



NATIONAL BOARD FOR TECHNICAL EDUCATION
PLOT B BIDA ROAD, P.M.B. 2239, KADUNA, NIGERIA

IN COLLABORATION WITH



**NATIONAL OCCUPATIONAL STANDARDS
(NOS)**

**ARTIFICIAL INSEMINATION IN LIVESTOCK
LEVELS 1 - 3**

JUNE, 2026



**RENEWED HOPE
IN AGRICULTURE**

PREFACE

The development of the National Occupational Standards (NOS) for the agricultural sector marks another important milestone in Nigeria's commitment to strengthening Technical and Vocational Education and Training (TVET), promoting skills development, and improving workforce productivity. These standards have been developed to provide nationally recognized benchmarks for the knowledge, skills, and competencies required for effective performance in various agricultural occupations.

The National Occupational Standards were developed through a collaborative process involving industry experts, employers, professional bodies, regulatory agencies, training institutions, development partners, and other key stakeholders. Their contributions ensured that the standards reflect current industry practices, emerging technologies, and the competency requirements of the modern agricultural sector.

I wish to express my sincere appreciation to the Honourable Minister of Education for providing the policy direction that made this initiative possible. I also acknowledge the support of the Honourable Minister of Agriculture and Food Security and the Honourable Minister of Livestock Development for their commitment to advancing agricultural skills development in Nigeria.

I extend my profound gratitude to the Tertiary Education Trust Fund (TETFund) for its intervention and support, which facilitated the development of these National Occupational Standards. I also appreciate the invaluable contributions of the Sector Skills Council for Agriculture (SSC4A), members of the Implementation Committee, resource persons, industry practitioners, employers, professional associations, regulatory agencies, the French Embassy in Nigeria, development partners, and all stakeholders who contributed their expertise throughout the development process.

These National Occupational Standards will serve as an important reference for competency-based training, assessment, certification, apprenticeship, Recognition of Prior Learning (RPL), and workforce development within the agricultural sector. It is my expectation that all implementing institutions and industry partners will effectively utilize these standards to enhance the quality, relevance, and competitiveness of agricultural skills development in Nigeria.

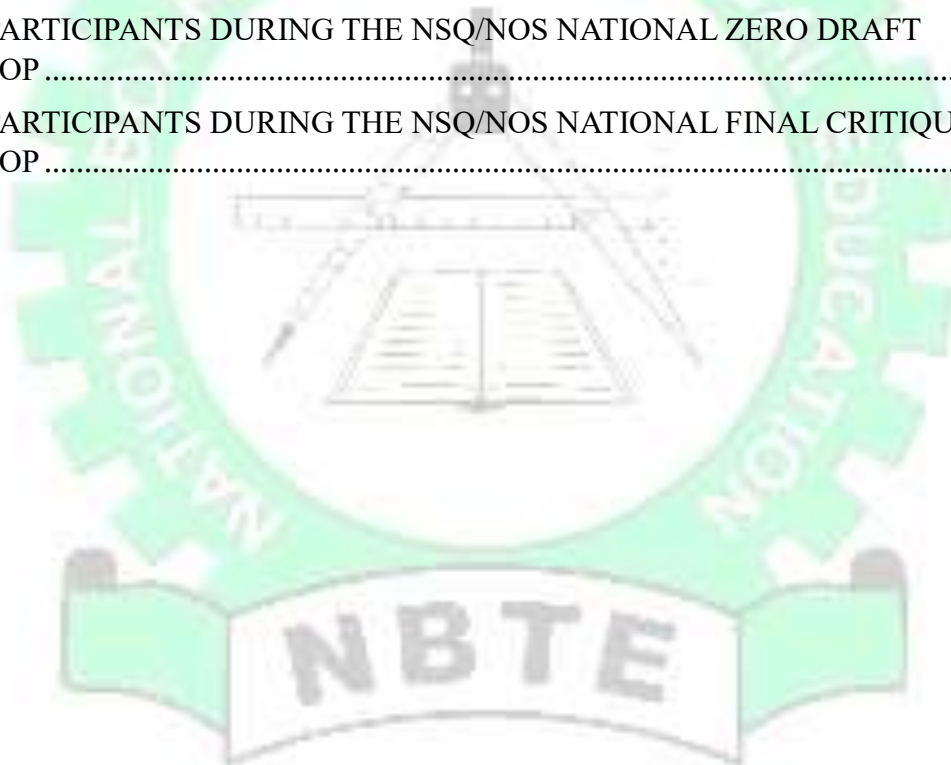
I commend all stakeholders for their dedication and commitment to this important national assignment and look forward to the successful implementation of these National Occupational Standards for the benefit of the agricultural sector and the nation as a whole.

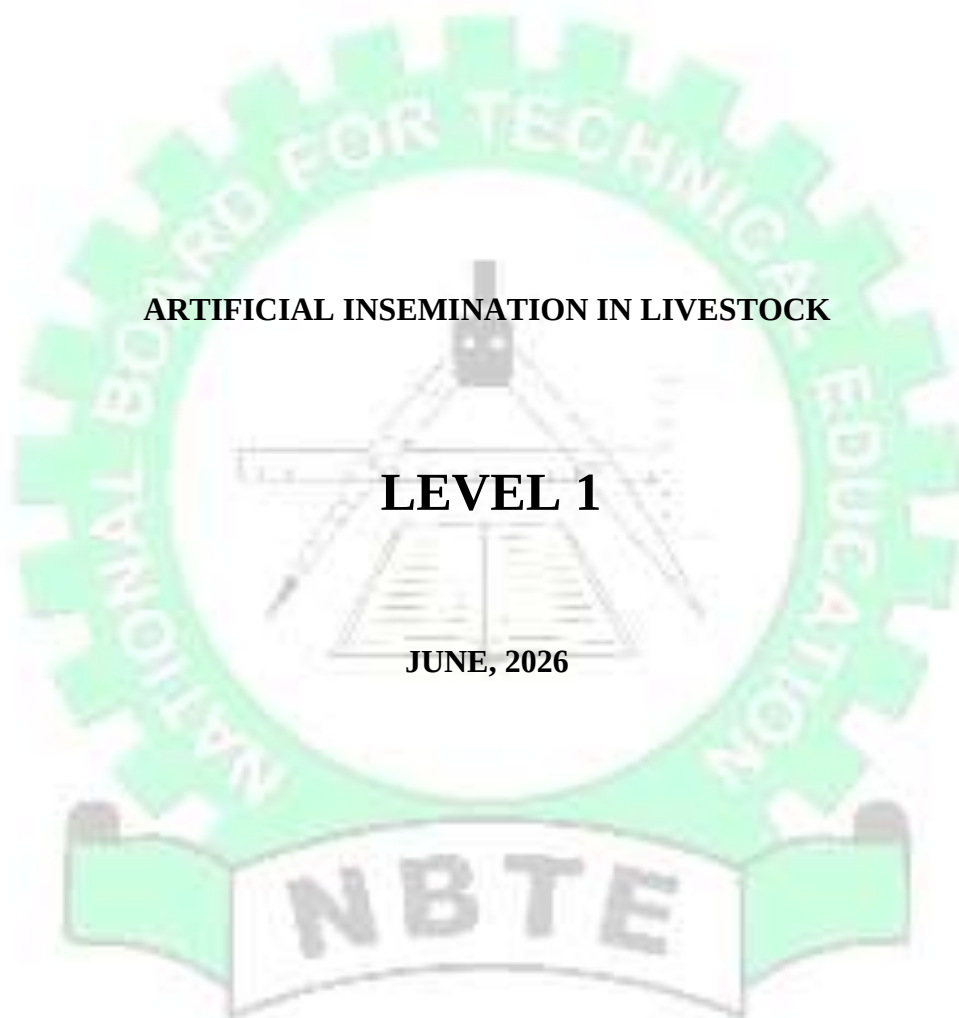
Professor Idris M. Bugaje, FNSE
Chairman, Implementation Committee
EXECUTIVE SECRETARY
National Board for Technical Education (NBTE), Kaduna

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GENERAL INFORMATION

OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in livestock artificial insemination for the award of National Skills Qualification (NSQ). It is aimed at producing competencies necessary to support in **Artificial Insemination in Livestock** at **NSQ Level 1**.

This qualification is subject to review as and when the need arises.

QUALIFICATION PURPOSE

The purpose of this qualification is designed to prepare learners with the basic knowledge, practical skills and workplace behaviours required to support livestock artificial insemination activities under supervision.

QUALIFICATION REQUIREMENTS

There are no formal academic entry requirements.

All Candidates must be:

- At least sixteen (16) years of age
- Medically fit
- Mentally fit (Mental alertness)
- A Nigerian citizen
- Other nationals should present international passport, residence permit or Parent work permit.
- Vetted
- Interested in Artificial Insemination in Livestock and related support operations;
- Able to carry out simple practical tasks under supervision.

QUALIFICATION OBJECTIVES

At the end of this qualification, the learner should be able to:

1. Apply workplace health, safety and biosecurity procedures during livestock operations;
2. Communicate effectively with supervisors, colleagues and livestock owners;
3. Work effectively as a member of a livestock production team;
4. Identify common livestock species and breeds used in artificial insemination programmes;
5. Assist in restraining livestock safely during Artificial Insemination activities;
6. Prepare basic artificial insemination tools, equipment and maintain cleanliness with hygiene in work area under supervision;
7. Observe basic signs of heat detection and animal reproductive behaviour;
8. Assist qualified personnel during artificial insemination procedures.

