

TRAINING REGULATIONS



ARTIFICIAL INSEMINATION (SWINE) NC II

AGRICULTURE AND FISHERY
SECTOR

TECHNICAL EDUCATION AND SKILLS DEVELOPMENT AUTHORITY
East Service Road, South Superhighway, Taguig City, Metro Manila

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AGRI-FISHERY SECTOR

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TRAINING REGULATIONS FOR ARTIFICIAL INSEMINATION (Swine) NC II

Section 1 ARTIFICIAL INSEMINATION (Swine) NC II QUALIFICATION

The **ARTIFICIAL INSEMINATION (Swine) NC II** Qualification consists of core competencies that a person must achieve to confirm readiness of sow/gilt for artificial insemination, collect boar semen, perform artificial insemination (AI) on sow/gilt and prepare documentations and reports on sow/gilt artificial insemination (AI). It has an elective competencies which are to conduct community awareness program on artificial insemination and render assistance to veterinary procedures related to reproductive problems.

This Qualification is packaged from the competency map of the Agri-Fishery Sector as shown in Annex A.

The units of competency comprising this qualification includes the following:

Code BASIC COMPETENCIES

500311105	Participate in workplace communication
500311106	Work in a team environment
500311107	Practice career professionalism
500311108	Practice occupational health and safety procedures

Code COMMON COMPETENCIES

AGR321201	Apply safety measures in farm operations
AGR321202	Use farm tools and equipment
AGR321203	Perform estimation and calculations

Code CORE COMPETENCIES

AGR621210	Confirm readiness of sow/gilt for artificial insemination
AGR621211	Collect boar semen
AGR621212	Perform artificial insemination (AI) on sow/gilt
AGR621213	Prepare documentations and reports on sow/gilt artificial insemination (AI) activities

Code ELECTIVE COMPETENCY

AGR621214	Conduct community awareness program in artificial insemination
AGR621215	Render assistance to veterinary procedures related to reproductive problems

A person who has achieved this Qualification is competent to be:

- **Swine Artificial Insemination Technician**
- **Swine Breeding Technician**

SECTION 2

COMPETENCY STANDARDS

These guidelines are set to provide the Technical Vocational Education and Training (TVET) providers with information and other important requirements to consider when designing training programs for **ARTIFICIAL INSEMINATION(SWINE) NC II**.

BASIC COMPETENCIES

UNIT OF COMPETENCY : PARTICIPATE IN WORKPLACE COMMUNICATION

UNIT CODE : 500311105

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to gather, interpret and convey information in response to workplace requirements.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Obtain and convey workplace information	1.1 Specific and relevant information is accessed from appropriate sources 1.2 Effective questioning , active listening and speaking skills are used to gather and convey information 1.3 Appropriate medium is used to transfer information and ideas 1.4 Appropriate non- verbal communication is used 1.5 Appropriate lines of communication with supervisors and colleagues are identified and followed 1.6 Defined workplace procedures for the location and storage of information are used 1.7 Personal interaction is carried out clearly and concisely
2. Participate in workplace meetings and discussions	2.1 Team meetings are attended on time 2.2 Own opinions are clearly expressed and those of others are listened to without interruption 2.3 Meeting inputs are consistent with the meeting purpose and established protocols 2.4 Workplace interactions are conducted in a courteous manner 2.5 Questions about simple routine workplace procedures and matters concerning working conditions of employment are asked and responded to 2.6 Meetings outcomes are interpreted and implemented
3. Complete relevant work related documents	3.1 Range of forms relating to conditions of employment are completed accurately and legibly 3.2 Workplace data is recorded on standard workplace forms and documents 3.3 Basic mathematical processes are used for routine calculations 3.4 Errors in recording information on forms/ documents are identified and properly acted upon 3.5 Reporting requirements to supervisor are completed according to organizational guidelines

