

BUSITEMA UNIVERSITY ARAPAI CAMPUS FACULTY OF AGRICULTURE AND ANIMAL SCIENCES

DIPLOMA IN CROP PRODUCTION AND MANAGEMENT

A REPORT OF INDUSTRIAL TRAINING CARRIED OUT IN NAMULONGE IN Na CRRI FROM 1ST MARCH TO 6TH MAY

COMPILED BY;

VERSI

NABIRYE JOYCE

BU/UG/2019/3510

joyhappynabi@gmail.com

DIPLOMA IN CROP PRODUCTION AND MANAGEMENT

DCP 1208

0775748556

SIGN.....

TO BE SUBMITED TO THE DEPARTMENT OF AGRIBUSINESS AND EXTENSION FOR THE PARTIAL AWARD OF DIPLOMA IN CROP PRODUCTION AND MANAGEMENT.

DATE OF SUBMISSION 18th 05 2022

DECLARATION

I NABIRYE JOYCE, solemnly declares that the work in this report is my original work compiled after the industrial training in NaCRRI and has never been submitted to any institution of learning or the award of any educational qualification.

Date 10th/05/2022

Signature.

BUSITEMA UNIVERSITY LIBRARY CLASS NO. FAA ACCESS NO 21

i

APPROVAL

The undersigned certify and hereby recommends for admission and acceptance by Busitema University a report of Industrial Training carried out in Namulonge at NaCRRI under their supervision and all the information in this document is a representation of the training.

FIELD SUPERVISOR:

MR. MUSANA PAUL	4		,
SIGNATURE	fm;	DATE:	10/05/2022

FARM MANAGER

SIGNATURE

MR ABITEGEKA JUDE M.

M. National Crops Resources Research Institute (NaCRRI) P. O. Box 7084, Kampala DATE: 10/5/2022

ACADEMIC SUPERVISOR:

MR. ETIANG PATRICK _____ DATE: 18/05/2022 SIGNATURE.....

DEDICATION

This report is dedicated to my beloved parents Mr. Walubo Richard and Mrs. Edith Walubo for their financial, parental and spiritual support, for the wellbeing and their moral guidance towards my success. I also dedicate it to my supervisors and lecturers who have been of great support with knowledge and my friends.

ACKNOWLEDGEMENT

This report has been written from the knowledge gathered over the Industrial Training. During this time, I have benefited from the skills, advice and encouragement of a great number of people. I should nevertheless wish to record my thanks to all those who have helped me in so many different ways during the training.

I owe a great debt to NaCRRI for giving me a chance to explore my internship from the farm.

I would like to appreciate BUAC for the course module which enables me explore more about my course.

I would like to acknowledge their assistance in a more personal manner, Mr. Musana Paul, Mr. Kabayi Paul, Mr. Allan Nkuboye, Mr. Ssekandi Wilber and all the supervisors whose guidance and assistance were of great help during the training.

I take the opportunity to extend my sincere grafitude to my beloved friends, Stella, Sharon, Aggrey, Nasasira and others for the team work and assistance offered to me in one way or the other during internship.

TABLE OF CONTENTS

DECLARATION
APPROVAL
DEDICATIONiii
ACKNOWLEDGEMENT
LIST OF TABLES
LIST OF FIGURES
LIST OF ABBREVIATIONSx
ABSTRACT xi
CHAPTER ONE:
1.0 INTRODUCTION
1.1 HISTORICAL BACKGROUND:1
1.2 PRESENT MANDATE
1.3 LOCATION
1.4 OBJECTIVES
1.5 NaCRRI FARM STRUCTURE
CHAPTER TWO:
2.0 DESCRIPTION OF ATTACHMENT
2.1 ACTIVITIES
2.2 DESCRIPTION OF ACTIVITIES
2.2.1 ADMINISTRATION
2.2.2 FARM WORKSHOP
Identification of internal and external parts of a tractor
Identification of internal and external parts of an engine
Identification of farm implements7
Maintenance of the Tractor, Engine and Implements7
2.2.3 LEGUMES
Breeding Of Beans and Soy Beans
The Breeding Objectives Of Soy Bean And Beans
Breeding Process
The Agronomy of Beans and Soy Beans
Genetic Material Evaluation
Germination Assessment