Level 1 Mandatory Units

Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Practice Time	Remark
Unit 001	AGR/AIA/001/L1	Health, Safety and Biosecurity Practices	2	20	60	Mandatory
Unit 002	AGR/AIA/002/L1	Communication in the Livestock Workplace	2	20	60	Mandatory
Unit 003	AGR/AIA/003/L1	Team Work in Livestock Operations	2	20	60	Mandatory
Unit 004	AGR/AIA/004/L1	Livestock Used for Artificial Insemination	3	30	90	Mandatory
Unit 005	AGR/AIA/005/L1	Animal Handling and Restraint	3	30	90	Mandatory
Unit 006	AGR/AIA/006/L1	Artificial Insemination Equipment Preparation	3	30	90	Mandatory
Unit 007	AGR/AIA/007/L1	Heat Detection and Animal Reproductive Behaviour	3	30	90	Mandatory
Unit 008	AGR/AIA/008/L1	Artificial Insemination Procedures	4	40	120	Mandatory
TOTAL			22	220	660	

QUALIFICATION STRUCTURE

This qualification comprises a total of eight (8) Mandatory and optional Units, with a credit value of 22 and 220 Guided Learning Hours (GLH) across the full qualification. One (1) credit is equivalent to ten (10) GLH. Guided Learning Hours are the time a learner spends in the classroom, workshop and laboratory of the Skills Training Centre (STC), being taught, instructed, supervised or assessed by a qualified trainer, facilitator or assessor.

In addition to the GLH, the qualification requires at least twice or thrice the GLH as practice time. Practice time is the time a learner is expected to spend applying the skills of each unit in a real workplace environment, carrying out the same tasks repeatedly until performance becomes consistent, accurate and habitual to the standard the qualification demands. It is undertaken under the guidance of a workplace supervisor, recorded in the learner's logbook and duly endorsed. Practice time is the principal setting where core assessment is conducted. It is through repeated performance in the workplace that a learner's achievement of the Learning Outcomes and Performance Criteria is judged and evidenced. Practice time is an additional requirement to GLH and does not replace them.

To achieve this qualification, the learner must complete all mandatory units, undertake the prescribed practice time, and accumulate the minimum credit value approved by NBTE. Credit is awarded only

when a learner has been assessed as competent against all Learning Outcomes and Performance Criteria of a unit.

GENERAL GUIDE

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE
Unit level	Denotes the level of the unit within the Nigerian Skills Qualification framework NSQF.
Unit credit value	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
Unit Purpose	Provides a brief outline of the unit content.
Learning outcome	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
Assessment criteria	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to support the assessment of the unit.
Unit guided learning hours	The average number of hours of supervised or directed study time or assessment required achieving a qualification or unit of a qualification.
Unit Practice Time	The average number of practice hours of unsupervised or direct study time or assessment required to achieve a qualification or unit of a qualification.

UNIT 001: HEALTH, SAFETY AND BIOSECURITY PRACTICES

Unit Reference Number: AGR/AIA/001/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 20

Practice Time: 60 hours

Unit Purpose: This unit equips learners with the basic knowledge, skills and attitudes required to work safely in livestock production environments.

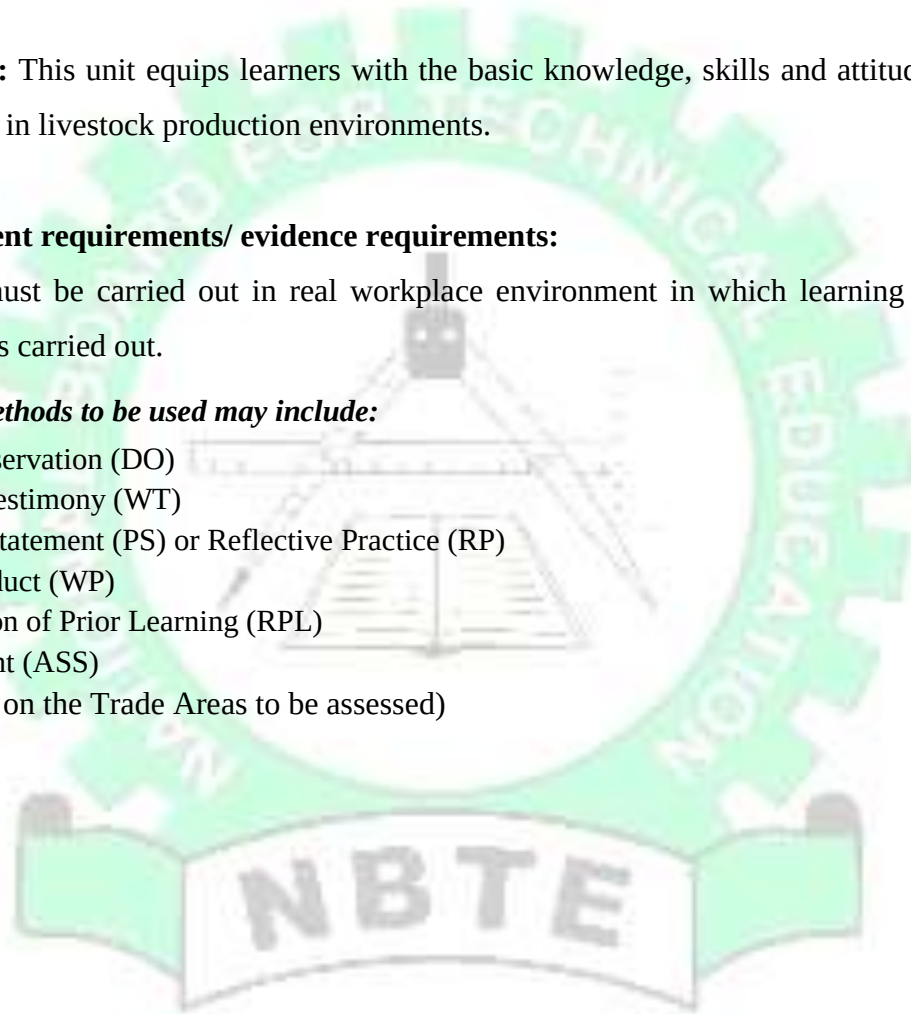
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Witness Testimony (WT)
3. Personal Statement (PS) or Reflective Practice (RP)
4. Work Product (WP)
5. Recognition of Prior Learning (RPL)
6. Assignment (ASS)

(This depends on the Trade Areas to be assessed)



UNIT 001: Health, Safety and Biosecurity Practices

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type		Evidence Ref. No.	Page No.
LO 1: Apply workplace health and safety practices.	1.1	Identify workplace hazards.				
	1.2	Wear appropriate personal protective equipment. (PPE)				
	1.3	Follow workplace safety instructions.				
	1.4	Maintain a safe working environment.				
LO 2: Apply hygiene and biosecurity procedures.	2.1	Clean work areas.				
	2.2	Disinfect tools and equipment.				
	2.3	Dispose waste appropriately.				
	2.4	Prevent cross-contamination.				
LO 3: List workplace emergencies.	3.1	Explain emergency situations.				
	3.2	List steps of emergency reporting.				
	3.3	List first-aid instrument/equipment.				
	3.4	List first-aid emergency procedures.				
LO 4: Promote animal welfare during livestock operations.	4.1	Handle animals humanely.				
	4.2	Observe animal behaviour.				
	4.3	Report animal behaviour.				

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 002: COMMUNICATION IN THE LIVESTOCK WORKPLACE

Unit Reference Number: AGR/AIA/002/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 20

Practice Time: 60 hours

Unit Purpose: This unit develops learners' ability to communicate effectively in livestock workplaces.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal Statement.

(This depends on the Trade Areas to be assessed)

UNIT 002: Communication in workplace

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will:		The learner can:			
LO 1: Communicate with supervisors and colleagues.	1.1	Listen attentively to instructions.			
	1.2	Respond appropriately to questions.			
	1.3	Report completed tasks.			
LO 2: Use workplace communication methods.	2.1	Read simple workplace information.			
	2.2	Interpret safety signs.			
	2.3	Complete simple workplace forms.			
	2.4	Record basic workplace information.			
LO 3: Respect effective interpersonal communication.	3.1	Respect workplace diversity.			
	3.2	Share relevant information.			
	3.3	Maintain professional behaviour.			
LO 4: Support workplace documentation.	4.1	Record daily activities.			
	4.2	Submit workplace records.			
	4.3	Store workplace documents safely.			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 003: TEAM WORK IN LIVESTOCK OPERATIONS

Unit Reference Number: AGR/AIA/003/L1

NSQ Level: 1

Credit Value: 2

Guided Learning Hours: 20

Practice Time: 60

Unit Purpose: This unit equips learners with the knowledge, skills and attitudes required to work cooperatively with supervisors, colleagues and other stakeholders in a livestock production environment.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal Statement.

(This depends on the Trade Areas to be assessed)

UNIT 003: Team Work in workplace

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will:		The learner can:			
LO 1: Work cooperatively with team members.	1.1	Identify team members.			
	1.2	Follow team instructions.			
	1.3	Support team activities.			
	1.4	Respect team members.			
LO 2: Contribute to workplace activities.	2.1	Attend team meetings.			
	2.2	Perform assigned duties.			
	2.3	Share relevant information.			
	2.4	Complete assigned tasks.			
LO 3: Demonstrate positive workplace behaviour.	3.1	Maintain punctuality.			
	3.2	Demonstrate responsibility.			
	3.3	Observe workplace discipline.			
	3.4	Accept constructive feedback.			
LO 4: Maintain harmonious working relationships.	4.1	Resolve simple disagreements.			
	4.2	Respect workplace diversity.			
	4.3	Assist fellow workers.			
	4.4	Promote cooperation.			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 004: LIVESTOCK USED FOR ARTIFICIAL INSEMINATION

Unit Reference Number: AGR/AIA/004/L1

NSQ Level: 1

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

Unit Purpose: This unit is designed to equip learners with knowledge, skills and attitude to identify common livestock species used in artificial insemination programmes.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal Statement.

