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**AN INDUSTRIAL ATTACHMENT REPORT AT NYENGA FOUNDATION
FROM 28TH FEB TO 6TH MAY 2022**

Employer name: Nyenga foundation

Location: Buikwe district

Date of Report: 28th Feb-2022-06th-May 2022

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Course number: 1208

Year: 2020-2021



**AN INDUSTRIAL ATTACHMENT REPORT SUBMITTED TO DEPARTMENT OF
AGRIBUSINESS AND EXTENSION IN PARTIAL FULFILLMENT FOR THE AWARD OF
DIPLOMA IN CROP PRODUCTION**



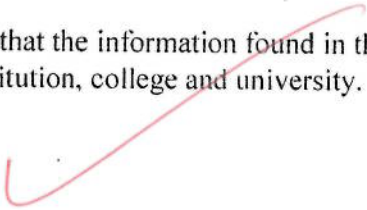
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DECLARATION

I **MWEZUKYE SEZI** declare that the information found in this report is first hand and has never been presented to any institution, college and university.

Signature: .....

Date: 17th/05/2022.....



APPROVAL

This report has been supervised and approved by

FIELD SUPERVISOR

MR RUBONGOYA NORBERT

Signature: .....

Date: 29th/04/2022.....



**NYENGA
FOUNDATION**

ACADEMIC SUPERVISOR

Name: **ATABO HELLEN**

Signature:.....

Date:.....

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DEDICATION:

I am very grateful to send my gorgeous affectionate to the administration of Nyenga foundation and busitema university, my brother Enock ,my sister,my mother and all the family members who worked tirelessly for my education and industrial training irrespective of who and what they are.

I would like to thank God almighty for granting me His merciful glory during my education and training.



ACKNOWLEDGEMENT:

With grate appreciation we thank the staff of Nyenga foundation for allowing us to carry out my internshipsuccessful. I also appreciate the community of Nyenga for giving the conducive environment during my internship.

And lastly ,my sincere thank goes to the attendants for the supervision on various section ,friends like Alex, Stephen, Daniel , parents,my brothers and sisters.

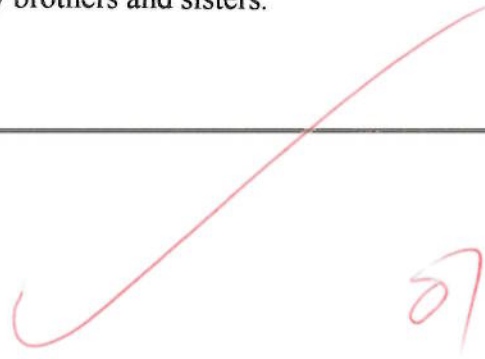
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LIST OF ABBREVIATIONS

BUAC BUSITEMA UNIVERSITY ARAPAI CAMPUS

I.e. That is to say

E.g. For examples

CMD Cassava Mosaic Diseases

CBSD Cassava brownstreak Diseases

CGM Cassava Green Mite

DCP Diploma in crop production

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LIST OF TABLES AND FIGURES

Tables

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1. Figure1....Showing weeding collards
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ABSTRACT/SUMMARY

This report book contains of four chapters and it clearly give details of activities and lecture section that we were involved in the program at Nyenga foundation. They include; cereals legumes and root crops programs and these are summarized as follows:

Chapter one

This chapter gives the introduction of Nyenga which includes location, background, vision, mission, finding, services offered competency areas and objectives of the study.

Chapter two

In this chapter describes in details the activities I got involved in the four programs roots crops legumes, and cereals. In mangoes this chapter will focus on entomology and pathology. The entomology and pathology will also give mitigation measures. This chapter will also give full details on agronomy, pathology, entomology of maize, rice, beans, cassava and sweet potatoes.

Chapter three

This chapter summarizes the skills I got from the different programs, responsibilities undertaken, the influence of the attachment to my future career, correlation of attachment activities with classroom knowledge and challenges faced.

Chapter four

This chapter contains conclusions and recommendations.

Appendices, work plan

References.

04

1.0 INTRODUCTION

1.1 Description of Nyenga

Nyenga Foundation is a Non- Government Organisation that was established in 2009 at Kabizzi Village, Kabizzi Parish, and Nyenga Division in Buikwe District. The organisation owns 68 acres of land on which different activities are implemented.

