



**BUSITEMA  
UNIVERSITY**  
*Pursuing Possibilities*

49  
-----  
60

P.O. Box 238, Tororo  
Gen. +256 454448842  
Dir. +256 454448864  
Mob. +256 787998873  
Fax. +256 454436517  
Email: [info@busitema.ac.ug](mailto:info@busitema.ac.ug)  
Website: [www.busitema.ac.ug](http://www.busitema.ac.ug)

**INTERNSHIP REPORT CONDUCTED AT NATIONAL CROPS RESOURCES  
RESEARCH INSTITUTE (NaCRRI) NAMULONGE.**

**COMPLIED BY: EBYAU IGNATIUS**

**REG No. B U/UP/2018/2080**

**EMAIL: [ignatiusebyau@gmail.com](mailto:ignatiusebyau@gmail.com)**

3

**COURSE CODE: 1208**

**YEAR: 2019**

**A REPORT SUBMITTED TO THE AGRIBUSINESS AND EXTENSION  
DEPARTMENT, BUSITEMA UNIVERSITY ARAPAI CAMPUS OF AGRICULTURE  
AND ANIMAL SCIENCE FOR PARTIAL FULFILLMENT OF THE REQUIREMENT  
FOR THE AWARD OF DIPLOMA IN CROP PRODUCTION AND MANAGEMENT**

**DECLARATION**

I, EBYAU IGNATIUS, hereby declare that this internship report is my original work and has been compiled by myself using materials and knowledge that I acquired during my internship at National Crops Resources Research Institute – Namulonge.

It has never been submitted to any other institution of higher level of learning for any award of any academic qualification.

NAME: EBYAU IGNATIUS

SIGNATURE: *[Handwritten Signature]*

DATE: 15<sup>th</sup> August 2019

**Field Supervisor**

NAME: Lelel Ramathani

SIGNATURE: *[Handwritten Signature]*

DATE: 15<sup>th</sup> August 2019

National Crops Resources  
Research Institute (NaCRRI)  
P.O. Box 7084, Kampala

**Academic Supervisor**

NAME: Cumi Sirija Coeta

SIGN: *[Handwritten Signature]*

DATE: 15/08/2019



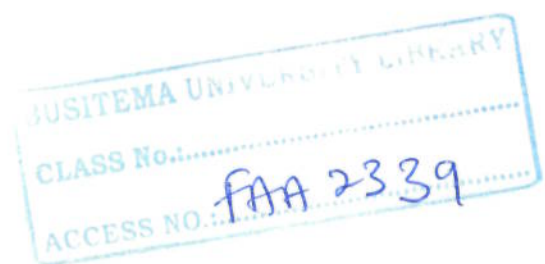
## DEDICATION

I dedicate this great piece of work to my beloved family members and friends. May the Lord reward them abundantly for the financial support in my studies.

I also dedicate it to the management of NaCRRI- Namulonge, more especially the field supervisors who devoted whole heartedly to essentially offer me all the necessary guidance and assistance throughout the period of attachment.

I pray to God to bless them.

(1)



## ACKNOWLEDGEMENT

I wish to express my gratitude to the Almighty God for keeping me alive and out of trouble for the whole of my internship period within a stipulated time.

I extend intensively personal sacrifice and greater self-discipline in order to work diligently over the entire industrial training period to collect data and present it into a report.

Let me take this opportunity to appreciate the academic staff of Busitema University Arapai Campus and I am deeply indebted to my mind the academic supervisor Mrs. Gumisiriya Costa for their contributions to make this internship a success.

I also appreciate the NaCRRRI – Namulonge staff for granting me the opportunity to undertake the training at the Organization more especially to the intern Coordinator who devoted herself whole heartedly to essentially offer me a conducive environment to learn from and bridging the gap between internship students and field supervisors.

D

## TABLE OF CONTENTS

DECLARATION.....	i
DEDICATION.....	ii
ACKNOWLEDGEMENT.....	iii
TABLE OF CONTENTS.....	iv
LIST OF ABBREVIATIONS.....	vi
LIST OF TABLES.....	vii
LIST OF FIGURES.....	viii
ABSTRACT.....	ix
CHAPTER ONE.....	1
Introduction.....	1
Description of NaCRRI.....	1
Location of the Institution (NaCRRI).....	1
Historical background of NaCRRI.....	1
Objectives of NaCRRI.....	2
Vision.....	2
Mission.....	2
Objectives of the training.....	2
NaCRRI organization structure.....	2
CHAPTER TWO.....	3
Introduction.....	3
CEREAL CROP PROGRAMME.....	3
ROOT CROP PROGRAMME.....	5
LEGUMES PROGRAMME.....	10
HORTICULTURE PROGRAMME.....	15
CHAPTER THREE.....	17
Impact of the attachment.....	17
Skills gained.....	17
Responsibilities.....	17
Influence of the attachment.....	17
Correlation of the attachment activities with classroom activities.....	17
Challenges faced during the period of attachment.....	18
CHAPTER FOUR.....	19
Recommendations.....	19