RANGE OF VARIABLES

VARIABLE	RANGE
1. Appropriate sources	1.1. Team members 1.2. Suppliers 1.3. Trade personnel 1.4. Local government 1.5. Industry bodies
2. Medium	2.1. Memorandum 2.2. Circular 2.3. Notice 2.4. Information discussion 2.5. Follow-up or verbal instructions 2.6. Face to face communication
3. Storage	3.1. Manual filing system 3.2. Computer-based filing system
4. Forms	4.1. Personnel forms, telephone message forms, safety reports
5. Workplace interactions	5.1. Face to face 5.2. Telephone 5.3. Electronic and two way radio 5.4. Written including electronic, memos, instruction and forms, non-verbal including gestures, signals, signs and diagrams
6. Protocols	6.1. Observing meeting 6.2. Compliance with meeting decisions 6.3. Obeying meeting instructions

EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> 1.1. Prepared written communication following standard format of the organization 1.2. Accessed information using communication equipment 1.3. Made use of relevant terms as an aid to transfer information effectively 1.4. Conveyed information effectively adopting the formal or informal communication
2. Required Knowledge and Attitudes	<ol style="list-style-type: none"> 2.1. Effective communication 2.2. Different modes of communication 2.3. Written communication 2.4. Organizational policies 2.5. Communication procedures and systems 2.6. Technology relevant to the enterprise and the individual's work responsibilities
3. Required Skills	<ol style="list-style-type: none"> 3.1. Follow simple spoken language 3.2. Perform routine workplace duties following simple written notices 3.3. Participate in workplace meetings and discussions 3.4. Complete work related documents 3.5. Estimate, calculate and record routine workplace measures 3.6. Basic mathematical processes of addition, subtraction, division and multiplication 3.7. Ability to relate to people of social range in the workplace 3.8. Gather and provide information in response to workplace Requirements
4. Resource Implications	<ol style="list-style-type: none"> 4.1. Fax machine 4.2. Telephone 4.3. Writing materials 4.4. Internet
5. Methods of Assessment	<ol style="list-style-type: none"> 5.1. Direct Observation 5.2. Oral interview and written test
6. Context of Assessment	<ol style="list-style-type: none"> 6.1. Competency may be assessed individually in the actual workplace or through accredited institution

UNIT OF COMPETENCY: WORK IN TEAM ENVIRONMENT

UNIT CODE : 500311106

UNIT DESCRIPTOR : This unit covers the skills, knowledge and attitudes to identify role and responsibility as a member of a team.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Describe team role and scope	1.1 The <i>role and objective of the team</i> is identified from available <i>sources of information</i> 1.2 Team parameters, reporting relationships and responsibilities are identified from team discussions and appropriate external sources
2. Identify own role and responsibility within team	2.1 Individual role and responsibilities within the team environment are identified 2.2 Roles and responsibility of other team members are identified and recognized 2.3 Reporting relationships within team and external to team are identified
3. Work as a team member	3.1 Effective and appropriate forms of communications used and interactions undertaken with team members who contribute to known team activities and objectives 3.2 Effective and appropriate contributions made to complement team activities and objectives, based on individual skills and competencies and <i>workplace context</i> 3.3 Observed protocols in reporting using standard operating procedures 3.4 Contribute to the development of team work plans based on an understanding of team's role and objectives and individual competencies of the members.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Role and objective of team	1.1. Work activities in a team environment with enterprise or specific sector 1.2. Limited discretion, initiative and judgment maybe demonstrated on the job, either individually or in a team environment.
2. Sources of information	2.1. Standard operating and/or other workplace procedures 2.2. Job procedures 2.3. Machine/equipment manufacturer's specifications and instructions 2.4. Organizational or external personnel 2.5. Client/supplier instructions 2.6. Quality standards 2.7. OHS and environmental standards
3. Workplace context	3.1. Work procedures and practices 3.2. Conditions of work environments 3.3. Legislation and industrial agreements 3.4. Standard work practice including the storage, safe handling and disposal of chemicals 3.5. Safety, environmental, housekeeping and quality guidelines