1.2 HISTORICAL BACKGROUND OF NYENGA

Nyenga Foundation is a Non- Government Organisation that was established in 2009 at Kabizzi Village, Kabizzi Parish, and Nyenga Division in Buikwe District. The organisation owns 68 acres of land on which different activities are implemented,

2012 the school and the healthy centre were constructed to treat the community members and the home children. The school was also constructed to educate home children and community members. Due to scarcity of food, the was set up to produce food for the community and homechildren

1.3 VISION

To build and run a centre of competence at Nyenga where people can meet, share and learn from each other.

1.4 MISSION

To promote sustainable growth through empowering individual, families and communities

1.5 THE PURPOSE

- 1.To establish and operate the children home in Uganda based on local resources and sustainable development
- 2.Collaboration with the local community shall stimulate local development
- 3 Through care and knowledge, work towards the goal that the children can create for themselves and coming generation.

1.6 OBJECTIVES

1. To acquire new knowledge.
2. To gain practical skills and experience.

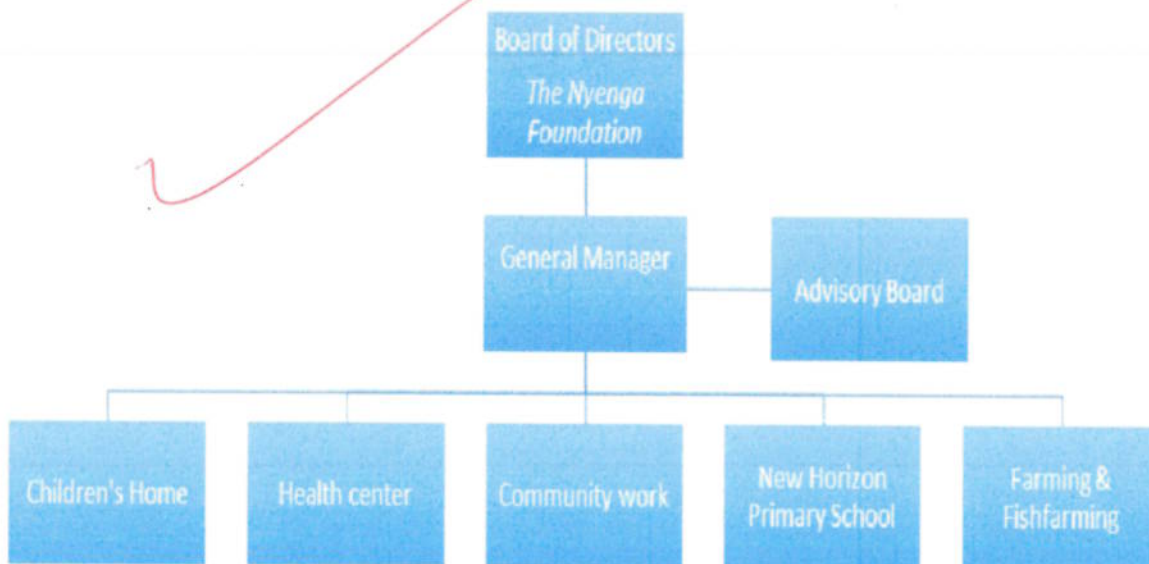
3 To enable us to learn.

4 To improve confidence in problem solving in the real work situation.

1.7 LOCATION

Nyenga foundation is located 1km from Nyenga-Katosi before where the railway cross the main road in Kabizzi village Buikwe district.

1.8 ORGANISATIONAL STRUCTURE OF NYENGA FOUNDATION



CHAPTER TWO

Description of attachment

This chapter presents the activities we were involved in during our training course in Nyenga Foundation. Our training was done in a rotational basis where we were divided into two groups, each group had to rotate into all sections i.e. hibiscus, urban gardening, rice, bananas, sweet potatoes, propagation, maize etc.

2.0 PROGRAMMES.

2.1 CROP SECTION

2.2 Urban Gardening

This is one of the modernised way of growing horticultural crops such as green paper, egg plants, and cabbage e.tc in a small piece of land. Such crops are grown in materials such as wooden boxes, concert boxes, polythene bags and tyres.

Materials I used while making

Timber, soil, tape measure hammer, bowsaw, nails,

Measurements I used while making

We made a 6 by 6 feet wooden box garden where it contained 4 by 4 feet and 2 by 2 feet boxes.

Crops were planted 1 foot by 1 foot.