(This depends on the Trade Areas to be assessed)

UNIT 004: Livestock Used for Artificial Insemination

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type		Evidence Ref. Page No.
LO 1: Identify livestock species.	1.1	Identify cattle.			
	1.2	Identify sheep.			
	1.3	Identify goats.			
	1.4	Identify pigs.			
	1.5	Identify Poultry			
LO 2: Identify breeding animal.	2.1	Identify donor male.			
	2.2	Identify recipient female.			
	2.3	Identify young animal.			
	2.4	Identify mature animal for breeding.			
LO 3: Identify phenotypic traits for Artificial Insemination	3.1	Score body condition.			
	3.2	Identify healthy appearance.			
	3.3	Recognise abnormal behavior in livestock.			
	3.4	Communicate unhealthy animals to supervisor			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 005: ANIMAL HANDLING AND RESTRAINT

Unit Reference Number: AGR/AIA/005/L1

NSQ Level: 1

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

Unit Purpose: This unit is designed to equip learners with the competencies required to safely assist in handling and restraining livestock before, during and after artificial insemination activities.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS)
5. Personal Statement (PS)

(This depends on the Trade Areas to be assessed)

UNIT 005: Animal Handling and Restraint

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Prepare animal for handling.	1.1	Identify handling facilities.									
	1.2	Identify handling equipment.									
	1.3	Assemble handling equipment.									
	1.4	Prepare working areas.									
	1.5	Store handling equipment.									
	1.6	Follow handling instructions.									
LO 2: Assist in restraining livestock.	2.1	Guide animal calmly.									
	2.2	Secure restraint equipment.									
	2.3	Position animal correctly.									
	2.4	Monitor restrained animal.									
LO 3: Promote animal welfare.	3.1	Handle animal humanely.									
	3.2	Reduce animal stress.									
	3.3	Prevent animal injuries.									
	3.4	Communicate welfare concerns to supervisor									
LO 4: Maintain safety during handling.	4.1	Observe safe distances.									
	4.2	Use protective equipment.									
	4.3	Maintain safe posture.									
	4.4	Communicate unsafe conditions.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 006: ARTIFICIAL INSEMINATION EQUIPMENT PREPARATION

Unit Reference Number: AGR/AIA/006/L1

NSQ Level: 1

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

Unit Purpose: This unit is designed to equip learners with knowledge, skills and attitude required to prepare, clean, organise and maintain artificial insemination equipment, materials and work areas before and after activities.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal Statement (PS).

(This depends on the Trade Areas to be assessed)

UNIT 006: Artificial Insemination Equipment and Work Area

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will:		The learner can:			
LO 1: Prepare the work area.	1.1	Clean the work area.			
	1.2	Organise work materials.			
	1.3	Store work materials after use.			
	1.4	Maintain workplace hygiene.			
LO 2: Prepare artificial insemination equipment.	2.1	Identify required equipment.			
	2.2	Clean equipment.			
	2.3	Assemble equipment.			
	2.4	Arrange equipment.			
LO 3: Prepare consumable materials.	3.1	Select required materials.			
	3.2	Organise consumables.			
	3.3	Store consumables appropriately.			
	3.4	Identify damaged materials.			
	3.5	Communicate damaged materials to supervisor.			
LO 4: Maintain equipment after use.	4.1	Collect used equipment.			
	4.2	Wash used equipment.			
	4.3	Dry washed equipment.			
	4.4	Sterilize/disinfect equipment			
	4.5	Store equipment safely.			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 007: HEAT DETECTION AND ANIMAL REPRODUCTIVE BEHAVIOUR

Unit Reference Number: AGR/AIA/007/L1

NSQ Level: 1

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

Unit Purpose: This unit is designed to equip learners with knowledge and skills required to identify basic signs of heat and animal reproductive behaviour

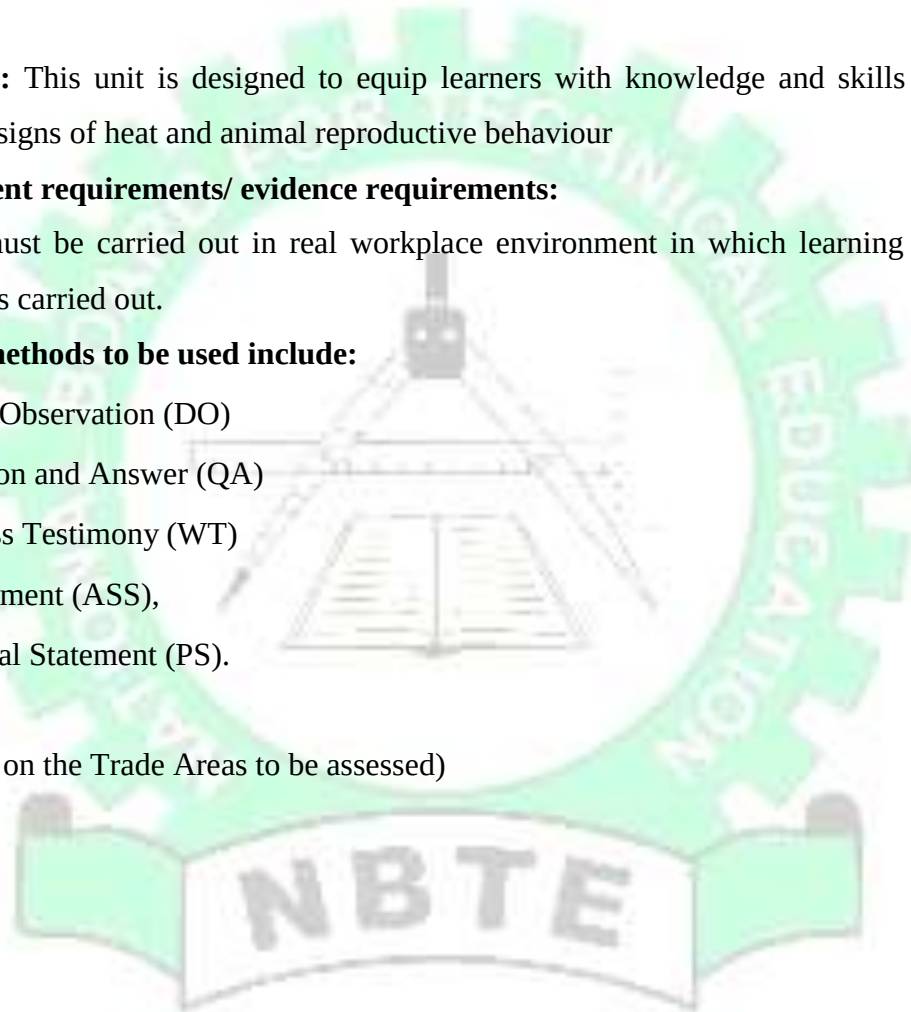
Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal Statement (PS).

(This depends on the Trade Areas to be assessed)



UNIT 007: Heat detection and animal reproductive behaviour

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type		Evidence Ref. No.	Page No.
The learner will:		The learner can:				
LO 1: Identify basic animal identification	1.1	Identify animal by color				
	1.2	Identify animal by branding				
	1.3	Identify animal by ear tags				
	1.4	Identify animal by names				
	1.5	Identify animal by breed				
LO 2: Identify signs of heat in animals	2.1	Identify primary sign of heat i.e., standing to be mounted				
	2.2	Identify secondary signs of heat e.g., mounting other animals, vulva swelling, vulva discharge, etc.				
	2.3	Communicate identified signs to supervisor				
LO 3: Identify heat detection aid	3.1	List heat detection aids				
	3.2	Identify heat detection aid e.g., Kamar heat detector, tail marking, chin ball marker, etc.				
	3.3	Identify teaser males				
	3.4	Store heat detection aids properly				
	3.5	Dispose heat detection aids properly after use.				

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 008: ARTIFICIAL INSEMINATION PROCEDURES

Unit Reference Number: AGR/AIA/008/L1

NSQ Level: 1

Credit Value: 4

Guided Learning Hours: 40

Practice Time: 120

Unit Purpose: This unit is designed to equip learners with knowledge, skills and attitudes required to assist qualified Artificial Insemination Technicians.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation/oral questions (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal Statement (PS) etc.

(This depends on the Trade Areas to be assessed)

UNIT 008: Artificial Insemination Procedures

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. No.	Page No.
LO 1: Prepare for artificial insemination activities.	1.1	Prepare required insemination materials.			
	1.2	Arrange equipment insemination.			
	1.3	Prepare animal for insemination.			
LO 2: Assist during artificial insemination procedures.	2.1	Present equipment.			
	2.2	Observe procedures.			
	2.3	Maintain cleanliness.			
	2.4	Assist in restraining animals during insemination.			
LO 3: Support post-procedure activities.	3.1	Assist in releasing the animal after insemination.			
	3.2	Clean work areas.			
	3.3	Collect equipment.			
	3.4	Clean equipment			
	3.5	Sterilize equipment			
	3.6	Dispose waste.			
LO 4: Observe professional workplace practices.	4.1	Follow instructions.			
	4.2	Maintain confidentiality.			
	4.3	Maintain work ethics.			
	4.4	Communicate unusual observations.			