Conclusion .....	19
APPENDICES .....	20
REFERENCES.....	26

## LIST OF ABBREVIATIONS

NaCRRRI	National Crops Resources Research Institute.
NARO	National Agriculture Research Organization.
ZARDs	Zonal Agriculture Research Development Institutes.
GMOs	Genetically Modified Organisms.
IPM	Integrated Pest Management.
ATF	Applied Tropical Floriculture.
NARS	National Agriculture Research Systems.
JICA	Japan International Cooperation Agency.
IITA	International Institute of Tropical Agriculture.
ARTP	Agriculture Research and Training Project.
NPK	Nitrogen Phosphorous Potassium.
SPVD	Sweet Potato Virus Disease.
CBB	Common Bean Blight.
BCMV	Bean Common Mosaic Virus.
Nam	Namulonge
Mak	Makerere
BUAC	Busitema University Arapai Campus.
DCP	Diploma in Crop Production and Management.
NE	North East
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries.

①

## LIST OF TABLES

Table 1. Bean disease symptoms and control measures .....	13
Table 2. Varieties of soya beans and their days to maturity .....	14

①



## LIST OF FIGURES

Fig 1. Pollen trapping and tagging of the maize plant.....	20
Fig 2. Field affected by CassavaMosaic Disease (CMD).....	20
Fig 3. Beans affected by leaf rust.....	20
Fig 4. Identifying diseases in sweet potatoes in the screenss-house.....	21

D

## **ABSTRACT**

This industrial training report contains four chapters and clearly describes the details of activities both practical and lectures that we performed at NaCRRRI and these include ; CEREALS, HORTICULTURE & OIL PALM, ROOT CROPS AND LEGUMES programmes as presented below;

### **Chapter one;**

7

This chapter describes NaCRRRI, the historical background, vision, mission and purpose, objectives of the training, the Organization structure of NaCRRRI is in the appendices.

### **Chapter two;**

Here, I described the set of activities I got involved in the four programs at NaCRRRI for example Cereals (maize and rice), Root crops (cassava, sweet potatoes), Legumes (beans and soya beans), Horticulture (solaneceious vegetables and fruits). Under each section, various activities are done such as pathology, entomology, agronomy, data collection and breeding.

### **Chapter three;**

This chapter summarizes the impacts of the attachment ie skills acquired, responsibilities undertaken, influence of the attachment to my future career plans, correlation of the attachment activities with class room knowledge and the various challenges faced during the period of the attachment.

### **Chapter four;**

This chapter contains the recommendations from NaCRRRI and BUAC which includes conclusions, appendices, work plan and references.

## CHAPTER ONE

### Introduction

### Description of NaCRRI

NaCRRI- Namulonge is one of the public agricultural institutes under the policy guidance of NARO which comprises of 4 programs namely Cereals, Root crops, Legumes and Horticulture.

The director of the institute is Dr. Godfrey Asea (PhD) and the administrator is Mr. Luzira Francis.

### Location of the Institution (NaCRRI)

NaCRRI is one of the six NARIs under the policy guidance and co-operation of the National Agriculture Research Organization (NARO). It is located at bimodal rainfall region at latitude 0032° NE. It is located north of Kyadondo constituency, Wakiso district and 27km north of Kampala city, central Uganda.

The place has a tropical wet and dry mild climate with slightly humid conditions with an average of 65%. The area has savanna vegetation with tall trees and the most dominant type of grass called Pannicum maximum. The institute has 1188 hectares of land, of which 187 hectares are found at Sendusu where it hosts another organization IITA.

### Historical background of NaCRRI

The NaCRRI formerly known as Namulonge Agricultural and Animal Production Institute, is one of the research institutes under the policy guidance of NARO which was established in 1949 by the empire cotton growing cooperation of Britain.

It was established to sole investigate problems related to cotton production with the countries of the British Empire.

It served Sudan, Kenya, Tanzania, Zambia, Malawi, Nigeria, Uganda, and Yemen among others.

Uganda was chosen to be the regional center because it was centrally placed with exception of India, and was the largest producer of cotton in Common Wealth.

The Cotton Research Cooperation handed the institution to the Uganda government in 1972 and the institute continued as a cotton research station until 1980s when the research on other community crops and animal production was introduced. The crops that were introduced included; maize, cassava, sweet potato, soya beans, sunflower, ground nuts, simsim and wheat among others. Fruits were also introduced such as mangoes, oranges and lemons.

The institute also got involved in weather forecasting, data collection, processing and transmission of information to the departments of metrology and agriculture.