Maintenance practices that I carried

Weeding.

Mulching

2.3 Banana Production. (MUSA SPP)

Banana is one of the perennial crops that is mostly grown in western Uganda.

Banana varieties found in Nyenga Foundation farm

Roosting varieties e.g. gonja

It is commonly grown in areas with high rainfall used as a desert variety

2 Cooking variety

05

These are varieties that are grown mainly for food e.g., mpologoma.

2.4 Agronomic Activities that I carried out

Weeding. This is the removal of unwanted plants from the garden. It involves the use of hoe and selective herbicide.

1. **Pest and disease control** this is done by use of pesticide e.g., rocket and good farm practices like proper spacing, weeding.
2. **Staking.** This is the provision of extra support to banana plants to prevent it from wind damage.
3. **Fertilizer Application.** Organic e.g., composite manure, sillary, farm yard and inorganic e.g. NPK, are applied to bananas to improve the yields.
4. **Mulching.** This is the covering of the top soil with dry grass, banana fibre etc. This helps to conserve moisture and suppress weeds.

2.5 COMMON DISEASES OF BANANAS THAT I WAS TAUGHT

Banana Bacterial Wilt. I was taught it is caused by *Xanthomonas campestris* PV *musacerum* also known as banana bacterial wilt.

Signs and Symptoms that I identified in the banana plantation

- ✓ Yellowing of the leaves
- ✓ Premature ripening of Banana bunch
- ✓ The male bud dries prematurely.

Black sigatoka Disease I identified that it is caused by *Mycosphaerella fijiensis* and it causes damage like decreasing the photosynthetic capacity of leaves hence causing reduction in quality and quantity of fruits.

Fusarium Wilt (Panama disease) I was taught that it is caused by *Fusarium oxysporum*. The disease is soil borne and the fungus can stay in the soil for 30 years. It is spread by planting infected suckers and using contaminated tools.

2.6 MAIZE (ZEA MAYS)

Table 1 summarizes the diseases of maize, symptoms that I identified and control that I carried out in maize

DISEASES

DISEASE	SYMPTOM	CONTROL
Maize lethal necrosis it is a viral disease brought by combination of two viruses i.e. maize chlorotic mottle virus and sugarcane mosaic virus	Barren ears Leaf mottling Stunted growth Low yields	Use of certified tolerant varieties e.g. bazooka Rouging of affected plants
Maize streak virus disease it is a viral disease transmitted by leafhoppers	Streaks on the leaf Stunted growth	Crop rotation Planting of tolerant varieties
Maize smut .it's a fungus transmitted by ustilago maydis	Formation of black powder substance on the grains Enlargement of the grains as they are filled with fungal powder	Uproot and burn the affected plants Planting tolerant varieties
Northern leaf blight. It's a fungal disease	Angular leafspot which later darken	Tolerant maize varieties Uproot and burn affected plants

PESTS OF MAIZE. I was taught the following pest of maize and these are leafhoppers, stem borers, maize weevils, birds, monkeys.

2.7 RICE (ORYZE SATIVA)

Varieties: That I was taught include NERICA 1-4 NARRIC and WITA

2.8 PESTS OF RICE THAT I WAS TAUGHT

2.9 Stalk eye fly (diopsis thoracic) the adult lays eggs inside the rice plant the hatched larva bore and feed on the plant tissue inside the rice stem hence causing a dead heart.

Management practices that I carried out

Crop rotation, use systematic chemicals e.g. cypermethrin

2.10 African rice gall midge (OREOLIA ORYZIVORA)

The pest mainly attacks lowland rice varieties.

Management practices that I carried out

Early planting, use of resistant varieties e.g. upland varieties

2.11 Stink bug and rice bug

The bugs stay on the panicles and suck the milky juice in the young panicles causing staining of the grains.

Management practices that I carried out

Early planting, use of insecticide.

2.12 Stem borers(PYRALIDAE). The larva bores through the stem and eat up the plant tissue resulting into a condition called a dead heart.

Control: crop rotation, planting of tolerant varieties.

Table 2 showing cost benefit analysis for one acre of upland rice cultivation.

EXPENDITURES.