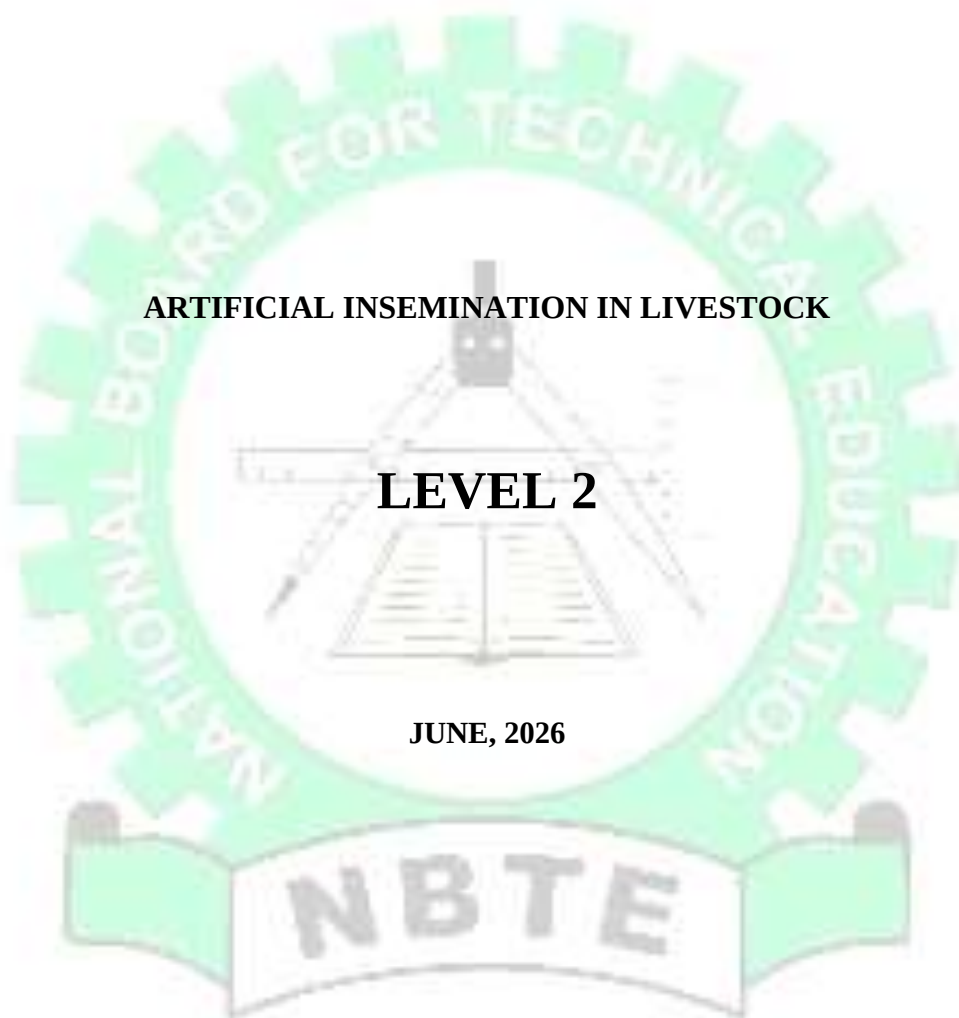
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EQAM's Signature	Date

NATIONAL SKILLS QUALIFICATION (NSQ)

ARTIFICIAL INSEMINATION IN LIVESTOCK

LEVEL 2

JUNE, 2026



GENERAL INFORMATION

OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in livestock artificial insemination for the award of National Skills Qualification (NSQ). It is aimed at producing competencies in livestock artificial insemination NSQ Level 2

This qualification is subject to review as and when the need arises.

QUALIFICATION PURPOSE

This qualification develops the competencies required to perform routine artificial insemination support activities in livestock production under minimal supervision.

The qualification prepares learners for employment as competent Artificial Insemination Assistants and provides progression to NSQ Level 3, where learners will perform artificial insemination procedures with greater independence.

QUALIFICATION REQUIREMENTS

All Candidates must be:

- At least sixteen (16) years of age
- Medically fit
- Mentally fit (Mental alertness)
- A Nigerian citizen
- Other nationals should present international passport, residence permit or Parent work permit.
- Vetted
- Interested in agricultural production and related support operations;
- Able to carry out routine practical tasks with minimal supervision.

QUALIFICATION OBJECTIVES

At the end of this qualification, the learner should be able to:

- i. Apply workplace health, safety and biosecurity procedures independently during routine activities.
- ii. Communicate effectively with livestock owners, supervisors and colleagues;
- iii. Perform routine teamwork responsibilities;
- iv. Identify livestock suitable for breeding;
- v. Detect signs of heat in livestock;
- vi. Maintain artificial insemination equipment and handle semen safely under supervision;
- vii. Assist during artificial insemination procedures;

viii. Maintain breeding and insemination records.

Level 2 Mandatory Units

Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Practice Time	Remark
Unit 001	AGR/AIA/001/L2	Health, Safety and Biosecurity in Artificial Insemination Operations	3	30	90	Mandatory
Unit 002	AGR/AIA/002/L2	Communication and Workplace Relationship	3	30	90	Mandatory
Unit 003	AGR/AIA/003/L2	Livestock Production Team	3	30	90	Mandatory
Unit 004	AGR/AIA/004/L2	Livestock for Breeding	3	30	90	Mandatory
Unit 005	AGR/AIA/005/L2	Heat Detection and Reproductive Behaviour	4	40	120	Mandatory
Unit 006	AGR/AIA/006/L2	Artificial Insemination Equipment and Semen Preparation for Breeding	4	40	120	Mandatory
Unit 007	AGR/AIA/007/L2	Artificial Insemination Procedures	4	40	120	Mandatory
Unit 008	AGR/AIA/008/L2	Artificial Insemination Record Keeping	3	30	90	Mandatory
TOTAL			27	270	810	

QUALIFICATION STRUCTURE

This qualification comprises a total of eight (8) Mandatory and optional Units, with a credit value of 27 and 270 Guided Learning Hours (GLH) across the full qualification. One (1) credit is equivalent to ten (10) GLH. Guided Learning Hours are the time a learner spends in the classroom, workshop and laboratory of the Skills Training Centre (STC), being taught, instructed, supervised or assessed by a qualified trainer, facilitator or assessor.

In addition to the GLH, the qualification requires at least twice or thrice the GLH as practice time. Practice time is the time a learner is expected to spend applying the skills of each unit in a real workplace environment, carrying out the same tasks repeatedly until performance becomes consistent, accurate and habitual to the standard the qualification demands. It is undertaken under

the guidance of a workplace supervisor, recorded in the learner's logbook and duly endorsed. Practice time is the principal setting where core assessment is conducted. It is through repeated performance in the workplace that a learner's achievement of the Learning Outcomes and Performance Criteria is judged and evidenced. Practice time is an additional requirement to GLH and does not replace them.

To achieve this qualification, the learner must complete all mandatory units, undertake the prescribed practice time, and accumulate the minimum credit value approved by NBTE. Credit is awarded only when a learner has been assessed as competent against all Learning Outcomes and Performance Criteria of a unit.



GENERAL GUIDE

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE
Unit level	Denotes the level of the unit within the Nigerian Skills Qualification framework NSQF.
Unit credit value	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
Unit Purpose	Provides a brief outline of the unit content.
Learning outcome	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
Assessment criteria	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to support the assessment of the unit.
Unit guided learning hours	The average number of hours of supervised or directed study time or assessment required achieving a qualification or unit of a qualification.
Unit Practice Time	The average number of practice ours of unsupervised or direct study time or assessment required to achieve a qualification or unit of a qualification.

UNIT 001: HEALTH, SAFETY AND BIOSECURITY IN ARTIFICIAL INSEMINATION OPERATIONS

Unit Reference Number: AGR/AIA/001/L2

NSQ Level: 2

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90

Unit Purpose: This unit equips learners with the competencies required to implement workplace health, safety and biosecurity procedures during artificial insemination activities.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 001: Health, Safety and Biosecurity in Artificial Insemination Operations

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.			
LO 1: Apply workplace safety procedures.	1.1	Identify workplace hazards.					
	1.2	Select appropriate PPE.					
	1.3	Discuss steps in workplace hazards prevention.					
LO 2: Implement biosecurity measures.	2.1	Clean work areas.					
	2.2	Disinfect equipment.					
	2.3	Discuss access control to work areas.					
	2.4	Dispose waste appropriately.					
LO 3: Promote animal welfare.	3.1	Handle animals humanely.					
	3.2	Observe animal behavior.					
	3.3	Prevent animal injuries.					
	3.4	Report welfare concerns.					

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 002: COMMUNICATION AND WORKPLACE RELATIONSHIP

Unit Reference Number: AGR/AIA/002/L2

NSQ Level: 2

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

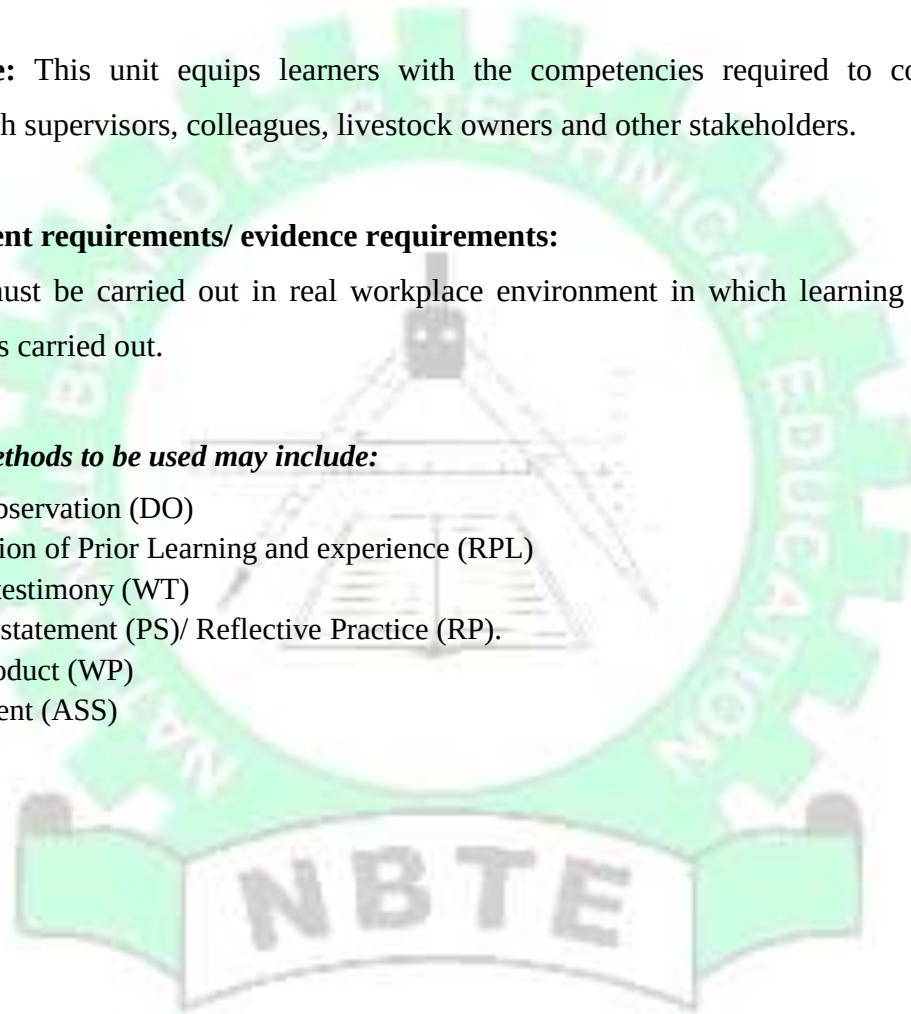
Unit Purpose: This unit equips learners with the competencies required to communicate effectively with supervisors, colleagues, livestock owners and other stakeholders.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)