EVIDENCE GUIDE

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1. Operated in a team to complete workplace activity 1.2. Worked effectively with others 1.3. Conveyed information in written or oral form 1.4. Selected and used appropriate workplace language 1.5. Followed designated work plan for the job 1.6. Reported outcomes
2. Required Knowledge and Attitudes	<ul style="list-style-type: none"> 2.1. Communication process 2.2. Team structure 2.3. Team roles 2.4. Group planning and decision making
3. Required Skills	<ul style="list-style-type: none"> 3.1. Communicate appropriately, consistent with the culture of the workplace
4. Resource Implications	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> 4.1. Access to relevant workplace or appropriately simulated environment where assessment can take place 4.2. Materials relevant to the proposed activity or tasks
5. Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> 5.1. Observation of the individual member in relation to the work activities of the group 5.2. Observation of simulation and or role play involving the participation of individual member to the attainment of organizational goal 5.3. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork
6. Context for Assessment	<ul style="list-style-type: none"> 6.1. Competency may be assessed in workplace or in a simulated workplace setting 6.2. Assessment shall be observed while task are being undertaken whether individually or in group

UNIT OF COMPETENCY: PRACTICE CAREER PROFESSIONALISM

UNIT CODE : 500311107

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes in promoting career growth and advancement.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Integrate personal objectives with organizational goals	1.1 Personal growth and work plans are pursued towards improving the qualifications set for the profession 1.2 Intra- and interpersonal relationships is are maintained in the course of managing oneself based on performance evaluation 1.3 Commitment to the organization and its goal is demonstrated in the performance of duties
2. Set and meet work priorities	2.1 Competing demands are prioritized to achieve personal, team and organizational goals and objectives. 2.2 Resources are utilized efficiently and effectively to manage work priorities and commitments 2.3 Practices along economic use and maintenance of equipment and facilities are followed as per established procedures
3. Maintain professional growth and development	3.1 Trainings and career opportunities are identified and availed of based on job requirements 3.2 Recognitions are -sought/received and demonstrated as proof of career advancement 3.3 Licenses and/or certifications relevant to job and career are obtained and renewed

RANGE OF VARIABLES

VARIABLE	RANGE
1. Evaluation	1.1 Performance Appraisal 1.2 Psychological Profile 1.3 Aptitude Tests
2. Resources	2.1 Human 2.2 Financial 2.3 Technology 2.3.1 Hardware 2.3.2 Software
3. Trainings and career opportunities	3.1 Participation in training programs 3.1.1 Technical 3.1.2 Supervisory 3.1.3 Managerial 3.1.4 Continuing Education 3.2 Serving as Resource Persons in conferences and workshops
4. Recognitions	4.1 Recommendations 4.2 Citations 4.3 Certificate of Appreciations 4.4 Commendations 4.5 Awards 4.6 Tangible and Intangible Rewards
5. Licenses and/or certifications	5.1 National Certificates 5.2 Certificate of Competency 5.3 Support Level Licenses 5.4 Professional Licenses

EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Attained job targets within key result areas (KRAs) 1.2 Maintained intra - and interpersonal relationship in the course of managing oneself based on performance evaluation 1.3 Completed trainings and career opportunities which are based on the requirements of the industries 1.4 Acquired and maintained licenses and/or certifications according to the requirement of the qualification
2. Required Knowledge and Attitudes	<ul style="list-style-type: none"> 2.1 Work values and ethics (Code of Conduct, Code of Ethics, etc.) 2.2 Company policies 2.3 Company-operations, procedures and standards (ex. 5S, 3R's, etc.) 2.4 Fundamental rights at work including gender sensitivity 2.5 Personal hygiene practices
3. Required Skills	<ul style="list-style-type: none"> 3.1 Appropriate practice of personal hygiene 3.2 Intra and Interpersonal skills 3.3 Communication skills
4. Resource Implications	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> 4.1 Workplace or assessment location 4.2 Case studies/scenarios
5. Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> 5.1 Portfolio Assessment 5.2 Interview 5.3 Simulation/Role-plays 5.4 Observation 5.5 Third Party Reports 5.6 Exams and Tests
6. Context of Assessment	<ul style="list-style-type: none"> 6.1 Competency may be assessed in the work place or in a simulated work place setting

