TECHNICAL REPORT ON STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)

UNDERTAKEN AT

THE FEDERAL MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

PRESENTED BY

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DEDICATION

First and foremost, I would like to dedicate this work to the Almighty Allah, who guided me during my internship and bestowed upon me a wealth of knowledge, understanding, strength, wisdom, and an endless list of wonderful things.

This report is also dedicated to my parents, **MR. AND MRS. OYINLOLA** for their love, support, and care from the day I was born till now. I express my gratitude to my parents.

I am also appreciative of my friends and family, who have always supported and been there for me when I needed them. Many thanks to everyone.

ACKNOWLEDGEMENT

It is impossible to ignore God's favor that came before me. My time at Kwara State Television Authority was made possible by Allah. I would like to thank Him for his knowledge and speed in helping me adjust to the work, for protecting me, for directing my steps, for providing me with good health, and for blessing my handiwork with speed. Yes, I am appreciative.

My sincere appreciation is sent to my wonderful parents, **MR**. **AND MRS. OYINLOLA** for their active parental involvement during my training. I also want to express my gratitude to all of my friends for their support and affection. May God bless everyone.

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CHAPTER ONE

1.1 INTRODUCTION TO SIWES

SIWES simply refer to students industry work experience scheme, is a skill training programme designed to expose and prepare students of universities, polytechnics, college of technology, colleges of agriculture and colleges of education for the industrial work experience they are likely to meet after graduation. The programme also affords student opportunity of familiarizing and exposing themselves to thee needed experience in handling equipments and machinery that are usually not available in their institutions.

Before the establishment of the scheme, there was a growing concern among industrialist that graduates of tertiary institution lacked adequate practical background preparatory for employment in industries. That is, the employers were of the opinion that the theoretical education going on in institutions of higher learning was not responsive to their needs it is against this background that the rational for initiating and designing the scheme by the fund during it's formative years 1973-94 was introduced to acquaint student with skill of handling employers equipment and machinery.

1.2 AIM OF SIWES

- ✓ To expose students of higher place of learning to the practical aspects of what they are being taught in school, and prepare them for future work related experiences.

1.3 OBJECTIVES OF SIWES

- ✓ To prepare students for the industrial work experience they are to undergo after graduation.
- ✓ To expose student to work method and techniques in handling equipment and machinery that may not available in their institution.
- ✓ To provide student opportunity to see the real world of theirs.

CHAPTER TWO

2.1 HISTORICAL BACKGROUND OF MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT

The Federal Ministry of Agriculture and Rural Development. The Federal Ministry of Agriculture and Food Security (FMAFS) formally known as federal ministry of Agriculture and Rural Development (FMARD) was establishment in 1966 with a clear vision to ensure food security and promote agricultural sustainability in Nigeria.

2.2 VISION AND MISSION STATEMENT

To position Kwara as the leading and most efficient food producing state in Nigeria and West African by harnessing her enormous agriculture resources.

Human capital potential and strategic geographical location in order to ensure food security. Create wealth decent employment for the raw material for secondary product sector as well as produce for domestic and international consumption, there by leading to rural development increase internal generation revenue (IGR) of the state and ultimately improving and standard of living of Kwarans.

AIM AND OBJECTIVES

The Kwara State Ministry of Agriculture and Rural Development include:

- The achievement of self – sufficiency in basic food supply and the attainment of food security.
- Increased production for agriculture raw materials for industries.
- Increase export crops using improved production and processing technologies.
- Generating gainful employment.
- Rational utilization of agricultural resources
- Improved protection of agricultural land resources form drought, desert encroachment, soil erosion and floor and general preservation of the environment for

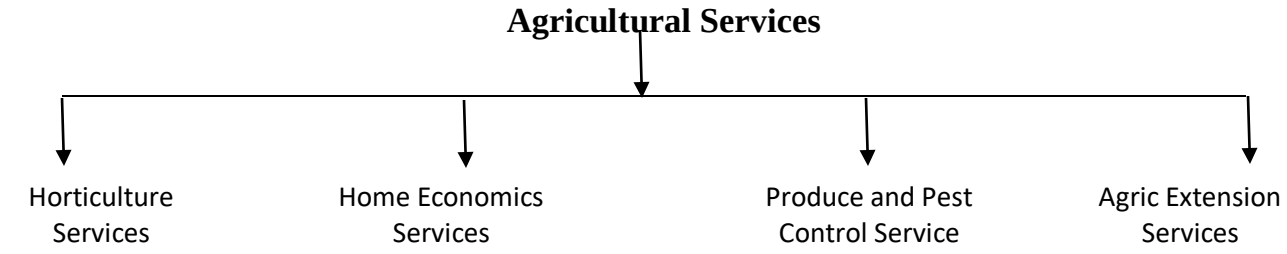
the sustainability of agricultural production, promotion of the increase application of modern technology to agricultural production and improvement in the availability of life of rural dwellers.