UNIT 002: Communication in Livestock Workplace

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: <i>Communicate workplace information.</i>	1.1	Interpret workplace instructions.									
	1.2	Relay workplace information.									
	1.3	Report completed activities.									
	1.4	Respond to enquiries.									
LO 2: <i>Maintain workplace relationships.</i>	2.1	Respect colleagues.									
	2.2	Support team members.									
	2.3	Resolve simple conflicts.									
	2.4	Maintain professional conduct.									
LO 3: <i>Maintain workplace documentation.</i>	3.1	Complete workplace forms.									
	3.2	Record workplace information.									
	3.3	Verify recorded information.									
	3.4	Submit completed records.									
LO 4: <i>Communicate with livestock owners.</i>	4.1	Welcome clients.									
	4.2	Explain routine procedures.									
	4.3	Answer basic questions									
	4.4	Report client concerns.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 003: LIVESTOCK PRODUCTION TEAM

Unit Reference Number: AGR/AIA/003/L2

NSQ Level: 2

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

Unit Purpose: This unit develops learners' ability to contribute effectively to livestock production teams by carrying out assigned responsibilities, supporting team objectives and maintaining productive working relationships.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

Unit 003: Livestock Production Team

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Perform assigned responsibilities.	1.1	Interpret work schedules.									
	1.2	Organise assigned tasks.									
	1.3	Complete assigned duties.									
	1.4	Report completed work.									
LO 2: Support team performance.	2.1	Assist team members.									
	2.2	Share workplace information.									
	2.3	Participate in meetings.									
	2.4	Promote cooperation.									
LO 3: Demonstrate workplace professionalism.	3.1	Demonstrate punctuality.									
	3.2	Maintain discipline.									
	3.3	Demonstrate responsibility.									
	3.4	Understand workplace ethics.									
LO 4: Maintain productive relationships.	4.1	Respect diversity.									
	4.2	Accept feedback.									
	4.3	Support workplace harmony.									
	4.4	Resolve workplace disagreements.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 004: LIVESTOCK FOR BREEDING

Unit Reference Number: AGR/AIA/004/L2

NSQ Level: 2

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 hours

Unit Purpose: This unit equips learners with competencies to identify livestock suitable for breeding programmes.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 004: Livestock for Breeding

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Identify breeding livestock.	1.1	Identify breeding cattle.									
	1.2	Identify breeding sheep.									
	1.3	Identify breeding goats.									
	1.4	Identify breeding pigs.									
	1.5	Identify breeding poultry.									
LO 2: Assess breeding suitability.	2.1	Examine body condition.									
	2.2	Identify breeding age.									
	2.3	Identify breeding soundness.									
	2.4	Report unsuitable animals for breeding.									
LO 3: Recognise reproductive characteristics.	3.1	Observe external reproductive organs.									
	3.2	Identify reproductive maturity.									
	3.3	Recognise breeding behaviour.									
	3.4	Report reproductive abnormalities.									
LO 4: Maintain breeding selection records.	4.1	Record animal identification.									
	4.2	Record breeding status.									
	4.3	Verify breeding information.									
	4.4	Update breeding records.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 005: HEAT DETECTION AND REPRODUCTIVE BEHAVIOUR

Unit Reference Number: AGR/AIA/005/L2

NSQ Level: 2

Credit Value: 4

Guided Learning Hours: 40

Practice Time: 120 Hours

Unit Purpose: This unit is designed to equip learners with the knowledge and skills required to identify heat signs, monitor reproductive behaviour and report observations that support successful artificial insemination exercise.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 005: Heat Detection and Reproductive Behaviour

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will:		The learner can:			
LO 1: Identify signs of heat.	1.1	Identify standing heat.			
	1.2	Identify mounting behaviour.			
	1.3	Recognise vulva swelling.			
	1.4	Identify mucus discharge.			
LO 2: Monitor reproductive behaviour.	2.1	Identify feeding behaviour.			
	2.2	Identify movement patterns.			
	2.3	Identify vocalisation.			
	2.4	Identify behavioural changes.			
LO 3: Record and Report breeding readiness.	3.1	Record animal identification.			
	3.2	Record observation dates and time.			
	3.3	Record heat signs.			
	3.4	Submit observation records.			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 006: ARTIFICIAL INSEMINATION EQUIPMENT AND SEMEN PREPARATION FOR BREEDING

Unit Reference Number: AGR/AIA/006/L2

NSQ Level: 2

Credit Value: 4

Guided Learning Hours: 40

Practice Time: 120 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to prepare, inspect, maintain and safely handle artificial insemination equipment and semen under supervision.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 006 Artificial Insemination Equipment and Semen preparation for breeding

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Prepare artificial insemination equipment.	1.1	Identify required equipment.									
	1.2	Select required equipment.									
	1.3	Assemble equipment.									
	1.4	Arrange equipment.									
LO 2: Maintain artificial insemination equipment.	2.1	Clean equipment.									
	2.2	Disinfect equipment.									
	2.3	Dry equipment.									
	2.4	Store equipment.									
LO 3: Handle semen safely.	3.1	Identify semen containers.									
	3.2	Retrieve semen straws.									
	3.3	Thaw semen correctly									
	3.4	Protect semen from contamination.									
	3.5	Maintain cold chain.									
LO 4: Maintain workplace hygiene.	4.1	Clean work surfaces.									
	4.2	Organise consumables.									
	4.3	Dispose waste appropriately.									
	4.4	Maintain biosecurity.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 007: ARTIFICIAL INSEMINATION PROCEDURES

Unit Reference Number: AGR/AIA/007/L2

NSQ Level: 2

Credit Value: 4

Guided Learning Hours: 40

Practice Time: 120 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to provide effective support during livestock artificial insemination procedures.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used include:

1. Direct Observation (DO)
2. Question and Answer (QA)
3. Witness Testimony (WT)
4. Assignment (ASS),
5. Personal statement (PS).

(This depends on the Trade Areas to be assessed)

UNIT 007: Artificial Insemination Procedures

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Prepare animals for artificial insemination.	1.1	Verify animal identity.									
	1.2	Restrain animals safely.									
	1.3	Prepare breeding areas.									
	1.4	Position animals correctly.									
LO 2: Assist in artificial insemination activities.	2.1	Present equipment.									
	2.2	Assist technicians.									
	2.3	Maintain hygiene.									
LO 3: Support post-insemination activities.	3.1	Release animals safely.									
	3.2	Observe animal behaviour.									
	3.3	Clean workstations.									
	3.4	Return equipment.									
LO 4: Follow professional standards.	4.1	Follow workplace procedures.									
	4.2	Observe work ethics.									
	4.3	Maintain confidentiality in the workplace.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 008: ARTIFICIAL INSEMINATION RECORD KEEPING

Unit Reference Number: AGR/AIA/008/L2

NSQ Level: 2

Credit Value: 3

Guided Learning Hours: 30

Practice Time: 90 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to accurately maintain artificial insemination records and breeding information.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

Unit 008: Artificial Insemination Record Keeping

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Record breeding information.	1.1	Record animal identification.									
	1.2	Record breeding dates.									
	1.3	Record insemination details.									
	1.4	Record technician information.									
LO 2: Update breeding records.	2.1	Verify breeding information.									
	2.2	Update breeding registers.									
	2.3	Organise breeding records.									
	2.4	Maintain record accuracy.									
LO 3: Prepare breeding reports.	3.1	Compile breeding information.									
	3.2	Prepare routine reports.									
	3.3	Submit completed reports.									
LO 4: Protect breeding information.	4.1	Maintain confidentiality.									
	4.2	Store records securely.									
	4.3	Protect record integrity.									
	4.4	Follow record management procedures.									

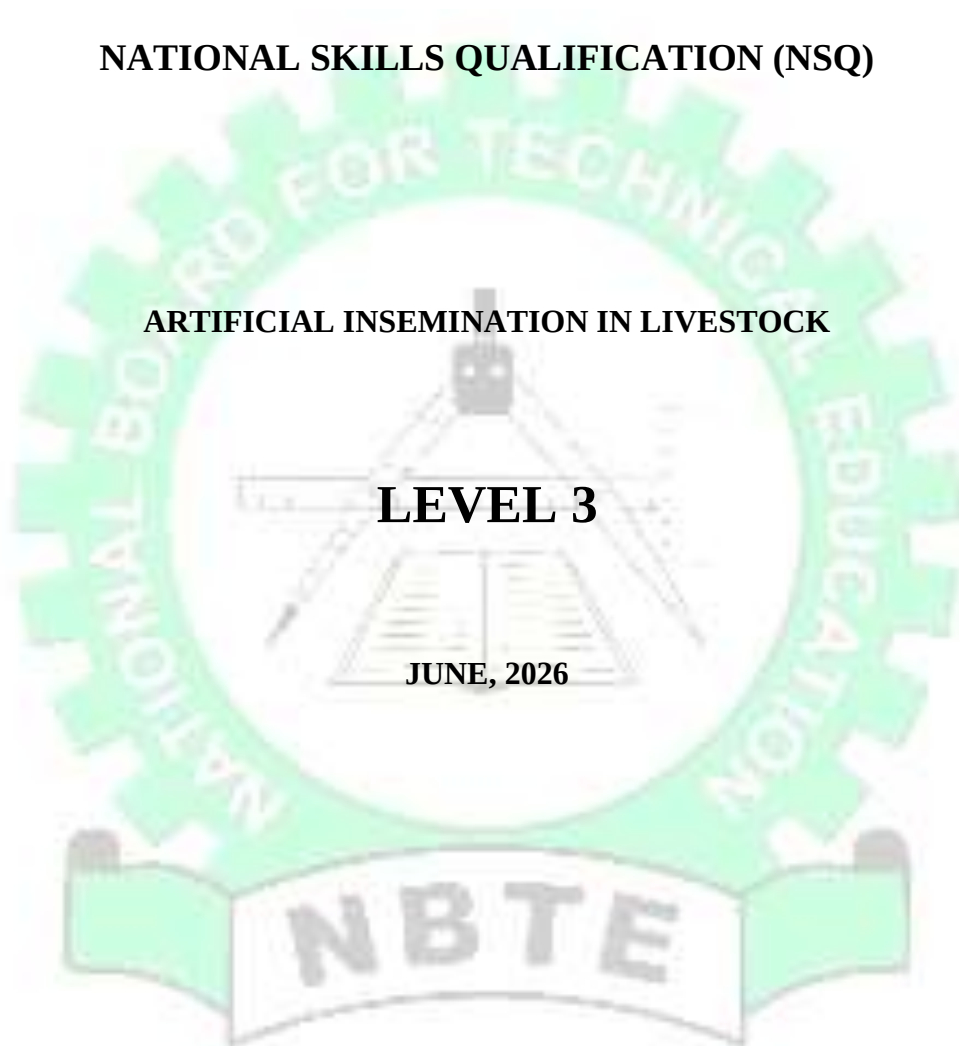
LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

