TECHNICAL REPORT ON STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME (SIWES)

UNDERTAKEN AT

MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT ILORIN

KM 5, Old Jebba Road, Sango, Ilorin.

PRESENTED BY

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ND/23/AGT/FT/0015

SUBMITTED TO:

THE DEPARTMENT OF AGRICULTURAL TECHNOLOGY, INSTITUTE OF APPLIED SCIENCES, KWARA STATE POLYTECHNIC, ILORIN.

IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF THE AWARD OF NATIONAL DIPLOMA IN AGRICULTURAL TECHNOLOGY

AUGUST TO NOVEMBER, 2024

ACKNOWLEDGEMENT

I wish to register my profound gratitude to Allah Almighty for the guidance and grace throughout my life.

My appreciation goes to the entire staff of MINISTRY AGRICULTURE AND RURAL DEVELOPMENT ILORIN for making industrial training interesting educative and worthwhile. My appreciation also goes to my industrial based supervisors, whose accessibility. Unitary effort, patient and guidance and suggestion fabulously contribution to the completion of this report, may God continue to guide and protect them and their family.

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SIWES COORDINATOR DATE

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SIWES SUPERVISOR DATE

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CHAPTER ONE

1.0 INTRODUCTION OF SIWES

SIWES simply refer to students industry work experience scheme, is a skill training programme deigned 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 pogramme also affords student the opportunity of familiarizing and exposing themselves to the needed experience in handling equipment 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 for initiating and designing the scheme by the fund during it's formative years 19673 – 94 was introduced to acquaint student with skill of handling employers and machinery.

1.1 AIMS 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.

1.2 OBJECTIVES OF SIWES

- ✔ To prepare 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 world of theirs.

CHAPTER TWO

2.0 BACKGROUND HISTORY OF THE ESTABLISHMENT

2.1 HISTORY OF MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT, ILORIN.

The Ministry of Agriculture and Rural Development in Ilorin, Kwara State, Nigeria, is located on Old Jebba Road, Sango, Ilorin [1].

As for its history, the Federal Ministry of Agriculture and Rural Development was established in 1967, and each state in Nigeria, including Kwara State, has its own ministry of agriculture and natural resources [2]. The Kwara State Ministry of Agriculture and Rural Development has undergone various transformations and reorganizations over the years to align with the changing needs of the state's agricultural sector.

The ministry's mandate includes ensuring food security, stimulating agricultural employment and services, promoting the production and supply of raw materials to agro-allied industries, and generating foreign exchange [2]. The ministry is also responsible for implementing various agricultural development projects and programs in Kwara State, including the Ilorin Agricultural Development Project

2.2.OBJECTIVES OF THE MINISTRY

- ✔ To boost Nigeria agricultural sector as a form diversification of the economy.
- ✔ To provide employment
- ✔ To provide student opportunity to see the world of theirs.
- ✔ To provide raw material for processing companies.
- ✔ To provide basic practical knowledge for people in the field of agriculture.

2.3. ORGANIZATIONS STRUCTURE (ORGANOGRAM)

The MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT, ILORIN. is headed by the director who gives order and instructions to the manager. The manager, manage the whole affairs of the farm and report therein back to the Director.

The manager makes sure that all activities is going on in the farm as expected.

CHAPTER THREE

3.1 TECHNICAL TRAINING EXPERIENCE

At my SIWES placement Forescraft Phase I and II there were two major division/unit as their area of specialization

Division / unit/ section

i. Crop unit / section
ii. Poultry unit / section

3.2. POULTRY UNIT

We were taught and identified that poultry are birds of any difference kinds and they are classified as mongrastric animals i.e. local cock, hen hybrid birds ranges from cocokrel, boiler layers noiler, ducks, geese, ostreg, etc.

At poultry units we were taught and had a technical training on the following.