CHAPTER THREE

3.1 TECHNICAL TRAINING SECTION

There were different technical training section department

Ministry of Agricultural and Rural Development



3.2 WORK DONE

During my SIWES I was appointed to four division on a rotational bases within the whole of 4months.

- Home economic unit
- Agricultural extension unit
- Horticultural unit
- Produce and past control unit

The summary of the aspect covered in each of the units

- ✓ Planning and Research / Crop Production Unit
  - ❖ Risk and risk management on farm
  - ❖ Plants and planting methods
  - ❖ Land measuration to determine farm sizes
  - ❖ Stock and store management
  - ❖ Horticultural unit
- ✓ Home Economics

❖ Soya beans and soya beans processing

We were lecturered on risk and risk management on farm. Mr. adeyeye A.O. one the technical training staff of the ministry exposed us to risk and risk management in field of agriculture in general, be it corps, livestock, home economics. Etc.

Division /types of risk

- Risk taker
- Risk adverse
- Risk neutral

Risk simply refer to strategies involves in carried out in forming system i.e. risk reducing technology, risk reduce input and system flexibility.

Risk Associated in Agriculture

❖ Production risk
❖ Marketing risk
❖ Credit risk
❖ Personnel risk
❖ Political risk
❖ Economic risk

✓ Production risk can set in, if there is no proper planning interms on cost invested, cost of management and cost incurred and what is likely to happened during the cost of production be it natural or artificial occurrence or happen.
✓ Marking risk: it occur during the cause of buying and selling all material needed for production and sales of products if planning is not properly look into critically.
✓ Credit risk

Agric-extension, we were taught that extension is about dissemination of innovation to improved livelihood of the populace in a state or country.

Technologist ⟷ Extension Agent ⟷ Farmer

(New Innovation) ⟷ information/Disease and Techniques ⟷ Better Improvement

Extension Communication Channel

Technologist ⟶ Extension Agent ——— Farmer

We were taught the qualities on an extension agent

- To fluent in speech on channel of communication
- To have love and interest for farmer
- To visit the farmer on the farm
- To plan and work with experimental plots and materials.

3.3 TERMINOLOGY OF AGRIC EXTENSION

MTRM = Monthly Technology Review Meeting

FNT = Forth Night Training

ZEO = Zonal Extension Officer

SMS = Subject Matter Specific

EA = Extension Agent

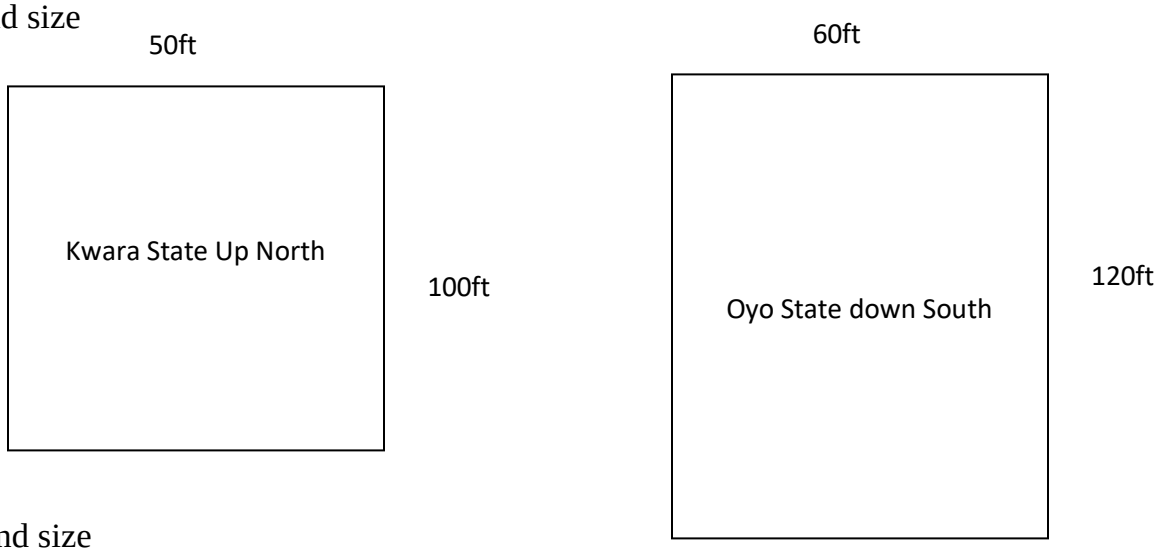
Land Measurement to determine

- Number of seeds to plant
- Number of bags of fertilizer

We were taught and exposed to land measurement to determining farm land parameters and all further activities on farm land in terms of seed, fertilizer and cost of farm management i.e. needing and harvesting of produces.