NATIONAL SKILLS QUALIFICATION (NSQ)

ARTIFICIAL INSEMINATION IN LIVESTOCK

LEVEL 3

JUNE, 2026



GENERAL INFORMATION

OVERVIEW

This qualification is designed for individuals who are interested in pursuing a career in livestock artificial insemination for the award of National Skills Qualification (NSQ). It is aimed at producing competencies necessary to support in **Artificial Insemination in Livestock at NSQ Level 3**.

This qualification is subject to review as and when the need arises.

QUALIFICATION PURPOSE

This qualification equips learners with the technical competencies required to perform artificial insemination in livestock using approved industry procedures. Learners acquire practical skills in reproductive anatomy and physiology, heat detection, semen handling, artificial insemination techniques, breeding programme implementation, animal welfare, biosecurity and breeding record management.

QUALIFICATION REQUIREMENTS

All Candidates must be:

- At least sixteen (16) years of age
- Medically fit
- Mentally fit (Mental alertness)
- A Nigerian citizen
- Other nationals should present international passport, residence permit or Parent work permit.
- Vetted
- Interest in agricultural production and related support operations;
- Able to carry out practical tasks independently and to guide the work of others.

QUALIFICATION OBJECTIVES

At the end of this qualification, the learner should be able to:

- i. Apply workplace health, safety and biosecurity procedures during artificial insemination operations.
 - ii. Interpret livestock reproductive anatomy and physiology.
 - iii. Identify breeding animals suitable for artificial insemination.
 - iv. Detect and interpret oestrus accurately.
 - v. Handle and prepare semen correctly.
 - vi. Operate artificial insemination equipment safely.
 - vii. Perform artificial insemination procedures in livestock.
 - viii. Monitor animals following insemination.
1. Maintain breeding and fertility records.

2. Demonstrate professional and ethical practice during breeding programmes.

Level 3 Mandatory Units

Unit No	Reference Number	NOS Title	Credit Value	Guided Learning Hours	Practice Time	Remark
Unit 001	AGR/AIA/001/L3	Health, Safety and Biosecurity in Artificial Insemination Operations	2	20	60	Mandatory
Unit 002	AGR/AIA/002/L3	Communication and Professional Ethics	2	20	60	Mandatory
Unit 003	AGR/AIA/003/L3	Teamwork and Clients Relations	2	20	60	Mandatory
Unit 004	AGR/AIA/004/L3	Livestock Reproductive Anatomy and Physiology	5	50	200	Mandatory
Unit 005	AGR/AIA/005/L3	Heat Detection and Reproductive Behaviour	5	50	220	Mandatory
Unit 006	AGR/AIA/006/L3	Artificial Insemination Equipment and Semen preparation	5	50	200	Mandatory
Unit 007	AGR/AIA/007/L3	Artificial Insemination Procedures	5	50	220	Mandatory
Unit 008	AGR/AIA/008/L3	Maintain Breeding Records and Monitor Fertility Performance	5	50	200	Mandatory
Unit 009	AGR/AIA/009/L3	Artificial Insemination in Poultry	3	30	180	
TOTAL			34	340	1400	

QUALIFICATION STRUCTURE

This qualification comprises a total of nine (9) Mandatory and optional Units, with a credit value of 34 and 340 Guided Learning Hours (GLH) across the full qualification. One (1) credit is equivalent to ten (10) GLH. Guided Learning Hours are the time a learner spends in the classroom, workshop and laboratory of the Skills Training Centre (STC), being taught, instructed, supervised or assessed by a qualified trainer, facilitator or assessor.

In addition to the GLH, the qualification requires at least twice or thrice the GLH as practice time. Practice time is the time a learner is expected to spend applying the skills of each unit in a real workplace environment, carrying out the same tasks repeatedly until performance becomes consistent, accurate and habitual to the standard the qualification demands. It is undertaken under the guidance of a workplace supervisor, recorded in the learner's logbook and duly endorsed. Practice time is the principal setting where core assessment is conducted. It is through repeated performance in the workplace that a learner's achievement of the Learning Outcomes and Performance Criteria is judged and evidenced. Practice time is an additional requirement to GLH and does not replace them.

To achieve this qualification, the learner must complete all mandatory units, undertake the prescribed practice time, and accumulate the minimum credit value approved by NBTE. Credit is awarded only when a learner has been assessed as competent against all Learning Outcomes and Performance Criteria of a unit.

GENERAL GUIDE

Unit title	Provides a clear explanation of the content of the unit.
Unit number	The unique number assigned to the unit.
Unit reference	The unique reference number given to each unit at qualification approval by NBTE
Unit level	Denotes the level of the unit within the Nigerian Skills Qualification framework NSQF.
Unit credit value	The value that has been given to the unit based on the expected learning time for an average learner. 1 credit = 10 learning hours
Unit aim	Provides a brief outline of the unit content.
Learning outcome	A statement of what a learner will know, understand or be able to do, as a result of a process of learning.
Assessment criteria	A description of the requirements a learner must achieve to demonstrate that a learning outcome has been met.
Unit assessment guidance	Any additional guidance provided to support the assessment of the unit.
Unit guided learning hours	The average number of hours of supervised or directed study time or assessment required to achieve a qualification or unit of a qualification.

UNIT 001: HEALTH, SAFETY AND BIOSECURITY IN ARTIFICIAL INSEMINATION OPERATIONS

Unit Reference Number: AGR/AIA/001/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Practice Time: 60 Hours

Unit Purpose: This unit equips learners with the competencies required to apply health safety, animal welfare and biosecurity measures during artificial insemination operations.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 001: Health, Safety and Biosecurity in Artificial Insemination Operations

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Apply workplace health and safety procedures.	1.1	Identify workplace hazards.									
	1.2	Assess workplace risks.									
	1.3	Apply safety procedures.									
	1.4	Report workplace incidents.									
LO 2: Implement biosecurity measures.	2.1	Control workplace access.									
	2.2	Disinfect equipment.									
	2.3	Isolate infected animals.									
	2.4	Dispose contaminated materials.									
LO 3: Promote animal welfare.	3.1	Assess animal condition.									
	3.2	Handle animals humanely.									
	3.3	Minimise animal stress.									
	3.4	Report welfare concerns.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 002: COMMUNICATION AND PROFESSIONAL ETHICS

Unit Reference Number: AGR/AIA/002/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Practice Time: 60 Hours

Unit Purpose: This unit equips learners with the competencies required to communicate effectively with livestock owners, supervisors, veterinary personnel and colleagues while demonstrating professionalism, ethical conduct and confidentiality during artificial insemination services.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 002: Communication and Professional Ethics

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will:		The learner can:			
LO 1: Communicate workplace information.	1.1	Interpret technical instructions.			
	1.2	Explain work procedures.			
	1.3	Report operational activities.			
	1.4	Respond to enquiries.			
LO 2: Maintain professional relationships.	2.1	Demonstrate professionalism.			
	2.2	Respect workplace diversity.			
	2.3	Resolve workplace conflicts.			
	2.4	Support team activities.			
LO 3: Apply ethical practices.	3.1	Maintain confidentiality.			
	3.2	Demonstrate integrity.			
	3.3	Protect client information.			
	3.4	Comply with workplace ethics.			
LO 4: Maintain workplace documentation.	4.1	Complete workplace records.			
	4.2	Verify documented information.			
	4.3	Submit technical reports.			
	4.4	Store workplace documents.			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 003: TEAMWORK AND CLIENTS RELATIONS

Unit Reference Number: AGR/AIA/003/L3

NSQ Level: 3

Credit Value: 2

Guided Learning Hours: 20

Practice Time: 60 Hours

Unit Purpose: This unit equips learners with the competencies required to work collaboratively with livestock production teams and maintain effective relationships with livestock owners through quality service delivery and customer care.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

Assessment methods to be used may include:

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 003: Teamwork and Clients Relations

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type		Evidence Ref. No.	Page No.
The learner will:		The learner can:				
LO 1: Apply teamwork principles.	1.1	Plan assigned activities.				
	1.2	Coordinate workplace tasks.				
	1.3	Support team objectives.				
	1.4	Evaluate completed tasks.				
LO 2: Maintain client relationships.	2.1	Welcome clients.				
	2.2	Explain service procedures.				
	2.3	Address client concerns.				
	2.4	Maintain client satisfaction.				
LO 3: Deliver quality service.	3.1	Follow service standards.				
	3.2	Monitor service quality.				
	3.3	Improve service delivery.				
	3.4	Resolve service issues.				
LO 4: Demonstrate workplace leadership.	4.1	Guide junior staff.				
	4.2	Assign routine duties.				
	4.3	Supervise workplace activities.				
	4.4	Evaluate team performance.				