Seeds	20kg x 1500	30000
Fertilizer DAP and Urea	25kg x 2000	50000
	50kg x 2000	100000
Sacks	15bags x 1000	15000
Slashing		60000
Digging		80000
Second digging		80000
Planting		30000
Hand weeding	50000x2	100000
Harvesting and threshing		40000
Transport		30000
Milling cost(if one gains 67%of milled rice out of paddy)	1000x100	100000
	Total	775000
INCOME		SHS
15baga x 100kg	1500x67%	

Rice 1000kg	1800x 1005kg	18090003
income-expenditure	1809000-775000	

2.2.1 **SWEET POTATO**(Ipomea batatus)

Sweet potato is a dicotyledonous plant that belongs to the Convolvulaceae family. here handled agronomy, entomology, pathology and breeding of sweet potato.

Importance's of sweet potato that I was taught

- ❖ It is source of nutrients
- ❖ Source of food and income
- ❖ Vines are used as livestock feeds

Table 3 below shows the major sweet potato diseases, symptoms and the control measures that I carried out

Diseases	Symptoms	control
Sweet potato viral disease N.B most destructive sweet potato disease in Uganda. it is aviral	<ul style="list-style-type: none"> • Vein clearances • leaf chlorosis • Stunted growth • Yield loss 	<ul style="list-style-type: none"> ➤ Planting of tolerant varieties e.g. new kawogo ➤ Use healthy planting materials
Alternaria blight i.e. it is a fungal disease	<ul style="list-style-type: none"> ✓ Black spots on leaves. ✓ Black lesions on the stems, leaves and veins 	<ul style="list-style-type: none"> ✓ Use of tolerant varieties e.g. NASPOT 13 ✓ Field hygiene.
	<ul style="list-style-type: none"> ✓ General plant chlorosis 	

2.14 SWEET POTATOES ENTOMOLOGY.

In this session, I carried out identification of major sweet potato pest and their control measures.

The major sweet potato pest I handled include, sweet potato weevils, sweet potato butterfly, locusts and grass hoppers.

Sweet potato weevils

These are the major sweet potato pests which cause up to loss between 80%-100%. They attack all the plant parts i.e. leaves, stems and roots. There are mainly two pest's species of weevils namely, Cylas brunnerus and Clayspuncticollis.

Multiplication in the field.

- ✓ Planting the affected the materials
- ✓ Poor farming methods
- ✓ Poor field hygiene
- ✓ Late planting

Damage caused

Extensive root damage

Tunnelling of the roots

Control measures that I carried out

- ✓ Crop rotation
- ✓ Use of clean planting materials
- ✓ Timely planting and harvesting
- ✓ Field hygiene

Sweet potato Butterflies (Acará accrete)

These are pale- yellow butterfly, they lay eggs on top and under the leaf surface. The hatch into small caterpillar. These pupate and then emerge into adults. The larva stage (caterpillar) is the most destructive stage. the caterpillars eat the leaves hence reducing the photosynthesis of the plant.

Control measures that I carried out

- Hand picking
- Early planting and harvesting.
- Use chemical

2.15 CASSAVA SECTION

CASSAVA (*Manihot esculentum*)

Is the second most important food crop in Africa after maize. It belongs to the Euphorbiaceae family and Dicotyledonae class. It is a tropical crop with its origin in Brazil. In Uganda it was

introduced by the Arabs in 1862. In Africa, Uganda is the second largest producer after Nigeria.

Importance of Cassava that I was taught

- ✓ It is an important staple and food security.
- ✓ It is the source of income to household.

Cassava agronomy.

In this session, I handled all the field management practices of cassava from site selection to harvesting. According to the senior agronomist in cassava Mr. Norbert I was told that there are eight recommended agronomic practices for proper cassava production. The practices are explained in below in detail;

○ **Site selection**

The site for cassava should be moderately fertile well drained with a sandy-loam texture. They should not be from a freshly cleared forest. The farmer should also study the history of the area for pests and diseases occurrences.

○ **Land preparation.**

Cassava requires a relatively fine seed bed for establishment. fields can be opened by tractors, ox plough or hand hoes. Zero tillage can also be done by use of herbicides e.g., glyphosate. fields may be prepared as mounds on shallow or stony soils, ridges on sloping land and spot holes on flat land. Early preparation is recommended for early planting.

○ **Selection of planting materials.**

Good planting materials should be disease and pest free plant of 08-18 month. selected the semi-mature part of the stem as it has the fastest sprouting rate compared to the young and old parts.

