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EFFECT OF TRADITIONAL THRESHING METHODS ON THE QUALITY AND MARKETABILITY OF RICE AMONG SMALL HOLDER PADDY RICE FARMERS IN BUDAKA SUB COUNTY, BUDAKA DISTRICT

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A SPECIAL PROJECT REPORT SUBMITTED TO THE DEPARTMENT OF AGRIBUSINESS AND EXTENSION IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF BACHELOR OF AGRIBUSINESS OF BUSITEMA UNIVERSITY

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DECLARATION

This study titled effect of traditional threshing methods on the quality and marketability of rice among small holder paddy rice farmers in Budaka sub county, Budaka district is original and has not been published or submitted for any other degree award to any other University before.

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Signature.....

Date.....23rd/04/2024.....

ii

APPROVAL

This Special Project Report has been submitted to the Department of Agribusiness and Extension with approval of the University supervisor.

Name of supervisor: Dr. Kabbiri Ronald

Signature .....

Date..... 23/9/2024

DEDICATION

I dedicate this thesis to the almighty God for he exalted himself above my potential most especially at the moments when I felt like giving up for he gave me the strength and equipped me with good health throughout the all process of research, blessed be your holy name. Special dedication go to my beloved family thank for your tireless efforts and support toward supporting me to achieve my carrier goal.

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TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

LIST OF ACRONOMYS

FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
UBOS	Uganda Bureau of Statistics
UGX	Uganda Shillings
Std. Deviation	Standard Deviation
HH	House hold
PHT	Post-Harvest Technologies
PHL	Post-Harvest Losses
MT/HA	Metric tons / Hectare
MAAIF	Ministry of Agriculture Animal Industry and Fisheries
SPSS	Statistical Package for Social Science
NERICA	New Rice of Africa
MMT	Million Metric Tones
Ha	Hectare
AWARDA	West African Rice Development Aid
UN	United Nations
BAB	Bachelor of Agribusiness
i.e.	That is to say

ABSTRACT

The aim of the study was to assess the effect of traditional threshing methods on the quality and marketability of rice among small holder paddy rice farmers in Budaka sub county, Budaka district. The study targeted 80 paddy rice farmers in Budaka Sub-county which comprises 4 parishes and 16 villages and these were; Chali parish (Bolosyo, Nabiketo, Chali, Izimbango), Nampangala parish (Nampangala, Nawango, Nanyuru, Bulumbi), Sapiri parish (Sapiri, namukumeri, Nansekese, Nansemenye) and Gadumire parish (Gadumire, Nabiketo, Nsawe, Namwenda). Primary data was collected using a structured questionnaire, and then entered and cleaned in the Microsoft excel sheet and analyzed using SPSS version 20. Descriptive statistics were used to characterize the traditional paddy rice threshing methods and determine the efficiency of the threshing methods. A binary logistic model was used to determine the effects of the threshing methods on rice quality. Results show that the most preferred method was beating (83.75%) as compared to hand threshing (16.25%). The choice of the threshing method was dependent on the variety of rice grown by the farmer as from the results obtained from the field it is evident that farmers who cultivated supa variety used hand threshing method and the reason attributed to this was its un uniform maturity of rice, while those who cultivated other varieties such as kaiso, wita9 used beating method and this is due to its uniform maturity. Traditional rice threshing method preserve the natural flavors and aroma of rice. Farmers used simple tools such as tarpaulin flail/sticks, sacks, trays or pans among others in the threshing of rice. The study revealed that beating method was more efficient in terms of costs, time and labor as compared to hand threshing though it causes a significant deterioration on the quality of the grains which is not the case with hand threshing method. In conclusion, hand threshing is more efficient in terms of grain quality preservation as compared to beating method though the beating method has an advantage of being cheap in terms of costs and labor efficient as compared to hand threshing. Despite the challenges, a lot of measures have to be employed to minimize PHLs caused as a result of use of poor threshing methods. Convenient and affordable threshing tools that are easy to operate should be made available to farmers in order to reduce human drudgery, Giving fair credit to farmers and harvesting of fully mature grains should be done by farmers as this will help in preserving grain quality and reduce grain breakage during threshing.

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

Rice (*Oryza sativa*) is a staple food for more than half of the world's population (Oryza *et al*., 2019). Its one-fifth of the world's population depends on rice production for their livelihood, and there are more than 200 million rice farms worldwide (Oryza *et al.*, 2019). The total area under rice cultivation globally is estimated to be 150 million hectares with annual production averaging 500 million metric tons (Ma, 2019). In the developing world, rice has twice the value of production compared to any other food crop, and it represents 29% of the total output of grain crops worldwide (Ma, 2019). In Africa, rice is becoming increasingly popular judging from the steady growth in its production, which, however, still lags behind consumption (Sreedhar & Reddy, 2019)The annual production of rice in Africa is estimated at 14 million metric tons while consumption is within the range of 16 million metric tons per annum, which implies a deficit of 2 million metric tons (Naomi & Lewis, 2019). The area under rice production in African countries will continue to expand in the foreseeable future. As part of the efforts to enhance rice yield as a means to reduce the gap between supply and demand, and to curb food insecurity and income poverty in Sub Saharan Africa (SSA) (Ma, 2019). New Rice for Africa (NERICA) was recently developed by the West Africa Rice Development Association (WARDA) (Sakagami, 2022). In Uganda, rice production started in 1942 mainly to feed the World War II soldiers, production remained low due to various constraints (Saito *et al.*, 2018). In 2002, NERICA was introduced in Uganda as one of the government's strategies for achieving its overarching development goals of reducing poverty and food security, as well as import substitution (Britwum *et al.*, 2020). Since NERICA is a high-yielding variety of upland rice developed to suit the African environment by combining resistance to African rice pests, diseases, and water stress with the high yield potential of the Asian species (Futakuchi & Saito, 2021).The average on farm yield of NERICA in Uganda was found to be 2.5 tons per hectare (Raheem et al., 2021). However as the consumption level of rice increases, the level of production of rice in Uganda is still low (Mohammed et al., 2018). This is due to poor threshing methods for rice remain a persistent challenge. The poor quality is due to fracturing caused by poor threshing methods and stickiness attributed to poor agronomic practices, post-harvest handling [7] and low standard rice processing (Amare, 2015).

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