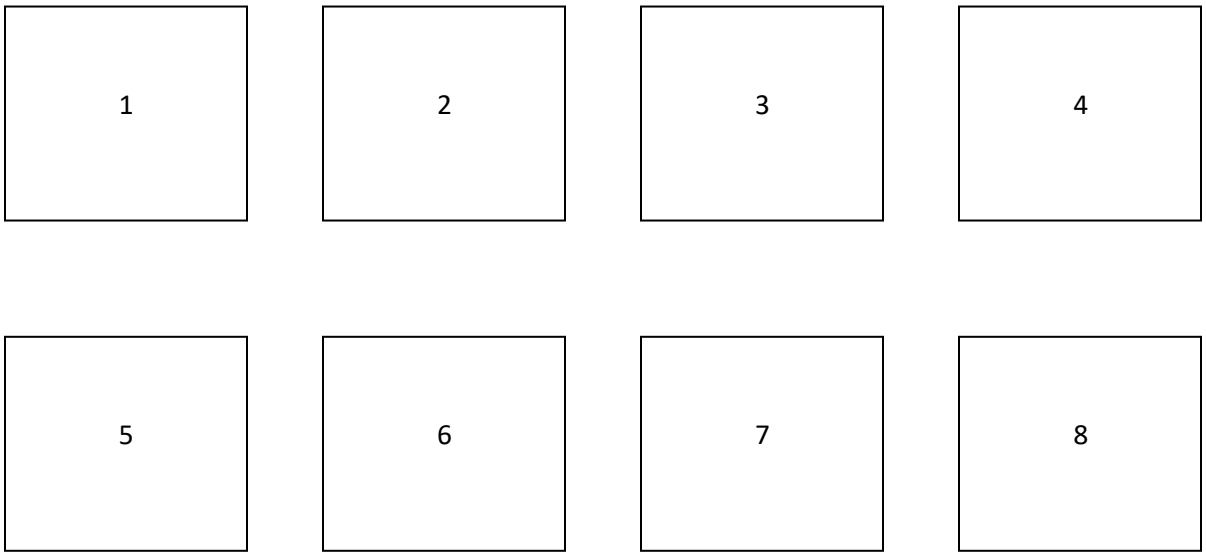
Land can be determined or measured based on plots, acres hectors.

Plot land size



Acre land size

An acre of land is eight sizes of a plot of the precision of 100ft by 50ft, while of that of 120ft by 50ft an acre is six plots.



= 1acre

A farm land measured 1,600 hectar and to use. 5tonnes of fertilizer what is the total number of bag of fertilizer used?

Since a bag of fertilizer is 50kg

The land area 1,600 hectar

Since 1 tonns = 1000kg

5tonns = 5000kg

1tonns

If a plant population is 500,000 what will each plant get or estimated.

- What is the total hecter of the land
- Each hectar should contain 50,000 plants
  The total number of plants, based on the hectorage
  =32,000,000 plants

Production planning or economic of production

Production planning is all about;

Forescasting production capacity

Scheduling production and opportunity cost. For example; a farmer harvested 5 tonnes of tomatoes form a 300acres land sizes; what is the total yield of the farmer?

1. Kg/hectar and tonnes/hecter and gram/hectar
2. Kg/acre and tones/acres and gram/acre

CHAPTER FOUR

4.1 INTRODUCTION TO PRODUCE, PEST AND PEST CONTROL

We were introduced to produces and storage; produces are refer to the out-come of crops at every cropping season, i.e. maize, rice, beans sorghum, G-corn we were exposed to majorly cereals as mention above. All these produces are stock or store after sun drying at zero moisture content and they can be store silo, cribs, pot polythene materials, jerry cana or any material that will give air tiety.

We were also exposed to how grains can be prevented from insect and pest with use of insecticides and pesticides and mode of application so that the grains will not contaminated.

4.2 STORE AND STORE KEEPER

In a store where farm produces are stock, there are certain materials that should be available, so that the store keeper can work effectively.

Store Equipments

⇨ Table, chair, scales, sack, pallet bowl, writing materials, pesticides, insecticides etc.

HORTICULTURAL UNIT

Horticulture refer to the studies of ornamental plants.

Branches of horticulture

We were also introduce to ulerculture, the study of vegetables.

Vegetables are majorly market gardening production. And factors to be considered in vegetable production.

Vegetables are:

- Amaranthus
- Flute pumpkin
- Pumpkin
- Cocorus /jute
- Melon
- Garden egg.

