



TECHNICAL REPORT ON STUDENT INDUSTRIAL WORK EXPERIENCE SCHEME
(SIWES)

UNDERTAKEN AT
**OSUN STATE AGRICULTURAL DEVELOPMENT (OSSADEC)
KARAA ALONG IBADAN EXPRESS WAY, IWO, OSUN STATE.**

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

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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 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 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 its 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 OSUN STATE AGRICULTURAL DEVELOPMENT

Osun State Agricultural Development is a fish farming business located on KARAA ALONG IBADAN EXPRESS WAY, IWO, OSUN STATE.

The Osun State Agricultural Development Corporation (OSSADEC) has played a pivotal role in transforming agriculture within Osun State, Nigeria. Established to enhance agricultural productivity and support services, OSSADEC's journey reflects the state's commitment to becoming the food basket of the South West.

The company started its operations following the creation of Osun State from the old Oyo State on August 27, 1991, the need for a dedicated agency to spearhead agricultural development became apparent. OSSADEC was established with a mission to promote agricultural support services through farm mechanization and timely financial interventions, ensuring adequate returns on stakeholders' investments.

2.2. STRATEGIC OBJECTIVES AND FUNCTIONS

OSSADEC's primary objectives include:

Farm Mechanization Services: Providing modern equipment and techniques to improve farming efficiency.

Agricultural Finance: Offering timely financial support to farmers and stakeholders to boost agricultural activities.

The corporation also focuses on:

Granting or guaranteeing agricultural loans to individuals and corporate bodies engaged in agricultural enterprises.

Collaborating with financial institutions for the provision of funds for agricultural purposes.

Procuring and maintaining agricultural machinery, vehicles, and related implements.

Constructing workshops and infrastructure necessary for agricultural and rural development.

2.3. ACHIEVEMENTS AND IMPACT

Since its inception, OSSADEC has contributed significantly to Osun State's agricultural sector:

Job Creation: Over 16,000 jobs have been created for the indigenes of Osun State.

Infrastructure Development: More than 700 km of rural roads and 30 bridges have been constructed, reducing transportation costs for farmers and increasing market access.

Financial Support: Over 2.8 billion naira has been disbursed as loans to farmers, with more than 11,000 farmers receiving direct cash transfers.

Land Management: The Osun Agriculture Land Bank has been expanded by over 30,000 hectares, facilitating private sector investment in agriculture.

2.4. COLLABORATIVE PROGRAMS

OSSADEC has been instrumental in implementing various agricultural programs:

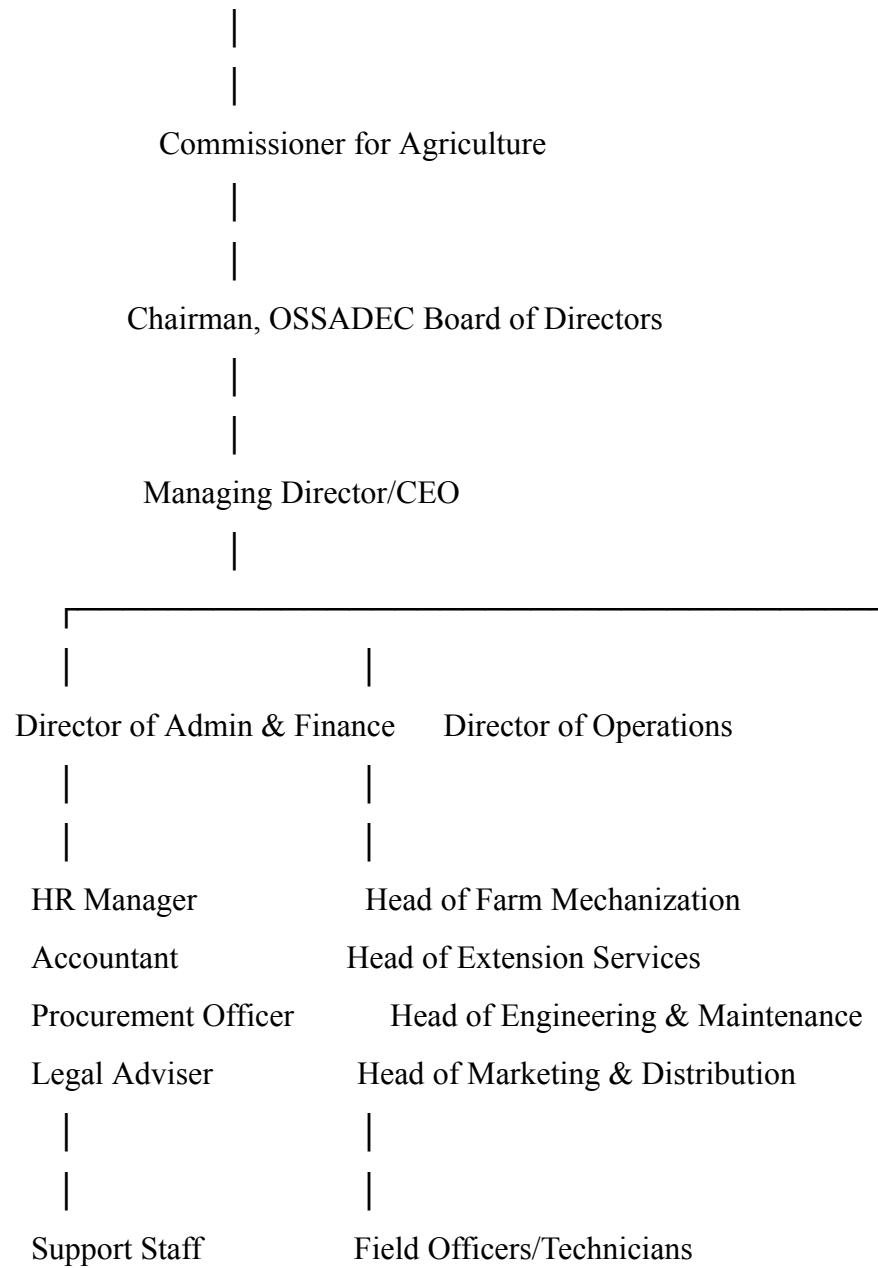
Osun Rural Enterprise and Agricultural Programme (O-REAP): Aimed at organizing the agriculture sector by strengthening associations, modernizing farms, and linking farmers to markets.

Osun Broilers Production Scheme (O-BOPS): Targeted at improving poultry production, this scheme has secured investments and managed numerous small-scale farmers.

Osun Fisheries Outgrower Production Scheme (O-FOPS): Focused on fish production, training, and establishment of commercial fish ponds.

2.5. ORGANOGRAM

Governor of Osun State



CHAPTER THREE

3.1 TECHNICAL TRAINING EXPERIENCE

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

Division / unit/ section

- i. Crop production unit / section
- ii. Extension services unit / section

3.2 CROP PRODUCTION 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 type
- 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

CHAPTER FOUR

4.1 EXTENTION AND ADVISORY SERVICES UNIT

This unit bridges the gap between research and farmers, delivering practical knowledge and support to improve crop production.

Key Functions:

Farmer Education and Training: Teaching best practices in soil management, climate-smart agriculture, and record-keeping through workshops and field schools.

Input Distribution: Providing access to high-quality seeds, fertilizers, and biological pest control, with guidance on proper usage.

Field Demonstrations: Using demo plots to showcase improved techniques, tools, and crop varieties, helping farmers see tangible results.

Farm Monitoring and Support: Conducting regular visits to assess crop progress, offer tailored advice, and relay farmer feedback to researchers.

Pest and Disease Management: Promoting Integrated Pest Management (IPM), early disease detection, and pest forecasting to protect crops.

Community Engagement: Facilitating farmer networks, cooperatives, and digital advisory platforms to enhance knowledge sharing and market access.

Impact:

With continuous support, farmers increase yields, reduce losses, adopt sustainable practices, and access better markets — contributing to regional food security and agricultural growth.

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.