

**FACTORS THAT HAVE LED TO DECLINE OF SORGHUM PRODUCTION AMONG  
SMALL SCALE FARMERS**

**A CASE STUDY OF NABISWA SUB COUNTY- KIBUKU DISTRICT**

**BY**

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**A RESEARCH REPORT SUBMITTED TO THE DEPARTMENT OF AGRICULTURE,  
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**DECLARATION**

I MUSWANE JONATHAN declare that this research report is my original work and to the best of my knowledge. The research report has never been presented for any award of degree or diploma in any other institution of learning.

Signature..... Date.....

**APPROVAL**

This is to certify that this research report entitled factors that have led to decline in sorghum production among small scale farmers in Nabiswa SubCounty, Kibuku District submitted in partial fulfillment of the requirement for award of degree of Bachelor of Science Education of Busitema University is authentic record of bonafied research work carried out by MUSWANE JONATHAN (BU/UP/2018/2890) under my guidance and supervision. This research report has never been submitted for any other degree or diploma award in any learning institution.

Signature:.....

Date:.....

**Mr. OGUZU EVANS**

SUPERVISOR

## DEDICATION

This work is dedicated to my beloved parents, Mr. Namboga Peter and Mrs. Kagino Albin who contributed much in my education.

This work is also dedicated to, my brother Kirongosa Kenneth and all other beloved family members like Katooko Suzan, Teddy, Katinde Francis for their courage and compassion and love they showed to me during my studies.

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## Table of content

Declaration.....	I
Approval.....	II
Dedication.....	III
Acknowledgements.....	IV
Abstract.....	V
Acronyms.....	VI
1.0 Chapter one: Introduction	
FAO            Food and Agricultural organization .....	xii
1.1 BACKGROUND .....	1
1.2 Brief Statement of Problem.....	3
1.3 Objectives Of The Research.....	4
1.3.1 Broad Objective. ....	4
1.4 Justification.....	4
1.5 Hypothesis .....	4
1.6 Research Questions.....	5
1.7 Scope of the study.....	5
1.8 Significance of the study.....	5
2.1 Background and global production .....	7
2.2 Utilization and importance.....	8
2.3 Sorghum production in Uganda .....	9
2.4 Sorghum growing areas in Uganda.....	9
2.5 FACTORS FOR LOW SORGHUM PRODUCTION (CONSTRAINTS) AND CONTROL MEASURES.....	10

2.5.1 Abiotic factors.....	10
2.5.2 Biotic factors.....	11
Fall armyworms .....	13
2.6 Strategies and measures to increase sorghum production.....	14
3.1 Introduction.....	16
3.2 Study Area .....	16
3.3 Location. ....	16
3.4 Rain fall .....	17
3.5 Temperature and relative Humidity .....	17
3.6 Population .....	17
3.7 Research design .....	17
3.8 study population.....	17
3.9 Sampling procedure .....	17
Sample size and sample size determination. ....	18
Sampling Technique .....	18
Table 2: Sample Size .....	18
CHAPTER FOUR:.....	20
4.0 DATA ANALYSIS, PRESENTATION, AND DISCUSSION.....	20
4.1 Introduction.....	20
4.2 Questionnaire Return Rate .....	20
4.3 Demographic characteristics of the respondents .....	20
Table 3: Respondents by Gender .....	20
4.3.1 Age of the respondents. ....	21
4.3.2 Respondents' level of Education .....	22
Table 6: Importances of sorghum.....	24

Table 7: Factors that have led to the decline of Sorghum production.....	25
4.4.1 Limited extension services .....	26
4.4.2 Decline in soil fertility. ....	26
4.4.3 Fall Army Worms(FAW).....	27
4.4.4 Striga weeds .....	27
4.5 STRATEGIES AND MEASURES TO INCREASE SORGHUM PRODUCTION AMONG SMALL SCALE FARMERS IN NABISWA SUBCOUNTY . ....	27
5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS.....	30
5.1 Introduction.....	30
5.2 Summary of the Findings .....	30
5.3 Importance of sorghum .....	30
5.4 Factors that have led to decline of sorghum production .....	30
5.5 Strategies to overcome the constraints faced by small scale sorghum farmers .....	31
5.6 Conclusions.....	31
5.7 Recommendations.....	32
5.7.1 Policy recommendation.....	32
5.7.2 Recommendation for further studies .....	33



## List of Tables

Table 1: sample size determination.....	28
Table 2: Sample size.....	29
Table 3: Respondents by Gender.....	30
Table 4: Age of Respondents.....	33
Table 5: Education level of Respondents.....	34
Table 6: Importance of sorghum.....	35
Table 7: Factors that led to decline in sorghum production.....	37
Table 8: Strategies for increasing sorghum production.....	39

## List of Figures

Figure 1: pie chart showing gender of respondents.....	32
Figure 2: Bar graph showing age of respondents.....	33
Figure 3: Bar graph showing Education level of Respondents.....	35
Figure 4: Apie chart showing importance of sorghum.....	36
Figure 5: A bar graph showing Factors that led to decline in sorghum production.....	38
Figure 6: A bar graph showing strategies to increase sorghum production.....	40

## **ABSTRACT**

This research study was about finding factors for low sorghum production in Nabiswa Subcounty former part of large Kirika Subcounty. The small scale sorghum farmers in Nabiswa Subcounty have been cultivating sorghum over the years for household food consumption. The production of the crop had lower yields in the recent years within the study area. Sorghum is known as a food security crop and its ability to withstand dry weather conditions.