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 004: LIVESTOCK REPRODUCTIVE ANATOMY AND PHYSIOLOGY

Unit Reference Number: AGR/AIA/004/L3

NSQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

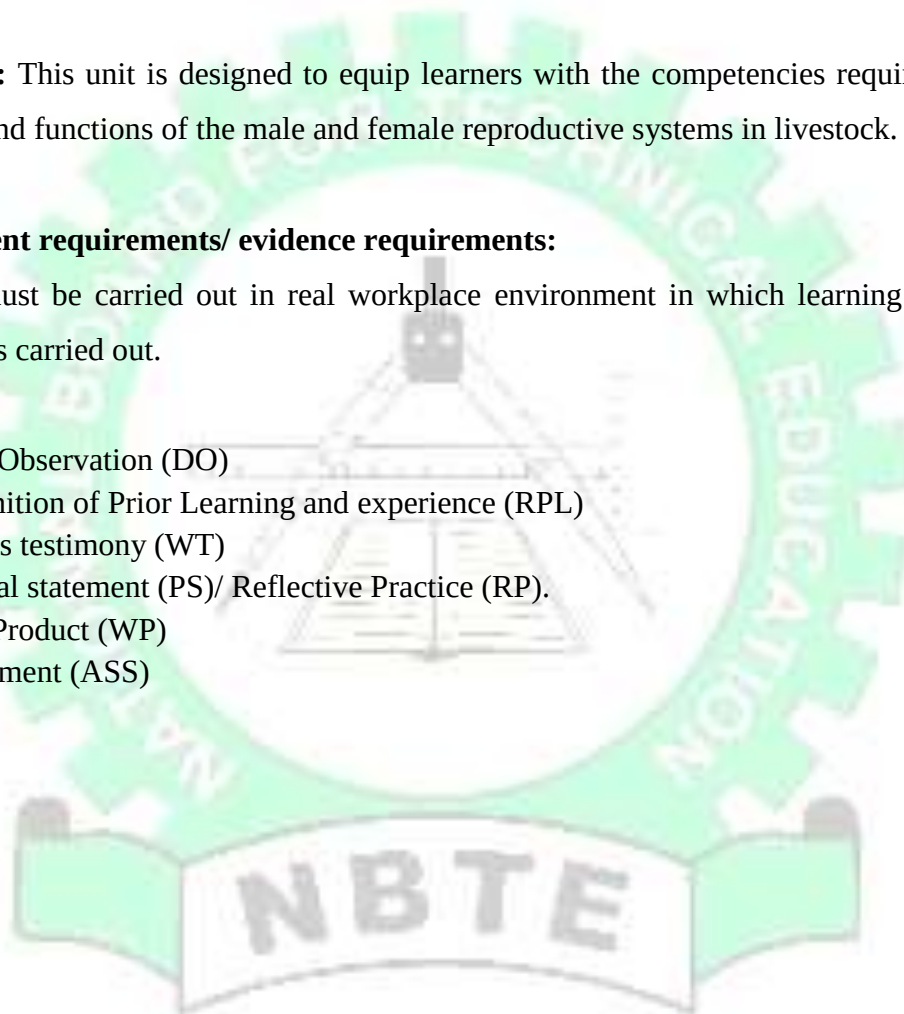
Practice Time: 200 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to know the structure and functions of the male and female reproductive systems in livestock.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)



UNIT 004: Livestock Reproductive Anatomy and Physiology

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Identify female reproductive anatomy.	1.1	Identify female reproductive organs.									
	1.2	Describe reproductive organ functions.									
	1.3	Differentiate reproductive structures.									
	1.4	Explain reproductive pathways.									
LO 2: Explain male reproductive anatomy.	2.1	Identify male reproductive organs.									
	2.2	Describe reproductive organ functions.									
	2.3	Explain sperm production.									
	2.4	Explain semen transport.									
LO 3: Explain reproductive physiology.	3.1	Explain the oestrous cycle.									
	3.2	Identify reproductive hormones.									
	3.3	Describe ovulation processes.									
	3.4	Relate hormonal activity to breeding.									
LO 4: Apply reproductive knowledge.	4.1	Select suitable breeding animals.									
	4.2	Assess breeding readiness.									
	4.3	Recommend breeding timing.									
	4.4	Report reproductive abnormalities.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 005: HEAT DETECTION AND REPRODUCTIVE BEHAVIOUR

Unit Reference Number: AGR/AIA/005/L3

NSQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

Practice Time: 220 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to accurately detect oestrus, evaluate breeding readiness and select suitable animals for artificial insemination programmes.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 005: Heat Detection and Reproductive Behaviour

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Assess breeding suitability.	1.1	Evaluate body condition.									
	1.2	Assess reproductive maturity.									
	1.3	Identify breeding defects.									
	1.4	Select suitable animals for breeding.									
LO 2: Detect oestrus in livestock.	2.1	Observe behavioural signs of oestrus.									
	2.2	Examine physical signs of oestrus.									
	2.3	Identify standing heat.									
	2.4	Confirm breeding readiness.									
	2.5	Carry out heat detection using heat detection aids e.g., Kamar heat detector, Estroject patches, Chin ball marker, etc.									
LO 3: Determine breeding timing.	3.1	Interpret oestrus observations.									
	3.2	Carry out ovulation timing using AM-PM rule.									
	3.3	Carry out fixed-time artificial insemination									
	3.4	Record breeding schedules.									
LO 4: Maintain breeding selection records.	4.1	Record breeding observations.									
	4.2	Update breeding records.									
	4.3	Verify breeding information.									
	4.4	Report breeding recommendations.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 006: ARTIFICIAL INSEMINATION EQUIPMENT AND SEMEN PREPARATION

Unit Reference Number: AGR/AIA/006/L3

NSQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

Practice Time: 200 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to safely handle frozen semen, prepare insemination equipment and maintain semen quality throughout the artificial insemination process.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 006: Artificial Insemination Equipment and Semen Preparation

LEARNING OUTCOME (LO)		PERFORMANCE CRITERIA	Evidence Type	Evidence Ref. No.	Page No.
The learner will:		The learner can:			
LO 1: Handle semen.	1.1	Inspect semen containers.			
	1.2	Perform liquid Nitrogen level checks regularly.			
	1.3	Carry out semen straw retrieval from the canister.			
	1.4	Evaluate semen quality using light microscope			
	1.5	Store semen containers at room temperature and on pallets.			
LO 2: Operate artificial insemination equipment.	2.1	Assemble equipment.			
	2.2	Check equipment.			
	2.3	Operate equipment.			
	2.4	Maintain equipment.			
LO 3: Prepare semen for insemination.	3.1	Thaw semen correctly.			
	3.2	Dry semen straws.			
	3.3	Load insemination guns.			
	3.4	Cut semen straws			
	3.5	Confirm the presence of semen in the straw			
LO 4: Maintain hygiene in semen handling.	4.1	Clean workstations.			
	4.2	Disinfect equipment.			
	4.3	Dispose waste appropriately.			

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 007: ARTIFICIAL INSEMINATION PROCEDURES

Unit Reference Number: AGR/AIA/007/L3

NSQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

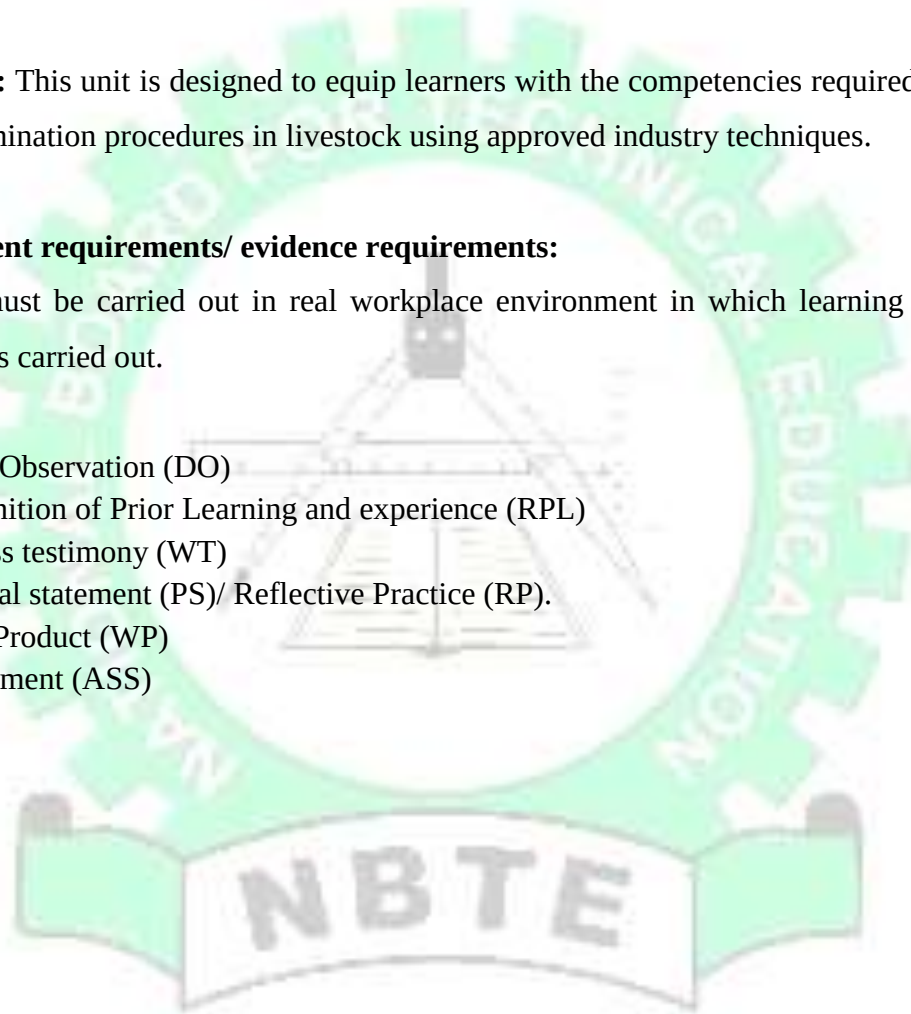
Practice Time: 220 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to perform artificial insemination procedures in livestock using approved industry techniques.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)



UNIT 007: Artificial Insemination Procedures

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. Page No.			
LO 1: Prepare animal for insemination.	1.1	Verify animal identity.									
	1.2	Examine breeding records.									
	1.3	Restrain animals safely.									
	1.4	Prepare insemination sites.									
LO 2: Perform artificial insemination.	2.1	Prepare insemination equipment.									
	2.2	Insert insemination gun.									
	2.3	Deposit semen correctly.									
	2.4	Withdraw the AI gun carefully and gently.									
LO 3: Complete post-insemination procedures.	3.1	Release animals safely.									
	3.2	Observe post-procedure behaviour.									
	3.3	Update record.									
	3.4	Clean equipment.									
	3.5	Store equipment appropriately.									
	3.6	Restore workstations.									
LO 4: Evaluate insemination activities.	4.1	Confirm procedure completion.									
	4.2	Identify procedural errors.									
	4.3	Report procedure outcomes.									
	4.4	Recommend corrective actions.									

