A TECHNICAL REPORT AND PRESENTATION

ON

STUDENT INDUSTRIAL WORK EXPERIENCE

SCHEME (SIWES)

HELD AT

FARM EXECUTIVE CONSULT

ILORIN KWARA STATE

PLOT 1, OLD JEBBA ROAD NEAR AGRO MALL

BY

SUBMITTED BY

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DEDICATION

I dedicate this project to Almighty God for his protection over me during SIWES program and my wonderful parent for their moral and financial support towards my academic career may God guide and protect them all. (AMEN)

ACKNOWLEDGEMENT

A report of this magnitude definitely involved more than just my hand work alone. In consequence to that, it is important that effort of the people who contribute to success of this program be acknowledge.

First of all am grateful to Almighty God and my dearest parent MR/MRS **OLAWUYI** for Their moral and financial support to my academics, in fact they are the best, my friends and my SIWES supervisor for their cooperation for making it possible for me to round up my program.

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CHAPTER ONE

1.1 INTRODUCTION

The Student Industrial Work Experience Scheme **(SIWES)** is aprogram embark on to give student specialized skill and acquisition of knowledge in their field of study. It also serves as a motive that compliments learning and encourages the attachment of students in industries, companies and firms based on their discipline. Students are thereby compelled as a matter of necessity to acquire certain educational skill and knowledge either in Polytechnic, University or College of Education.

1.2 DEFINITION OF SIWES

SIWES which is also known as Student Industrial Work Experience Scheme is an aid which enables students to have practical knowledge pertaining to their field of study. It is a program that involves the higher institution knowledge in relation to national board for technical education.

1.3 AIMS AND OBJECTIVES

- To expose students on a particular field they have focused on.
- To enable students face challenges.
- To enable them gain more experience.
- To help students acquire skills.
- To enlighten students about the practical aspect of their field of study.