The objective of this study was to get information about the factors for low sorghum production and give recommendations to increase sorghum production

To answer this, the following research question and sub-questions were formulated:

What are the importances of sorghum production among small scale farmers? What are the factors leading to the decline of sorghum production in Nabiswa Subcounty in Kibuku district? What are the strategies to increase sorghum production among small scale farmers in Nabiswa Subcounty in Kibuku district?

A qualitative cross sectional survey design was used to collect data from the respondents. The sampling technique used was random sampling where 30 respondents were selected to participate in the study and were given well prepared questionnaires. Data was analyzed using Microsoft Excel software and it was found out that source of food was the major importance of sorghum, decline in soil fertility, was the main factor that have led to decline in sorghum production and the use of fertilizers was the major strategy to overcome constraints leading to decline in sorghum production. The research study concluded that the major strategy to overcome the problem faced by small scale sorghum farmers was use of fertilizers. The study

recommended that the Government should increase on number of extension workers to advise farmers in Nabiswa Subcounty.

## **ACRONYMS**

FAO	Food and Agricultural organization
MFPEd	Ministry of Finance Planning and Economic Development
IITA	International Institute of Tropical agriculture
SOM	Soil Organic Matter
SSA	Sub Saharan Africa
FAW	Fall Army Worms
CAN	Calcium Ammonia Nitrogen
NPK	Nitrogen Phosphorus potassium
DAP	Di-ammonium Phosphate
KARI	Kenya Agricultural Research Institute
TARA	Trust for African Rock art
MT.	Metric Tonnes
USAID	United State Agency International for Development
U.S.	United States
FAOSTAT	Food Agricultural Organization Statistics
ICRISAT.	International Crop Research Institute for the Semi-Arid Tropics
ECA.	Eastern and Central Africa
ECARSAM.	Eastern and Central Africa regional Sorghum and Millet
GDP.	Gross Domestic per Capita
MoA.	Ministry of Agriculture

DFID            Department for International Development  
ILRI            International Livestock Research Institute  
ASARECA       Association for Strengthening Agricultural Research in Eastern and Central  
Africa  
SLF            Sustainable Livelihood Framework  
NaSARRI-NARO   National Semi Arid Resources Research Institute of the National  
Agricultural Research Organisation

## **1.0 CHAPTER ONE: INTRODUCTION**

### **1.1 BACKGROUND**

Sorghum (*Sorghum bicolor* (L.) Moench) is the world's fifth most important cereal in terms of production and area of coverage (FAO and ICRISAT, 1996) after wheat, rice, maize and barley. The cereal is an important food crop in semiarid areas of subSaharan Africa (Wortmann et al., 2009); being the second most important after maize in Africa and the third in Eastern Africa after maize and finger millet.

Sorghum (*Sorghum bicolor* L. Moench) is native to the tropical areas of Africa. The oldest cultivation records date back to 3000 B.C. in Egypt. Sorghum is produced throughout the tropical, semi-tropical and arid regions of the world. The crop is a self-pollinating plant and its drought tolerance is higher than that of corn. It is a member of the grass family graminea and can be categorized into four groups by application, i.e. grain, sweet, broom sorghum or grass sorghum. Grain sorghum is mainly used as a principal food in tropical areas and often used as raw material for alcoholic beverages, sweets and glucose. Broom sorghum on the other hand is for making brooms while sweet and grass sorghum is used to make sweetener syrup and green feed (U.S Grain Council, 2010). Sorghum is one of the most important drought tolerant crops and is often referred to as the camel of the plant kingdom (Fetene et al., 2011). The plant has for a long time been noted to be the most important cereal for human consumption surpassed only by maize, wheat, rice and barley (Dicko et al., 2006; Akram et al., 2007). It is reported to be one of the main staple food crops for the world's poorest and food insecure people (Timu et al., 2012). Sorghum is a globally cultivated cereal unique due to its tolerance to drought, water logging and saline-alkali infertile soils and high temperature (Taylor, 2003). The potential of sorghum to catalyze regional development and improve food security is considerably high. Farmers in the semi-arid areas often prefer to grow maize since it is less labour intensive and there is often a ready market.

Sorghum varieties in Kenya; Drought events associated with climate change and climate variability have become more pronounced in Kenya in recent years adversely affecting the lives and livelihoods of smallholder farmers in ASALs (Miano et al., 2010). In terms of tonnage, sorghum has been reported to be Africa's 2<sup>nd</sup> most important cereal. The continent produces about 20 million tons of sorghum per annum which accounts for a third of the total global

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