MICRO-LIVESTOCK UNITS

Micro-livestock are majorly monogostic or animals that can be kept inside a cages or small apartment with full cure, of their husbandry i.e. snail, rabbit, cana or grass cutter.

Micro livestock unit, we were exposed or introduced to rearing of snail and rabbitary.

Snail Husbandry/Snary

Snail husbandry is a management practices involves in good health well being of snail based on snail housing, snail feeds and feeding, snail medication, and nursing of young hatched snail.

At this unit we were showed difference sizes and types of snail based on the names.

Housing: a sizeable rectangular, concrete of about 5ft by 2½ft were used housing. And we prepared a soil mixture of sandy, loamy and manure as beding for those snail inside their housing.

Soil mixture at ration, 2;4;6 that is sandy 2, manure 4 loamy 6 .

Some materials that can be used as housing for snail are; tyres concrete rectangular concrete constructed, big bowls, half a plot or a plot under barble wire fenced.

FEED AND FEEDING OF SNAIL

- Pawpaw leave
- Neem leave
- Water elave
- Wet-un-raiple maize
- Left-over of fruits. Watermelon orange cucumber
- Concentrate feed. NB it need to be well-planned
- Method of feeding snail and management
- Mourning sanitation

- Evening supply with enough forage of eldble leaves as listed above with moisting wetting of the soil.

Types of snail

Achatina marginata

Achatina achachatina

MERIT OF MICRO-LIVESTOCK (SNAILS)

- Source of protein
- Source of meat
- Empowerment opportunity
- Experimental purposes
- Medicinal value to human health
- By –product benefit i.e. shell as source of calcium

HOME ECONOMIC SECTION

Processing simply refer to changing the forms of raw materials to some finished or finished goods and products.

Product is the final stage of produce or nay raw materials that under final change as a benefit of humanity.

i.e.

Produce	⟶	product	⟶	Consumer
Cassava	⟶	Garri	⟶	Consumption
Bone	⟶	Bone meal	⟶	Consumption
Soybean	⟶	Cheese, Milk, Stew	⟶	Consumption
Maize	⟶	Papa, Popcorn, mill maize	⟶	Consumption
Animal skin	⟶	white ponma	⟶	Consumption

Product processing are changes in stages of produces from plants or animal into finish or final product for human benefit.

At this unit we were taught and exposed to difference machines used in processing cassava into Garri.

We as a SIWES student involves in stage by stage garri processing

1. Feeling of cassava
2. Washing of cassava
3. Grafting of cassava into grannlar size
4. Placed under fermentation of two days
5. Sieve into loose granular sizes
6. Frying into durable granular garri size
7. Lastly we involves in sales

Processing of bones to bone meals

We visited nearby abattoir get available bones for processing into bone meal as part of livestock feed ingredient.

The processing are in two means

i. Direct burning fire
ii. Steam flame fire or burning charcoal

We set-up firewood and lightened some of the bones were practice into the fire while some other set-were pached into left burning charcoal to differentiate the product processed observation

i. Direct burning fire, look backed and burnt with less and product calcium
ii. Steam fire or burning charcoal cooked gray had 100% calcium needed by livestock as bone meal.

PROCESSING OF SOYA-BEAN TO SOYA MILK AND CHEESE

Soya beans is a plant produce of a legumes class of protein source as nutrient digestibility. Soya beans are not durable for direct consumption, but its need to undergo processing into certain product or the other i.e.

Soybean can be processing into

Soya milk

Soya meal

Soya cheese

Soya bean offal/bran/husk shaft

We were taught and introduced into processing stage of soya beans to soya bean milk, cheese and fate pumpkin stew.

Stages of involves in processing soya-bean into milk and cheese.

- ✓ Purchased of soya-bean and socked in water
- ✓ Brushed together to remove and bran/shaft
- ✓ Milling of the washed and brushed soya beans
- ✓ Milled soya, add water and sieved with 0.00
- ✓ Sieved milled semi-liquid will then placed on heat sour for boiling
- ✓ At the process of boiling sour water will then be added bit by bit on till coaqlation occur the coagulated soya cheese will the sieved into a sieve of 0.002mm.

CHAPTER FIVE

RECOMMENDATION AND CONCLUSION

RECOMMENDATION

SIWES programme is an interested practical and working experience which facilitate familiarity with working act, tools and machinery handling for student such graduate and under graduate with these view. It is highly recommend that federal governments should fund the programme for more better efficiency.

CONCLUSION

In conclusion SIWES programme it's what of continuity with strong monitoring by the (ITF) officers and various higher places of learning to make sure that their students are fully participate in the programme for better working experience for great better nation ahead.