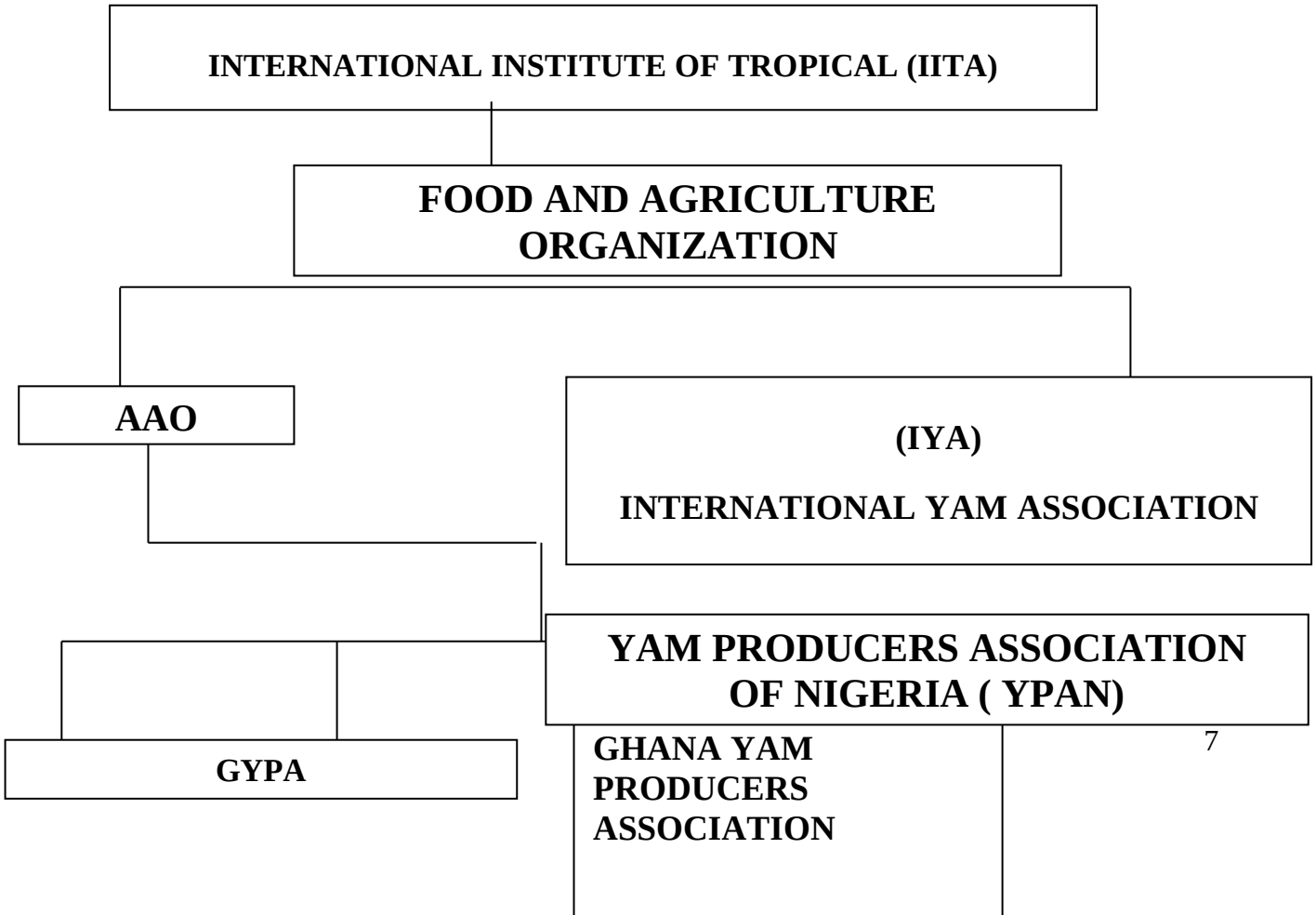
CHAPTER TWO

2.1 HISTORICAL BACKGROUND OF THE ORGANIZATION

The Student Industrial Work Experience Scheme (SIWES) was established in **PLOT 1, OLD JEBBA ROAD NEAR AGRO MALL ILORIN KWARA STATE** to address the lack of practical skills among students preparing for employment in industry. SIWES is a scheme designed to prepare and expose students to industrial work situations they are likely encounter after graduation.

2.2 ORGANIZATION CHART

ORGANIZATIONAL CHART



2.3 MAJOR ACTIVITIES OF THE ORGANIZATION

The ORGANIZATION deals With yam cultivation and provides food:

- Yam Cultivation
- Seed Yam Production
- Farmer Training and Support
- Yam processing and Value
- Food and Security

3.1 SECTIONAL/UNIT OF THE ORGANIZATION WITH THEIR SPECIFIC FUNCTIONS.

These are the various units of the organization and their specific functions:

- **YAM CULTIVATION UNIT :** Responsible for cultivating yams on a large scale, using modern farming techniques and best practices
- **SEED YAM PRODUCTION UNIT:** Responsible for production high – quality seed yams for distribution

3.2 EGG SORTING IS ALSO KNOWN AS EGG GRADING.

This is the process of sorting eggs into different grades. Therefore they would separate the eggs into small, medium, large, extra large, jumbo, and super jumbo. This is mainly determined by the size and weight of the egg

3.3 IN EGG HATCHING MAY REFER TO EGG SHAPE, EGG STORAGE, AND HATCHING TEMPERATURE.

EGG SHAPE

- Eggs that are closest to an oval shape hatch best.
- Eggs that are too long, thin, or completely round do not hatch well.
- Eggs with shell imperfections, such as ridges or pointed ends, do not hatch well.

EGG STORAGE

- Eggs stored between 3 to 6 days have optimal hatchability.

- The pH of the albumen is too low for optimal embryonic development at lay, but protects the embryo from bacterial infection.

Hatching temperature

- The optimum temperature for hatching eggs is 37.5 °C (99.5°F).
- Above this temperature, there will be an increase in the number of crippled and deformed chicks.
- Above 40.5 °C (104.9°F) no embryos will survive.

INCUBATORS

- An incubator is an enclosed structure with a fan and heater to keep eggs warm during the incubation period.
- Some incubators have automatic features, such as egg turning and a fan to facilitate even heat distribution.

3.4 EGG FUMIGATION : is a process that uses gases or fumigants to kill microorganisms and pests that could harm the eggs or cause disease. It's a key step in ensuring the health of chicks.

Why fumigate eggs? To reduce the risk of disease transmission, To improve the quality of chicks, To improve hatchability rates, and To protect the health of the flock.

HOW TO FUMIGATE EGGS?

- Use a disinfectant that can be sprayed, fogged, or turned into gas
- Follow the safety guidelines for the product and fumigation equipment
- Ensure the concentration of disinfectant is correct
- Ensure the temperature and humidity are correct
- Allow good airflow and separate the eggs so the disinfectant can reach them all

RISKS OF FUMIGATION

- Formaldehyde, a common fumigant, is toxic and can damage the embryo if used improperly
- The cuticle, the outermost organic layer of the egg, is most exposed to the fumigant
- Damaging the cuticle can have serious consequences during incubation

3.5 CHICK DISPATCH: SAFE TRANSPORTATION OF DAY-OLD CHICKS

Chick dispatch refers to the process of transporting day-old chicks from the hatchery to farms or customers. This process requires careful handling to minimize stress and mortality.