○ **Preparation of planting of materials.**

Use a sharp machete to cut the stems, each cutting should be at least (20-25) centimetres long with 5-8 nodes. Cutting can be dipped in warm water (50c) for 5-10 minutes before planting or diazotone solution for protection against root rot diseases.

○ **Planting.**

Select a suitable planting date i.e., at the beginning of the first rains. cuttings are planted at (1x1) meter. Adapt a planting mode depending the area i.e., on ridges, plant vertically, on mounds plants at an angle and on flat land plant horizontally. However, horizontal planting is recommended as it produces best results.

Pest management practices that I carried out

Cassava pest include; cassava green mites, whites' flies and scales. The problem of pest can be addressed by planting resistant varieties, selection of pest free planting materials, ~~treatment of the cutting, chemicals and biological control.~~

Disease management.

Cassava disease include; CMD and CBSD. Management is done by selection of healthy planting materials, effective control vector, safe use of cutting materials, isolation and rouging of infected plants.

Weed management.

This can be done by use of chemicals, culture, mechanical and biological methods.

Harvesting.

This is usually done hands i.e. easier when the soil is moist. It can be done between 8-12 months depending on the variety. The upper part of the stem is removed and with hands the whole plant is pulled out. Harvesting can either be piece meal or whole sale harvesting.

We also carried out thinning of cassava ratoon crop in the multiplication field. we did this by leaving the best four plant removing the rest.

2.16 CASSAVA ENTOMOLOGY.

In this section, we had identification of pests on cassava and their control measures and scoring. The major cassava pest include whiteflies CGM, scales and mealy bugs.

Cassava white flies (Bemisia tabaci)

This is the major cassava pest in Africa. it is the vector of the major cassava disease i.e. CMD and CBSD, Adults and eggs are visible under leaves.

Damage caused

They feed on leaves and young tips.

Produce honey dew which promote fungal growth which affects the photosynthesis.

Damaged plants shows bunching of the tips.

Stunted growth and yield losses can be 100%.

Control

Biological control i.e. use *Apanagyru Lopez* (wasp)

Use of healthy planting materials.

Uproot and burnt infected cassava stem.

Cassava Green Mites (*Mononycellustanajoa*)

Damage caused.

Attack tips and young leaves causing chlorosis hence reducing photosynthesis.

Affected plants produce fever and smaller leaves.

Control

Use of natural enemies e.g. *Typhlodromalus aripo* (T. aripo)

We also had scoring on CGM effects cassava using a scale of 1-5 as explained below in detail

Scale 1 No damage.

Scale 2 Little damages are visible on the leaves.

Scale 3 Moderate damage i.e. chlorotic patches.

Scale 4 Severely damaged i.e. dead patches on the leaves.

Scale 5 Critical pest damage i.e. die back and plant death.

2.17 CASSAVA PATHOLOGY

In this sector, I dealt with cassava disease identification and their control measures. The main diseases of economic importance were cassava mosaic disease and Cassava Brown Streak disease.

Cassava Mosaic Disease

This is the most widely spread disease of cassava in Uganda and Africa in general. I was taught that it is transmitted by white fly. It is a viral disease which causes almost 100% losses in the fields.

Symptoms that I identified

Leave curling mottling.

Chlorosis on the leaves.

Critical disease stage lead to reduce plant vigour, short internodes and stunting.

Control measures that I carried out

Use clean planting materials.

- ✓ Uproot and burn disease sprouting.
- ✓ Plant disease resistant varieties such as NASE 14.

Cassava Brown Streak Disease

This is also viral disease transmitted by white fly, it is caused by cassava brown streak virus.

This is a devastating disease of cassava and can cause 100% loss. It mainly affects the roots.

Symptoms that I identified

- ✓ Tuber constriction.
- ✓ Necrotic patches on the roots.
- ✓ Chlorotic patches around the main veins.

Control measures that I carried out

- ✓ Planting tolerant varieties like NAROCASS 1.
- ✓ Use of disease free planting materials.