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 008: MAINTAIN BREEDING RECORDS AND MONITOR FERTILITY PERFORMANCE

Unit Reference Number: AGR/AIA/008/L3

NSQ Level: 3

Credit Value: 5

Guided Learning Hours: 50

Practice Time: 200 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to maintain breeding records, monitor fertility performance and prepare technical reports that support effective reproductive management in livestock enterprises.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)

UNIT 008: Maintain Breeding Records and Monitor Fertility Performance

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type					Evidence Ref. No.	Page No.
LO 1: Maintain breeding records.	1.1	Record insemination details.							
	1.2	Record semen information.							
	1.3	Record technician information.							
	1.4	Update breeding registers.							
LO 2: Monitor fertility performance.	2.1	Observe pregnancy indicators.							
	2.2	Determine pregnancy rate.							
	2.3	Identify repeat breeders.							
	2.4	Report reproductive performance.							
LO 3: Prepare breeding reports.	3.1	Compile breeding data.							
	3.2	Analyse breeding records.							
	3.3	Prepare technical reports.							
	3.4	Submit completed reports.							
LO 4: Manage breeding information.	4.1	Verify breeding records.							
	4.2	Update breeding records							
	4.3	Store breeding information.							
	4.4	Protect confidential information.							

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

UNIT 009: ARTIFICIAL INSEMINATION IN POULTRY

Unit Reference Number: AGR/AIA/009/L3

NSQ Level: 3

Credit Value: 3

Guided Learning Hours: 30

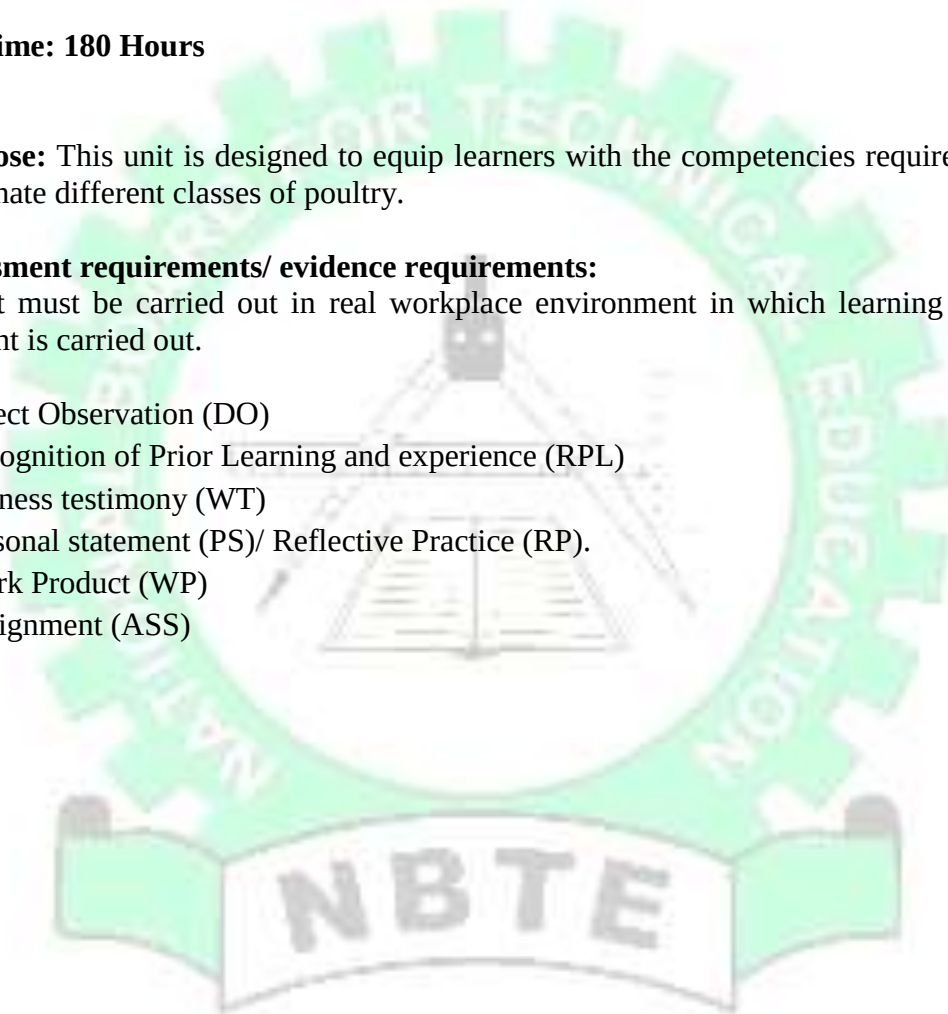
Practice Time: 180 Hours

Unit Purpose: This unit is designed to equip learners with the competencies required to handle and inseminate different classes of poultry.

Unit assessment requirements/ evidence requirements:

Assessment must be carried out in real workplace environment in which learning and human development is carried out.

1. Direct Observation (DO)
2. Recognition of Prior Learning and experience (RPL)
3. Witness testimony (WT)
4. Personal statement (PS)/ Reflective Practice (RP).
5. Work Product (WP)
6. Assignment (ASS)



Unit 009: Artificial Insemination in Poultry

LEARNING OUTCOME (LO) The learner will:		PERFORMANCE CRITERIA The learner can:	Evidence Type	Evidence Ref. Page No.
LO1: <i>Identify artificial Insemination in poultry</i>	1.1	Describe artificial insemination in poultry.		
	1.2	Identify importance of artificial insemination in poultry		
	1.3	Identify advantages of artificial insemination over natural mating in poultry		
LO 2: <i>Select criteria for selecting breeding birds</i>	2.1	Identify breeding birds by physical health		
	2.2	Select breeding birds by heritable phenotypic traits		
	2.3	Select breeding birds by quality of semen		
LO 3: <i>Handle semen collection and handling techniques</i>	3.1	Handle cocks for semen collection humanely.		
	3.2	Prepare cocks for semen collection.		
	3.3	Assemble semen collecting tube.		
	3.4	Carry out semen collection from the cock using abdominal massage.		
LO 4: <i>Demonstrate semen evaluation techniques</i>	4.1	Evaluate the quantity and quality of semen collected		
	4.2	Process collected semen by adding the extender		
	4.3	Preserve collected semen at 4° Celsius.		
LO 5: Practical insemination procedures in hens	5.1	Prepare flock for artificial insemination		
	5.2	Inseminate the recipient hens.		
	5.3	Record the artificial insemination process.		

LEARNER's Signature	Date
ASSESSOR's Signature	Date
IQAM's Signature	Date
EQAM's Signature	Date

LIST OF MINIMUM RESOURCES AND EQUIPMENT

A. RESTRAINING FACILITY

S/N	ITEM (DESCRIPTION)	QUANTITY REQUIRED
1.	Chute	1
2.	Crush	1
3.	Ropes	Varieties
4.	Stanchion	1
5.	Nose lead	3
6.	Nose ring	3
7.	Head gate	2
8.	Cage	3 (Chicken, Turkey, Guinea fowl each)

B. ARTIFICIAL INSEMINATION LABORATORY

S/N	ITEM	QUANTITY REQUIRED
1.	A.I Kits	3 (Large and Small ruminants and Poultry each)
2.	Thermos flask	1
3.	Artificial vagina	2
4.	Electro-ejaculator	2
5.	Digital weighing scale	1
6.	Thermometer	2
7.	Torch	1
8.	Hemocytometer	2
9.	Gestation chart	2
10.	Cleaning brush	2
11.	Micropipette	Assorted
12.	Sprayer	2
13.	Marker pens	1 pack
14.	Heat mount detectors/tail chalk	Assorted
15.	Timer	1
16.	Pocket knife	1
17.	Record book	1
18.	Clipboard	1
19.	Pregnancy blood/milk test kit	1
20.	Vaginal speculum	2
21.	Long forceps	2
22.	Tag applicator	2
23.	Liquid nitrogen tank	2 (Big and Small)
24.	Computer	1
25.	Refrigerator	1
26.	Training reproductive models	Assorted
27.	Printer	1

28.	Microscope	1
29.	Waste disposal system	4
30.	Water bath (37°C)	1
31.	First aid box	1
32.	AI laboratory bench	1
33.	PPE cabinet	1
34.	Frozen semen straws	Assorted
35.	70% alcohol	2
36.	Biohazard waste bags	Assorted
37.	Bleach	2
38.	Cotton wool	Assorted
39.	Disposable Obstetrical gloves	Assorted
40.	Examination gloves	Assorted
41.	Lens cleaning tissue	Assorted
42.	Liquid soap	5 Liters
43.	Lubricating gel	5 Liters
44.	Microscope slides	Assorted
45.	Cover slips	Assorted
46.	Paper towels	Assorted
47.	Stationery materials	Assorted
48.	Fresh Female reproductive organs	As required
49.	Fresh Male reproductive organs	As required
50.	Semen extender	Assorted



LIST OF PARTICIPANTS DURING THE NSQ/NOS NATIONAL ZERO DRAFT WORKSHOP

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