3.6 CHICK VACCINATION

A CRUCIAL STEP IN DISEASE PREVENTION

- **CHICK VACCINATION :** is a vital process in preventing diseases such as Newcastle disease, infectious bronchitis, and infectious bursal disease (IBD). Vaccination helps boost the immune system, reducing mortality rates and promoting healthy growth in poultry farms.

IMPORTANCE OF EARLY VACCINATION

Early vaccination is essential for several reasons:

- **BOOSTS IMMUNE SYSTEM:** Vaccination helps stimulate the immune system, enabling chicks to fight off diseases.
- **REDUCES MORTALITY RATES :** Vaccination has been shown to significantly reduce mortality rates in poultry farms.
- **PREVENTS DISEASE OUTBREAKS:** Vaccination helps prevent disease outbreaks, which can have devastating effects on poultry farms.

METHODS OF VACCINATION

Chicks can be vaccinated through various methods, including:

- **EYE DROPS:** Vaccines can be administered through eye drops, which is a common method for Newcastle disease vaccination.
- **DRINKING WATER:** Vaccines can be added to the drinking water, making it easy to vaccinate large numbers of chicks.

INJECTION : Vaccines can be administered through injection, which is often used for IBD vaccination.

PROPER VACCINATION PROTOCOL

To ensure effective disease prevention, it's essential to follow proper vaccination protocols:

- **CONSULT A VETERINARIAN :** Consult with a veterinarian to determine the best vaccination schedule for your flock.
- **USE HIGH-QUALITY VACCINES :** Use high-quality vaccines that are specifically designed for poultry.
- **FOLLOW MANUFACTURER INSTRUCTIONS:** Follow the manufacturer's instructions for vaccine administration and dosage.

KEY CONSIDERATIONS FOR CHICK DISPATCH

To ensure the welfare of the chicks, the following factors are crucial:

- **PACKAGING:** Chicks are packaged in specialized boxes with adequate ventilation to prevent overheating and stress.
- TEMPERATURE CONTROL : Chicks are transported in temperature-controlled vehicles to maintain a comfortable temperature range (around 24-26°C).

- **HUMIDITY CONTROL :** The transport vehicle is equipped to maintain optimal humidity levels (around 50-60%) to prevent dehydration.
- **TRAVEL DURATION** : Travel time is minimized to reduce stress and prevent mortality.

BENEFITS OF PROPER CHICK DISPATCH

PROPER CHICK DISPATCH PROTOCOLS ENHANCE FARM PRODUCTIVITY AND ENSURE HIGH SURVIVAL RATES BY:

- Reducing stress and mortality during transportation
- Preventing disease outbreaks
- Promoting healthy growth and development
- Improving overall flock performance

3.6 MAINTENANCE OF FARM EQUIPMENT:

ENSURING SMOOTH OPERATIONS IN POULTRY FARMS

Regular maintenance of farm equipment is crucial for ensuring smooth operations in poultry farms. Common equipment that requires maintenance includes:

- Incubators
- Feeders
- Watering systems
- Ventilation systems

IMPORTANCE OF MAINTENANCE

Maintenance involves:

- Cleaning: Regular cleaning of equipment to prevent dust and debris buildup.
- Lubrication : Lubricating moving parts to reduce friction and wear.
- Part replacement : Replacing worn-out or damaged parts to prevent breakdowns.

BENEFITS OF REGULAR MAINTENANCE

Regular maintenance offers several benefits, including:

- **IMPROVED EFFICIENCY :** Well-maintained equipment operates more efficiently, reducing energy consumption and costs.
- **EXTENDED EQUIPMENT LIFE :** Regular maintenance extends the lifespan of equipment, reducing the need for costly replacements.
- **REDUCED DOWNTIME :** Maintenance helps prevent breakdowns, reducing downtime and minimizing losses.
- **ENHANCED BIRD HEALTH:** Properly maintained equipment helps maintain a healthy environment for birds, reducing the risk of disease.

BEST PRACTICES FOR MAINTENANCE
To ensure effective maintenance, follow these best practices:

- **SCHEDULE REGULAR CHECKS :** Regularly inspect equipment to identify potential issues before they become major problems.
- **KEEP MAINTENANCE RECORDS :** Maintain accurate records of maintenance activities to track equipment performance and identify areas for improvement.
- **TRAIN STAFF :** Ensure that staff are trained to perform maintenance tasks correctly and safely.