2.17 COFFEE PRODUCTION

Coffee is a beverage crop that belongs to the family of RUBIACE. There are two types of coffee that I was taught

Robusta (*coffeecanephora*) are a result of cross pollination

Arabica coffee(coffee Arabica) self-pollination

COFFEE SPACING

- Arabica 3.7m x 3.7m according to ZARD
- Robusta 3m x 3m

IMPORTANCE OF COFFEE

- i. Coffee husks can be used for mulching
- ii. The pruned can be used as fuel
- iii. Coffee can be sold to earn income to farmers
- iv. It is also a source of raw materials that is Woolley industries

2.18 PESTS OF COFFEE THAT I SAW

They include, antesia bugs, lace bugs, coffee berry borer

2.19 DISEASES OF COFFEE THAT I WAS TAUGHT

1. Red blister disease. This can be controlled by growing resistant variety
2. Coffee wilt disease. This causes the plant to wilt. It is controlled by pruning and planting resistant plant
3. Coffee berry disease

2.20 METHODS OF PRUNING COFFEE THAT I USED

- Single stem pruning
- Multiple stem pruning
- Stump pruning

2.21 METHODS OF PROCESSING THAT I WAS TAUGHT

- I. Dry method
- II. Wet method

2.22 STORAGE OF COFFEE THAT I WAS TAUGHT

Raw coffee can be stored in dark areas at low temperature and relative humidity under optimum condition, dry fruits can be stored.

2.23 ORGANIC PESTICIDES:

There are pesticides which are made out of plants for example red paper, tobacco, neem tree, tick berry, calindra wood ask, pawpaw leaves, malt berries, and animal residues like fresh cow dung, Haman urine, liquid soap and water.

2.24 Procedures that I used while making organic pesticides

I Collected the above plants, chopped into pieces

I Mixed them thoroughly

I Added wood ash and liquid soap, wood ash for fastening the decomposition rate of the materials and liquid soap it help the pesticides to strict on plant after spraying

I Stirred them to allow uniform decomposition, then leave it for two weeks for full decomposing

I Removed the plant material and remained with liquid pesticide after period of two weeks.

Method of applicationthat I used

Application using knapsack sprayer

importance of organic pesticides

- Environmental friendly
- The materials are locally available
- Easy to apply compared to in organic

Disadvantages

- ✓ Time consuming in making
 - ✓ They are not effective to some pests
-

2.25 ANIMAL SECTION

2.26 PIGGERY SECTOR

2.27 DISEASE INVESTIGATION

Disease investigation is the way of assessing the health of animals particularly pigs in this section.

SIGNS OF ILLNESS IN PIGS THAT I IDENTIFIED

- ✓ Tearing of the eyes
- ✓ Loss of appetite
- ✓ Rough hair coat
- ✓ Sours on the body
- ✓ Less response

SIGNS OF A HEALTHY PIG THAT I IDENTIFIED

- Smooth hair coat
- High appetite
- Moist snout
- Ever alert
- Strong legs

2.28 COMMON DISEASES IN PIGS THAT I WAS TAUGHT

1. Coccidiosis

It is caused by protozoa COCCI and it is associated with signs like loss of appetite, diarrhoea, loss of body weight.

2. African swine fever

It is viral caused by African Swine Fever Virus. It has signs like colour of the skin changes from reddish to bluish as the condition progress, vomiting, sudden death

3. Foot and mouth disease

It's a viral disease caused by foot and mouth disease virus. It has the following signs; sours on the mouth and salivation, vomiting

2.28 CONTROL AND TREATMENT OF THE DISEASES IN PIGS THAT I CARRIED OUT

Bacterial diseases in general can be treated using anti-biotic like pen and strep, O.T.C, Microloan, sulfadiazine, sulfoxide, sulfamethazine etc.

Viral diseases cannot be treated using any anti-biotic but can only be controlled through vaccination and quarantine.

Generally, diseases can be controlled through proper feeding proper hygiene, good ventilation, etc.

Treatment with ivermectin to remove or get rid of barrowing mites.

Deworming to control internal parasites e.g., tape worms, round worms, ascaris etc.

Spraying using acaricide to control external parasite

2.29 ROUTINE ACTIVITIES I CARRIED OUT IN PIGERY SECTION

- Cleaning.
- Feeding and watering.
- Identifying and treating of the sick pigs.

2.30 CATTLE SECTION

2.31 DAIRY PRODUCTION

Introduction

Dairy farming was introduced in 2013 for production of milk and its products.

2.31 Breeds of dairy cattle I saw

- I. Friesians
 - II. Jersey
 - III. Brown Swiss
-

Activities I carried out in dairy section

1. Spraying the animals with the acaricide called vectocid mixed in the ration of 1:1 that is 1 ml of acaricide to 1 litre of water and 20 mls of vectocid were used.
2. Cleaning around the milking yard every morning before milk.
3. Feeding dairy animals with concentrate feeds during milking.
4. Deworming animals to control internal parasites.

