUSES OF POST HARVEST LOSSES IN MAIZE DURING  
STORAGE AND ITS EFFECT ON THE FARMER.**

**A CASE STUDY AT ADEKOKWOK SUB-COUNTY LIRA DISTRICT**

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**BU/UP/2018/2563**

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## **DECLARATION**

I Ongom Bonny with the University Registration Number BU/UP/2018/2563 declare that this report has been compiled by me and it is original and has not been submitted to any institution or organization for any award.

Sign: .....

Date: .....

**APPROVAL**

Academic supervisor Prof. Ochwoh Victor Akangah

Date: .....

Sign: .....

## **DEDICATION**

First and foremost, I would like to thank the Almighty Father for having kept us up to this moment. I would like to dedicate this report to my father and mother Mr. Ojungu Lawrence and Mrs. Semmy Ojungu who supported me spiritually and financially during my studies, research and in coming up with this report. I would like also to dedicate this report to my lovely wife Sharafina Ongom and to my lovely daughter Jordine Smith Achola and lastly to all my friends especially Agriculture students and home friends and to everyone who helped me in all ways during my studies and training and all well-wishers. May God bless you all. AMEN.

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## LIST OF ACRONYMS

LC .....	Local Council
UBOS.....	Uganda Bureau of Statistic
MT .....	Metric Tons
FAO .....	Food and Agriculture Organization
APHLIS .....	African Post-Harvest Losses Information System
WFP .....	World Food Programme
AFA .....	Adekokwok Farmers Association
UN .....	United Nation
NRI.....	National Research Institute
SSA .....	Sub Saharan Africa

## ABSTRACT

This Special Report was compiled after conducting a Research Study among maize farmers at Adekokwok sub-county Lira City and Lira District on the "Causes of post-harvest loss in maize during storage phase and how it affects farmers". The Research report was compelled by Ongom Bonny after conducting a research study in accessing the major causes of post-harvest loss in maize during storage and its effects on the farmer. The objective of the research was to determine the quantity of maize loss under each agent during storage phase of maize, to estimate the loss during storage phase in monetary form and also to find out what farmers has done to overcome the loss and to determine the impact of solution toward the loss during storage phase of post-harvest

The information in this report was collected first hand (first hand data) using questionnaire, interview and observation methods where 40 farmers carrying out maize production at the sub-county were picked at random from various villages within the sub-county

During the study, it was found that insect was the major cause of post-harvest loss in maize during storage, it also found out that quantity of maize loss during storage phase alone is 1,672 kegs, it also found that the loss caused by different agent of post-harvest loss during storage alone amounts to UGX 1,266,540., the study also found that farmer are trying several measures to reduce the loss caused during storage with the best results rated 92% i.e. using insecticide to kill insects.

In conclusion, the main cause of post-harvest losses in the farmer's stored maize was found to be insects among others like; spillage, molds, rodents and etc. this was because farmers do not have good quality storage facilities, and majority are lowly educated which has resulted in to famine and eating low value food stuff that affects their health and nutrition.

After entering all the data collected and analyzing it, I recommended farmers to use insecticide to control insect, dry their maize well before storing, have rodent prove store, concern authorities should invest in educating farmers about post-harvest loss and there should be need in improving packaging materials to avoid spillage.

Lastly I would recommend further research in; the major cause of post-harvest loss during other phases of post-harvest, how management practice affects maize productivity and how temperature and humidity causes post-harvest loss in stored grains.

# CHAPTER ONE

## INTRODUCTION

This is the research report that was carried out at Adekokwok Sub County in Lira Uganda for the partial fulfillment of Bachelor of Science education in agriculture. In Uganda, about 16 major food crops are grown. These include Cereals (Maize, Millet, Sorghum, Rice); Root crops (Cassava, Sweet potatoes, potatoes); Pulses (Beans, Cow peas, Field peas, Pigeon peas); and Oil crops (Groundnuts, Soya beans, Sim sim), Plantains; and Coffee. (UBOS, 2014). However wheat is to be included in here because it has increasingly become a major crop in Uganda as it has been in the rest of East Africa. (UBOS, 2014).

### 1.1. Background

Maize was introduced in Uganda in 1861 (Balirwa, 1992) and by 1900 was already an established crop (Ministry of Agriculture 1988, quoted by Balirwa (1922)). Maize is widely grown in Uganda covering about 50 districts. The main production agro ecological zones are in the west, east, north and southeast Uganda. The crop is cultivated in over 3.6 million households on about 1.5 million hectares of land. (UBOS, 2014). The national production of maize in 2009 was 2.4 million MT which came from an estimated area of 1 million hectares. (UBOS, 2010). In some regions of the country, the crop has now become a staple food, replacing crops like sorghum, millet, cassava and bananas. It is a growing source of household income and foreign exchange through exports.

One of the main global challenges is how to ensure food security for a world growing Population while ensuring long-term sustainable development. According to FAO (2013) food production will need to grow by 70% to feed world population which will reach 9 billion by 2050. Consequently, there is a need for an integrated and innovative approach to the global effort of ensuring sustainable food production and consumption (Nellemann, 2009). In the meantime, while the number of food insecure population remains unacceptably high (FAO, 2011), each year and worldwide, massive quantities of food are lost due to spoilage and infestations on the journey to consumers (FAO, 2011).

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