BROODING OF DAY OLD CHICKS (DO)

With the help of industrial based supervisor we purchased day old chicks for brood and brooding management

We made used of the following materials for brood and brooding management

- Brooding pen or cage
- Dislufecent; for dislufect pen or cage against any diseases
- Heat source: be it electiciites heat generating bulbs, charcoal coolpot
- Brightness source: bulb, lanta dry cell battery touch light
- Drinks, feeders, drugs, feeds, vaccine
- Needle and syringe.

3.4 MEDICATION AND VACCINATION

We were showed difference poultry drugs and how to medicate poultry birds at day old likewise at adult example drugs used are Embaz in forth, anacinlin antibiotic maltivitamines oxtetracylin power and injectable.

Vaccine and vaccination

Vaccine and hormones instored on luingorgansim to prevent deadly infestion that can calm poultry birds to death.

TYPES OF AVAILABLE VACCINE

Lasto ta vaccine

Gomboro vaccine

Fow pox vaccine

Kamorov vaccine

Vaccination programme we were exposed to during SIWES for broiler day old birds

Days	**Vaccine**	**How we administer**
Before 10days old	Lastoal	Oral, inside water through mouth
Before 14days	1st gomboro	Oral, inside water through mouth
Before 21days	2nd lastoa	Oral, inside water through mouth
Before 28days	2nd Gomboro	Oral, inside water through mouth

DAILY ROUTINE MANAGEMENT

Everything we cleaned the pen/cage, washed their drinker for another fresh water or if there was need to applied drugs or medicant for medication.

NB We were taught that we should be giving preventives antibiotic at every two to three weeks for three to five days to prevent infection that those birds might picked along with feed or with water or on the floor.

Also any applied drugs that lapse 24hours most be discard and washed the drink or with ordinary water or water solution provided the materials to washed should not be metalics.

FEEDS AND FEEDING OF BIRDS (DOC)

During the SIWES we were exposed to difference feeds and the feed ingredients constituent in feed type.

Chick starter or broiler starter	from day one till 4weeks
Broiler finisher	4weeks till 8 to 12weeks
Grower mash	6weeks till table size for cocreals and 10% egg drop for layers.
Layers mash	After 10% egg dropped till spent or old layers

Some Available feeds ingredient of different proposition

Maize

GNC (Ground-nut cake)

Soya beans

Fish

PKC (Palm Kernel Cake)

Bone meal

Micro nutrient

Lysine

Methionine

Premix

Salt

CHAPTER FOUR

4.1. CROP UNIT

At crop production unit were exposed to various technical aspect of focuses on boosting crop yield and improving farming techniques for staple and cash crops, as follows:

Crop, and Crop types

Soil and Land Management

Planting Techniques and Spacing

Irrigation and Water Management

Crop Rotation and Intercropping

Weed and Pest Control

Growth Stage of Crop

Harvesting and Post-Harvest Management

Storage and Preservation Techniques

Crop: is a plant grown and harvested for food, livestock feed, fiber, or other uses.

Agronomy: is the science and practice of growing crops and managing soil for better productivity and sustainability.

It involves understanding plant physiology, soil science, and environmental factors affecting crop growth.

At my SIWES farm, we were introduced and exposed to various crop types, including cereals, legumes, tubers, and vegetables. We learned how to cultivate these crops, from land preparation to harvesting and storage.

Soil Types and Land Preparation:

We studied different soil types and how to prepare land for planting through plowing, harrowing, and ridging to create suitable conditions for crop growth.

Plant Nutrient Management:

We explored how to balance soil nutrients using organic and inorganic fertilizers to promote healthy plant development and maximize yields.

Planting Techniques and Spacing:

We practiced various planting methods, such as direct seeding and transplanting, and learned the importance of proper spacing for optimal plant growth and resource utilization.