5. Milking of dairy animals.

These activities are supposed to be done in the morning and evening but not during hot days.

Importance of dairy production

- i. Provides the income throughout the year, through selling milk.
- ii. The dung and urine provide farm yard manure which improves on quality of crops.
- iii. Provide hide and skins.

Limitations of dairy production that I was taught

1. Poor animals breed
2. Parasite and diseases
3. Government policies
4. Shortage of high quality pasture
5. Poor housing
6. Shortage of income
7. Parasite and diseases that affect Dairy production

The following are the parasite that attack animals that I was taught

2.32 External parasites

- i. Ticks
- ii. Mites
- iii. Lice

2.33 Internal parasites

- I. Liver fluke
- II. Tape worm
- III. Round worm

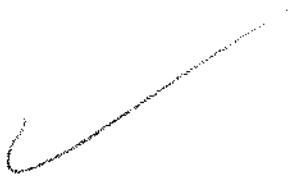
Diseases that affects animals that I identified

- I. Mastitis
- II. Brucellosis
- III. Foot rot (bacterial disease)
- IV. Red water

- V. Heart water
- VI. East coast fever

Control of parasite and diseases that I carried out

- I. Spraying the animals to control ticks
 - II. By using pen and strip for treating wounds in animals
 - III. By deworming animals using albendazole
 - IV. By cleaning the utensils
-



CHAPTER THREE

3.1 IMPACTS OF THE ATTACHMENT

3.2 SKILLS AND QUALIFICATION THAT I GAINED

- I. I was able to gain the skill of disease identification in animals
- II. In root crops, I acquired skill such as field making using Pythagoras theorem to obtain straight rows and easy crop spacing were learnt.
- III. I also gained the skill and knowledge about plant breeding and improvement in different crops.

- IV. I got the technique in data collection in rice and sweet potatoes which will help in breeding process in future in the field of agriculture to transform the local communities.
- V. I gained the skill of drawing a cost benefit budget in rice production.
- VI. I learnt the experience skill and qualification in dealing with farmers and general communities in the field of agricultural development and extension.
- VII. I gained the skill of field marking.
- VIII. I also gained the skill of soil sterilisation using steaming method.
- IX. I gained the skill of hoe to formulate animal feeds.
- X. I gained the skill on animal treatment and management.

3.3 RESPONSIBILITIES UNDER TAKEN

In our group, I was given responsibility as the group leader, I also participated in the group while making urban garden.

During my industrial training attachment I was also given responsibility of disease and pest identification.

3.4 INFLUENCE OF THE ATTACHMENT TO MY FUTURE CAREER PLANS.

With the knowledge and the skill that I gained during the period of my attachment, I have gained in areas such as urban farming, pest and disease management, crop improvement and data collection. In this case, I am looking forward to becoming a crop entomologist or pathologist in government organisations and non-government organisations.

3.5 CORRELATION OF THE ATTACHMENT ACTIVITIES WITH MY CLASSROOM KNOWLEDGE

We used the theory learnt in class on how to control pests and diseases we identified in the field. We applied most of the theory work class in the field e.g., field marking, pest and disease scoring and various post-harvest handling practices such as threshing and process

Attachment activities and classroom knowledge are correlated in that I used the theory learnt in class, we identified maturity indicators in fruits and other crops.

~~This training has made me know how to tackle out both animal and crop activities by~~ converting theory learnt in class into practical e.g., pest and disease control, disease identification and treatment, castration, feed formulation, use of different pesticides and acaricide and it has made me to get exposed to field work activities which is a high achievement to me as a student who is looking forward to be more professional on the field of agriculture.

3.6 Challenges faced during the period of my attachment

- ✓ The high costs of living in terms of housing, food and water.
- ✓ Shortage of working tools during work like pangas, secateurs etc.
- ✓ Some practicals in some programmes had hard scientific terms which we don't understand e.g. pathology in sweet potato viral diseases

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4.0 CHAPTER FOUR

CONCLUSION AND RECOMMENDATIONS

4.1 CONCLUSION

Despite of the few challenges encountered in the field during industrial training at Nyenga foundation, the activities were able to be accomplished successfully and great thanks goes to the management of Nyenga foundation for the services rendered to me and mostly to my field supervisor Mr Rubongoya Norbert for his extra effort on participation to us in the field, this helped me in improving my understanding on farm management practice.