UNIT OF COMPETENCY : PRACTICE OCCUPATIONAL HEALTH AND SAFETY PROCEDURES

UNIT CODE : 500311108

UNIT DESCRIPTOR : This unit covers the outcomes required to comply with regulatory and organizational requirements for occupational health and safety.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Identify hazards and risks	1.1 Safety regulations and workplace safety and hazard control practices and procedures are clarified and explained based on organization procedures 1.2 Hazards/risks in the workplace and their corresponding indicators are identified to minimize or eliminate risk to co-workers, workplace and environment in accordance with organization procedures 1.3 Contingency measures during workplace accidents, fire and other emergencies are recognized and established in accordance with organization procedures
2. Evaluate hazards and risks	2.1 Terms of maximum tolerable limits which when exceeded will result in harm or damage are identified based on threshold limit values (TLV) 2.2 Effects of the hazards are determined 2.3 OHS issues and/or concerns and identified safety hazards are reported to designated personnel in accordance with workplace requirements and relevant workplace OHS legislation
3. Control hazards and risks	3.1 Occupational Health and Safety (OHS) procedures for controlling hazards/risks in workplace are consistently followed 3.2 Procedures for dealing with workplace accidents, fire and emergencies are followed in accordance with organization OHS policies 3.3 Personal protective equipment (PPE) is correctly used in accordance with organization OHS procedures and practices 3.4 Appropriate assistance is provided in the event of a workplace emergency in accordance with established organization protocol
4. Maintain OHS awareness	4.1 Emergency-related drills and trainings are participated in as per established organization guidelines and procedures 4.2 OHS personal records are completed and updated in accordance with workplace requirements

RANGE OF VARIABLES

VARIABLE	RANGE
1. Safety regulations	May include but are not limited to: 1.1 Clean Air Act 1.2 Building code 1.3 National Electrical and Fire Safety Codes 1.4 Waste management statutes and rules 1.5 Philippine Occupational Safety and Health Standards 1.6 DOLE regulations on safety legal requirements 1.7 ECC regulations
2. Hazards/Risks	May include but are not limited to: 2.1 Physical hazards – impact, illumination, pressure, noise, vibration, temperature, radiation 2.2 Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects 2.3 Chemical hazards – dusts, fibers, mists, fumes, smoke, gasses, vapors 2.4 Ergonomics 2.4.1 Psychological factors – over exertion/ excessive force, awkward/static positions, fatigue, direct pressure, varying metabolic cycles 2.4.2 Physiological factors – monotony, personal relationship, work out cycle
3. Contingency measures	May include but are not limited to: 3.1 Evacuation 3.2 Isolation 3.3 Decontamination 3.4 (Calling designed) emergency personnel
4. PPE	May include but are not limited to: 4.1 Mask 4.2 Gloves 4.3 Goggles 4.4 Hair Net/cap/bonnet 4.5 Face mask/shield 4.6 Ear muffs 4.7 Apron/Gown/coverall/jump suit 4.8 Anti-static suits
5. Emergency-related drills and training	5.1 Fire drill 5.2 Earthquake drill 5.3 Basic life support/CPR 5.4 First aid 5.5 Spillage control 5.6 Decontamination of chemical and toxic 5.7 Disaster preparedness/management
6. OHS personal records	6.1 Medical/Health records 6.2 Incident reports 6.3 Accident reports 6.4 OHS-related training completed

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Explained clearly established workplace safety and hazard control practices and procedures 1.2 Identified hazards/risks in the workplace and its corresponding indicators in accordance with company procedures 1.3 Recognized contingency measures during workplace accidents, fire and other emergencies 1.4 Identified terms of maximum tolerable limits based on threshold limit value- TLV. 1.5 Followed Occupational Health and Safety (OHS) procedures for controlling hazards/risks in workplace 1.6 Used Personal Protective Equipment (PPE) in accordance with company OHS procedures and practices 1.7 Completed and updated OHS personal records in accordance with workplace requirements
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1 OHS procedures and practices and regulations 2.2 PPE types and uses 2.3 Personal hygiene practices 2.4 Hazards/risks identification and control 2.5 Threshold Limit Value -TLV 2.6 OHS indicators 2.7 Organization safety and health protocol 2.8 Safety consciousness 2.9 Health consciousness 2.10 Practicing 5S and 3R's
<p>3. Required Skills</p>	<ul style="list-style-type: none"> 3.1 Practice of personal hygiene 3.2 Hazards/risks identification and control skills 3.3 Interpersonal skills 3.4 Communication skills
<p>4. Resource Implications</p>	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> 4.1 Workplace or assessment location 4.2 OHS personal records 4.3 PPE 4.4 Health records
<p>5. Methods of Assessment</p>	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> 5.1 Portfolio Assessment 5.2 Interview 5.3 Case Study/Situation
<p>6. Context for Assessment</p>	<ul style="list-style-type: none"> 6.1 Competency may be assessed in the work place or in a simulated work place setting

COMMON COMPETENCIES

UNIT TITLE : APPLY SAFETY MEASURES IN FARM OPERATIONS

UNIT CODE : AGR321201

UNIT DESCRIPTOR: This unit covers the knowledge, skills and attitudes required to perform safety measures effectively and efficiently. It includes identifying areas, tools, materials, time and place in performing safety measures.