CHAPTER THREE

4.1 YAM LIFECYCLE: PROPAGATION TO HARVEST STAGE PROPAGATION STAGE (WEEKS 1-4)

- **SEED YAM SELECTION :** High-quality seed yams are selected for propagation. Seed yams should be disease-free, pest-free, and have a high germination rate.
- **SEED YAM TREATMENT :** Seed yams are treated with fungicides and insecticides to prevent rot and pests.
- **NURSERY PREPARATION :** Nurseries are prepared with well-draining soil and adequate shade. The nursery should be located in an area with minimal risk of flooding.
- **SEED YAM PLANTING:** Seed yams are planted in the nursery, usually in late winter or early spring. Seed yams are planted 2-3 cm deep, with the "eyes" facing upwards.

4.2 GERMINATION STAGE (WEEKS 5-8)

- **GERMINATION :** Seed yams germinate, producing sprouts and roots. Germination typically occurs within 1-2 weeks after planting.
- **SPROUT THINNING :** Weak or spindly sprouts are removed to promote healthy growth. This helps to prevent overcrowding and reduces the risk of disease.
- **SUPPORT :** Sprouts may require support to prevent lodging. This can be achieved using stakes or a trellis system.

4.3 VINE STAGE (WEEKS 9-16)

- **VINE GROWTH :** Sprouts develop into vines, which spread and climb. Vines can grow up to 3 meters in length.
- **TUBER FORMATION :** Tubers begin to form underground. Tubers are the edible part of the yam plant.
- **PEST AND DISEASE MANAGEMENT :** Regular monitoring and management of pests and diseases. Common pests and diseases affecting yam plants include nematodes, beetles, and fungal infections.

4.4 TUBER GROWTH STAGE (WEEKS 17-24)

- **TUBER ENLARGEMENT:** Tubers continue to grow and enlarge. Tubers can grow up to 10 kg in weight.
- **VINE SENESCENCE :** Vines begin to yellow and die back. This is a natural process that occurs as the tubers mature.
- **TUBER MATURATION :** Tubers mature and harden. This process typically occurs 6-8 months after planting.

4.5 HARVEST STAGE (WEEKS 24+)

- Tuber lifting: Tubers are carefully lifted from the soil to avoid damage. Harvesting typically occurs 6-8 months after planting.
- Curing : Harvested tubers are cured in a warm, dry place to heal wounds. Curing helps to improve the storage life of the tubers.
- Storage: Cured tubers are stored in a cool, dark place to maintain quality. Storage conditions should be maintained at 12-15°C and 80-90% relative humidity.

4.6 POST-HARVEST STAGE

- **SEED YAM SELECTION :** High-quality seed yams are selected for the next crop. Seed yams should be disease-free, pest-free, and have a high germination rate.
- **FIELD PREPARATION :** Fields are prepared for the next crop, including soil preparation and pest management.
- **CROP ROTATION :** Crop rotation is practiced to maintain soil fertility and reduce the risk of pests and diseases.

CHAPTER FOUR

4.1 DISCUSSION

I gained a lot of things during my attachment in the organization. I was introduced to Yam Cultivation and processing , Agriculture extension services, Marketing and sales, Research and Development .

4.2RELEVANCE OF EXPERIENCE GAINED TO STUDENT FIELD OF STUDY

i. It enables me to practical zed the theoretical aspect of my course.

ii. It enables me to know the important and usefulness of cultivation to man

iii It enables me to expose to the activity involved in the cultivation

4.3INTERPERSONAL RELATIONSHIP WITH THE ORGANIZATION

FARM EXECUTIVE CONSULT is a nice organization where I was able to interact with the director, instructors and students of the organization.

Even when I was about to round up my program, I felt like extending it but I have no option other than to leave.

CHAPTER FIVE

5.1 CONCLUSION

I appreciate the effort of The Federal Government of Nigeria for introducing such program **(i.e. SIWES)** Student Industrial Work Experience Scheme to enhance students practical knowledge in their various field of study.

5.2 PERSONAL IMPRESSION ABOUT THE ORGANIZATION

It is an organization where unity exists within the director, instructors, secretary and student and this has really contributed to the growth of the organization.

The organization where I did my SIWES training can be recommended to any individual who is ready to acquire with Valuable Knowledge and Skills. Based on your personal impression, it's clear that the Organization Offering this course prioritizes unity and collaboration among its staff and students.

5.3 SUGGESTION AND RECOMMENDATION TO THE ORGANIZATION

I am appealing to the organization to give **SIWES** applicant a helping hand because they can both learn from each other.

5.4 TO THE POLYTECHNIC

I am appealing to all Polytechnics that they should get all their students engaged in the **SIWES** program because I believe it is a program that can boost student's practical knowledge about the theoretical aspect they have been taught in school. It also makes the student to learn more on how to interact with people and how to work.