4.2 RECOMMENDATION

Activities on the farm went on successfully in the period at the farm although there were some hindrances like limited tools to be used, change of programs which made other task not to be accomplished, delay in delivery of inputs like chemicals and drugs with all these, I recommend that the farm should do the following:

The farm should buy enough tools e.g., pangas, axes, tape measure, pruning saws in order to address to the problem of limited tools.

Inputs like chemicals and drugs should be availed in time so that the cases that arise can be addressed in time.

The farm top officials should also follow the farm work plan so that all activities can be done equally and successfully.

I recommend the foundation to employ more workers.

I recommend the foundation to mechanizes the farm

I recommend the foundation to buy more irrigation systems

4.3 APPENDICES



Fig 1.....weeding collards.

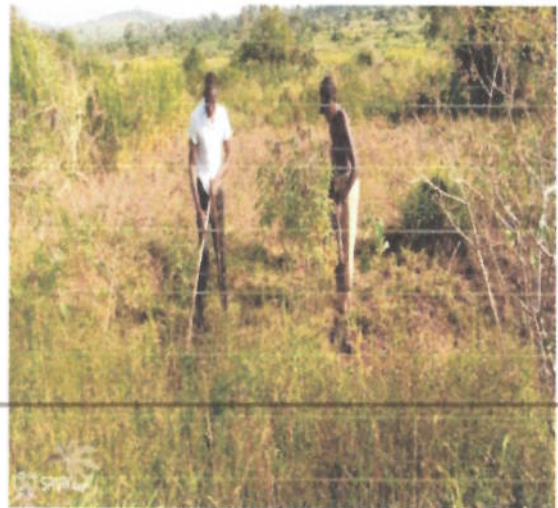


Fig 2.....weeding cassava



Fig 3.....making urban boxes



Fig 4 .. Making liquid pesticides

Work plan

DATE/WE EK	SECTIO N	ACTIVITES	PARTICIPANTS	REMARKS
1 Week 28 th -02-4th-03 2022	Orientati on	Reporting to the institute Group attachment Drawing the work plan Mixing feeds Feeding pigs	I.T coordinator Farm manager Facilitor	Well done
	Piggery maize	Clearing of land for maize	students	Successf ul
2 nd week 7 th -11 th -03- 2022	Cassava	Cassava agronomy Cassava entomology and pathology	Students Farm manger	excellent
3 rd week 14 th -18 th	Pineapple field Pasture managem ent	Agronomy, pathology and entomology Weeding ,application of silary	Students and farm manger	Well done
4 th week 21 st -25 th - 03-2022	Sweet potatoes Hibiscus	Agronomy,entomology,pa thology	Students Farm manager	Well done
	gardenin g			
5 th week 28 th 03-1 st - 04-2022	Black solider fly	Collecting eggs Making the paste for flies	Facilitator Farm manager students	Successf ul
6 th week 4 th -8 th -	Demo gardens	Measuring of plots of 10ftby10fts	Students Farm	Very good

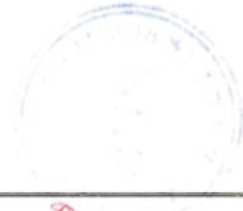
2022		Levelling of plots Planting in the demo garden	manager	
7 th week 11 th —15 th - 04-2022	Piggery bananas	Treatment Disease diagnosis Demarcation of holes Deleafing Desucking,application of silary	Farm manager students	Proper done

8 th week 18 th -22 nd - 04-2022	Poultry birds	Disease diagnosis De beaking,feeding,treatment	Students Farm manager	wonderful
9 th week 25 th -29 th - 04-2022	Organic pesticides coffee	Collection of plant like tickberry,tobacco Chopping the plant leaves Pest and disease identification Application of fertilizers pruning	Students Farm manager	Wonderful
10 th week 2 nd -6 th -05- 2022	Urban gardening Maize	Cutting the boxes Mixing of soil with manure Planting in boxes Weeding maize Application of NPK	Farm manager Students	Well done

4.5 REFERENCES

Horticultural hand book by horticulture section of Kenya department of agriculture of agriculture 1982

Alley farming research and development by B, T, Kang, A, O, O.



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