Growth Stages of Crops:

Understanding the stages of crop development helped us manage crops more effectively:

Germination → Seedling → Vegetative stage → Flowering → Maturity → Harvest

Common Crop Feeds (Fertilizer Components):

Just like fish feed has ingredients, crops need specific nutrients:

Nitrogen (N) — for leaf and stem growth

Phosphorus (P) — for root development and flowering

Potassium (K) — for disease resistance and overall plant health

Organic matter — for soil structure and long-term fertility

When and How to Plant Crops

We were introduced to planting techniques and practiced proper scheduling based on crop type, season, and environmental factors.

Morning planting (7:30 – 8:30 am): Ideal for crops that prefer cool temperatures to prevent transplant shock.

Evening planting (4:30 – 5:30 pm): Useful for seedlings that need time to acclimate before exposure to full sunlight.

Planting was done using broadcasting, drilling, or transplanting, depending on the crop requirements.

Soil and Water Management for Crops

Soil health and water availability are essential for successful crop production. The supervisor emphasized the importance of soil moisture, drainage, and nutrient levels.

Reliable Water Sources for Crop Production:

Rainwater: Ideal for most crops, providing natural irrigation and nutrient cycling.

Irrigation from wells (85–75% efficiency): Suitable for consistent watering, especially in dry seasons.

Borehole water (50–45% efficiency): Useful for drought-prone areas but may require treatment for mineral balance.

> Note: Stagnant water is not advisable, as it may promote fungal diseases and root rot.

Soil Types and Land Preparation

We learned that different crops thrive in specific soil types, and proper land preparation enhances growth potential.

Soil Types:

Loamy soil: Ideal for most crops due to its balanced texture and nutrient-holding capacity.

Clay soil: Suitable for water-loving crops but requires amendments for drainage.

Sandy soil: Good for root crops but needs organic matter to improve moisture retention.

Land Preparation Techniques:

Plowing: To break up compact soil and improve aeration.

Harrowing: To refine soil texture and remove weeds.

Ridging: For crops like yam, to promote root development and drainage.

i. Crop Classification and Identification

Farmers learn to select crops based on soil, climate, and market demand:

Cereals: Maize, rice, millet

Legumes: Cowpea, soybean

Tubers: Yam, cassava

Vegetables: Tomatoes, leafy greens

Cash Crops: Cocoa, oil palm

ii. Soil and Land Management

Healthy soil is vital for crop growth. Farmers are trained in:

Soil Testing: Checking pH and nutrients

Fertilization: Using organic/inorganic fertilizers

Land Preparation: Plowing, harrowing, and ridging

Soil Conservation: Techniques like terracing and cover cropping

iii. Planting Techniques and Spacing

Proper planting boosts yields and prevents overcrowding:

Seed Selection: Choosing disease-resistant seeds

Planting Depth & Spacing: Optimizing root development

Plant Population Management: Thinning and pruning for airflow

iv. Irrigation and Water Management

Efficient water use prevents stress and increases growth:

Irrigation Systems: Drip, sprinkler, and furrow irrigation

Water Conservation: Mulching and rainwater harvesting

Drainage Solutions: Preventing waterlogging and root diseases

v. Crop Rotation and Intercropping

Diverse cropping strategies improve soil health and reduce pests:

Crop Rotation: Alternating crops to balance nutrients

Intercropping: Planting complementary crops (e.g., maize + beans)

Companion Planting: Using plants like marigolds to repel pests

vi. Harvesting and Post-Harvest Management

Timely harvesting and careful handling prevent losses:

Timely Harvesting: Picking crops at peak maturity

Harvesting Techniques: Using tools to avoid damage

Post-Harvest Handling: Sorting, drying, and proper transport

vii. Storage and Preservation Techniques

Proper storage protects crop quality and reduces spoilage:

Storage Structures: Silos, cribs, and airtight containers

Preservation Methods: Drying, smoking, and chemical treatments

Pest Control: Managing rodents and molds with safe methods

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CHAPTER FIVE

RECOMMENDATION AND CONCLUSION

RECOMMENDATION

SIWES Programe 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.