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**A REPORT OF INDUSTRIAL TRAINING FOR ACTIVITIES CARRIED OUT AT  
NATIONAL SEMI-ARID RESOURCES RESEARCH INSTITUTE (NaSAARI) - SERERE**

**FROM 28<sup>th</sup> FEBRUARY, 2022 TO 6<sup>th</sup> MAY 2022**

**COMPILED BY**

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**COURSE: DIPLOMA IN CROP PRODUCTION AND MANAGEMENT**

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**COURSE NAME: INDUSTRIAL TRAINING**

**COURSE CODE: DCP 1208**

**SUBMITTED TO THE DEPARTMENT OF AGRI-BUSINESS AND EXTENSION OF  
BUSITEMA UNIVERSITY - ARAPAI CAMPUS IN PARTIAL FULLFILMENT OF THE  
REQUIREMENTS FOR THE AWARD OF A DIPLOMA IN CROP PRODUCTION AND  
MANAGEMENT OF BUSITEMA UNIVERSITY**

**MAY, 2022**

## DECLARATION

I **AKELLO SARAH GRACE** declare that the information contained in this report is exactly of my own work and has never been submitted to any institution or any university for the award of Diploma in crop production and management or any other academic qualification.

Sign.  .....

Date. 5<sup>TH</sup> MAY 2022 .....



**APPROVAL**

This is to confirm that the work presented here is my own work and it was done under the supervision of the following persons;

**Field supervisor, NaSARRI**

Name: Okiring Joseph

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Date: 5/5/2022

**Intern Coordinator, NaSARRI.**

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Sign: [Signature]

Date: .....



**Director, NaSARRI**

Name: SBuo JOHN EMBIDIAIS

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**Academic Supervisor**

Name:

Sign: .....

Date: .....

## DEDICATION

I dedicate this report to my family members most especially my parents for their divine support, and all my relatives and friends who have always supported. May the almighty GOD bless you all.

## ACKNOWLEDGEMENT

My great thanks go to the staff of NaSARRI who accepted me and guided me through all activities for the success of industrial training.

To begin with, I would like to appreciate the Director of NaSARRI Dr. Ugen Michael for granting me that opportunity to conduct my internship from the institute, my field supervisor Mr. Okiring Joseph the farm manager at NaSARRI, the internship coordinator NaSARRI and the entire staff, programme leaders, scientists, technicians and field assistants.

I would also like to extend my appreciation to the staff Busitema University Arapai campus for implementing industrial training as one of the course modules which helps students gain practical skills in correlation to the classroom knowledge, enhancing their agricultural experience hence preparing them for a wide range for job market, thus effective service delivery to farmers upon the modernized agricultural technologies.

Finally, special thanks go to my family members for the tireless support they rendered to me.

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### TABLES

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**Table 2;** showing common pests that attack sorghum, their damages and control.

**Table 3:** Showing common diseases that affect sorghum, damage and control.

**Table 4:** showing the released varieties of cow pea at NaSARRI and their colours:

**Table 5:** showing the diseases of cow pea, their damage /symptoms and control measures.

**Table 6:** showing common pests of legumes, the damage they cause and the control measures.

**Table 7:** showing the comparison between early and late leaf spot in groundnuts

### Figures

**Fig. 1.** Emasculation of flowers

**Fig. 2:** Bulking of groundnut trials.

**Fig.3.** Site clearing for nursery bed.

**Fig.4.** Grafting of mangoes

## LIST OF ABBREVIATIONS

NaSARRI	:	National Semi-Arid Resources Research Institute
IT	:	Industrial training
OPV	:	Open pollinated varieties
DCP	:	Diploma in crop production
NARO	:	National Agricultural Research organization
SESO	:	Serere sorghum
SERENUT	:	Serere groundnuts
NAROGAM	:	NARO Green gram
SAARI	:	Serere Agricultural Research and Animal Production Research Institute.

## ABSTRACT

The industrial training was carried out for 10 weeks starting from 28<sup>th</sup> February, 2022 to 6<sup>th</sup> MAY, 2022 at NaSARRI (National Semi-Arid Resources Research Institute). NaSARRI is located in the Eastern Agro-ecological zone in Serere district 27 km south of Soroti town. NaSARRI is one of the 16 Research Institutes under Agricultural Research Organization (NARO) established by the National Agricultural Act 2005. The training was carried out in different programmes in a rotation manner i.e. farm management, dry land cereals program, dry land legumes program, fiber crop program and oil crops program.

During the training I was able to carry out various activities which included; disease identification (grain mold, anthracnose) in sorghum, pest identification in sorghum (sorghum shoot fly, stalk borer), post-harvest data collection on 100 seed counting of sorghum, 100 pod counting in groundnuts, grain weighing grafting in mangoes and budding in oranges under Agro-forestry, onion nursery bed preparation under horticulture, and while in the field I carried out activities like emasculation crossing, selfing, pest and disease identification and field marking..

However, I faced few challenges during the training like; inadequate tools and equipment's to be used in nursery bed establishment, lack of some item in some stations for example a barometer in the weather station, unfavorable weather conditions.

In conclusion the training was carried out successfully since the theory aspect was put into practical. Therefore, I recommend that some errors should be rectified by; provision of adequate tools needed to be used in different sections, proper allocation of students to their due respective programs in advance in order to avoid confusion.

## CHAPTER ONE

### INTRODUCTION AND BACKGROUND

#### 1.1 Introduction

This industrial training was carried out at National Semi-Arid Resources Research institute from 28<sup>th</sup> February 2022 to 6<sup>th</sup> May, 2022. Industrial training is one of the modules incorporated in the curriculum to expose to students to practical skills in correlation to the classroom knowledge. Its main objectives are to enable students acquire practical knowledge, skills in agricultural research and other related activities and techniques. The training was carried out in the different units and programmes in a rotational manner.

#### 1.2 Background of NaSARRI

The National Semi-Arid Resources Research institute (NaSARRI) is one of the 16 Public Agricultural Research institutes (PARIs) of National Agricultural Research Organization (NARO) established by the National Research Act 2005. The National Semi-Arid Resources Research institute started its operation way back in 1920. It initially began as Serere Agricultural and Animal Production Research Institute (SAARI) and later changed to NaSARRI. It was initially established as an experimental station for ox-cultivation which was charged to support cotton production in Teso. It as well served as a unit for training staff of Department of Agriculture.

It pioneered as a station for research study on cotton, livestock and other animal traction technologies to emphasize quality output under supervision of the Ministry of Agriculture.

#### 1.3 Location of NaSARRI.

NaSARRI is located in Eastern Agro-ecological Zone in Serere District, about 27Km south of Soroti town in Olio Sub-county, Igola Parish. *City, Serere town Council, Okulonyo Ward, Igola Village.*

#### 1.4 NaSARRI's mission

To generate, package and disseminate appropriate agricultural production technologies and information for improved and sustained integrated crop and national resources management in partnership with other stakeholders.

#### 1.5. Vision of NaSARRI

A market leader in generating and disseminating of appropriate crop technologies for sustainable development in Semi-Arid Areas.