Data Collection And Recording
Seed Counting and Packaging For Field Trial
Field Marking
Preparation of inoculum12
Pest and Disease Identification
2.2.4 HORTICULTURE
Tomatoes (Lycopersicum esculentum)14
Identification of varieties
CABAGGES (Brassica oleraceae)14
Nursery bed establishment14
Field preparation15
Transplanting
Fertilizer application
Tomato labelling
Oil palm production and management
Field lining
Experimental designs17
2.2.5 CEREALS
Maize (Zea mays)
Seed preparation for field trial
Breeding of Maize
RICE (Oryza sativa)
Planting upland Rice
Planting low land rice
Cassava (Manihot esculenta)
Breeding of cassava
Assessing for the presence of pests and diseases
SWEET POTATOES
Breeding of sweet potatoes
Rearing of sweet potato weevils,
Testing for resistance for the weevils
Biological control of pests

vi

Testing for nutritional value of foods,	23
Preparation of MS growth media	23
Preparation of Macro nutrients	24
CHAPTER THREE: DESCRIPTION OF ATTACHMENT	
3.1 Social conditions	25
3.2 Skills attained during the industrial training	
3.3 Responsibly undertaken during the industrial training	25
3.4 Influence of the training	25
3.5 Correlation of activities with lecture room knowledge	25
3.6 Challenges faced during the industrial training	26
CHAPTER FOUR: CONCLUSIONS AND RECOMMENDATIONS	27
4.1 Conclusions	27
4.2 Recommendations	27
APPENDICES.	28
Appendix 1: Work plan	28
Appendix 2: Photos	30

٨

ι.

LIST OF TABLES

Table 1 Showing the Implements Used and Their Uses

Table 2 Showing Genetic Material Evaluation

Table 3 showing fertilizer regimes in oil palm

Table 4 showing the sampling for white flies

Table 5 Showing breeding in sweet potatoes

Table 6 Components used while preparing MS media

Table 7 Showing Components used in making macro nutrients

LIST OF FIGURES Fig 1. Showing zigzag method

Fig 2. Showing transverse method

Fig 3. Planting upland rice in the screen house

Fig 4. Preparation of MS Media

Fig 5. Spore counting

11

Ľ

?

į

Ţ

Fig 6. Labelling tomato plants

LIST OF ABBREVIATIONS NaCRRI: National Crop Resources Research Institute

BUAC: Busitema University Arapai campus

REG NO: Registration number

Tel: Telephone

RCBD: Randomized Complete Block Design

CRD: Complete Randomized Design

NARO: National Agricultural Research Organization

ABSTRACT

This industrial training report contains the details of practical activities taken during the industrial training at NaCRRI. This was carried out in six programs; Administration, Farm workshop, Horticulture & Oil palm, Cereals, Legumes and Root crops programs. Activities per program was conducted in one study planed week. In some programs like Legumes and Root crops, they were conducted in two weeks. These activities in each program were taken under a specific program supervisor.

In administration program, induction and orientation throughout the other research programs was taken for a week, farm workshop involved identification and operation of farm tools like tractor, tractor engines and many as described in chapter 2, horticulture and oil palm and cereals most work was basically the agronomical practices of oil palm, cabbages, and Tomatoes and rice and maize in cereals, however in Legumes and root crops, different departments like agronomy, Entomology, pathology and breeding were covered.

xì

CHAPTER ONE:

1.0 INTRODUCTION

1.1 HISTORICAL BACKGROUND:

National Crops Resources Research Institute (NaCRRI) formerly Namulonge Agricultural and Animal Production Research Institute is one of the research institutes under the policy guidance of the National Agricultural Research Organization was established in 1949 by the Empire Cotton Growing Cooperation of Britain. It was solely established to investigate problems related to cotton production within the countries of the Britain Empire. It served the Sudan, Kenya, Tanzania, Zambia, Malawi, Swaziland, Nigeria, Uganda and some extent the Gambia and Yemen. Uganda was chosen to be the regional Centre because it was centrally placed and with exceptionally India, Uganda was the largest producer of cotton in common wealth. The Cotton Research Cooperation handed over Namulonge to the Uganda government in 1972. The institute continued as a cotton research station until 1980 when research on the other end commodity crops and animal production was introduced. The crops introduced included, cassava, sweet potatoes, rice, soybean, sunflower, ground nuts, sim sim and wheat in addition to cotton. Agroforestry research was also introduced to the institute at this time. In addition, Namulonge supervised the collection of weather data, processing and transmission of the information to the department of metrology and agriculture. This information was further processed into advisories on weather to farmers by both the department of meteorology and agriculture.

1.2 PRESENT MANDATE

With the reorganization of agricultural research and the creation of the agricultural research organization, Namufonge became one of the research institute of NARO with the following programmes, legumes, root crops, cereals, horticulture and oil palm. Research activities in the institute are carried out under mandated commodity programs and units. Presently. The priority crops according to the mandate are; legumes i.e., beans, soybean. Root crops i.e., cassava, sweet potatoes. Cereals i.e., maize and rice, horticulture and oil palm among others.

The products and services are: foundation seed, expert consultancy service, hi-tech laboratory, training and internship, seedlings, conference and accommodation services, golf course, motor

1