ELEMENT	PERFORMANCE CRITERIA
1. Determine areas of concern for safety measures	1.1 Work tasks are identified in line with farm operations 1.2 Place for safety measures are determined in line with farm operations 1.3 Time for safety measures are determined in line with farm operations 1.4 Appropriate tools, materials and outfits are prepared in line with job requirements
2. Apply appropriate safety measures	2.1 Tools and materials are used according to specifications and procedures 2.2 Outfits are worn according to farm requirements 2.3 Effectivity/shelf life/expiration of materials are strictly observed 2.4 Emergency procedures are known and followed to ensure a safework requirement 2.5 Hazards in the workplace are identified and reported in line with farm guidelines
3. Safekeep/dispose tools, materials and outfit	3.1 Used tools and outfit are cleaned after use and stored in designated areas 3.2 Unused materials are properly labeled and stored according to manufacturers recommendation and farm requirements 3.3 Waste materials are disposed according to manufacturers, government and farm requirements

RANGE OF VARIABLES

VARIABLE	RANGE
1. Work tasks	Work task may be selected from any of the subsectors: 1.1 Aquaculture 1.2 Animal Production 1.3 Crop Production 1.4 Post-harvest 1.5 Agri-marketing 1.6 Farm Equipment
2. Place	2.1 Animal pens, cages, barns 2.2 Fish ponds, cages 2.3 Stock room/storage areas/warehouse 2.4 Field/farm/orchard
3. Time	3.1 Vaccination and medication period 3.2 Fertilizer and pesticides application 3.3 Feed mixing and feeding 3.4 Harvesting and hauling 3.5 Cleaning, sanitizing and disinfecting 3.6 Dressing, butchering and castration
4. Tools, materials and outfits	4.1 Tools 4.1.1 Wrenches 4.1.2 Screw driver 4.1.3 Pliers 4.2 Materials 4.2.1 Bottles 4.2.2 Plastic 4.2.3 Bags 4.2.4 Syringe 4.3 Outfit 4.3.1 Masks 4.3.2 Gloves 4.3.3 Boots 4.3.4 Overall coats 4.3.5 Hat 4.3.6 Eye goggles
5. Emergency procedures	5.1 Location of first aid kit 5.2 Evacuation 5.3 Agencies contract 5.4 Farm emergency procedures
6. Waste materials	6.1 Animal manure 6.2 Waste water 6.3 Syringes 6.4 Unused farm chemicals e.g. pesticides, chemicals, fertilizers 6.5 Expired reagents 6.6 Dead animals
7. Hazards	7.1 Chemical 7.2 Electrical 7.3 Falls

EVIDENCE GUIDE

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Determined areas of concern for safety measures 1.2 Applied appropriate safety measures according to industry requirements 1.3 Prepared tools, materials and outfit needed 1.4 Performed proper disposal of used materials 1.5 Safekeep/cleaned tools, materials and outfit in designated facilities
2. Required Knowledge and Attitudes	<ul style="list-style-type: none"> 2.1 Safety Practices <ul style="list-style-type: none"> 2.1.1 Implementation of regulatory controls and policies relative to treatment of area and application of chemicals 2.1.2 Proper disposal of waste materials (ex. 3 Rs) 2.2 Codes and Regulations <ul style="list-style-type: none"> 2.2.1 Compliance to health program of DOH and DENR 2.2.2 Hazard identification 2.2.3 Emergency procedures 2.3 Tools & Equipment: Uses and Specification <ul style="list-style-type: none"> 2.3.1 Masks, gloves, boots, overall coats for health protection 2.4 Maintenance <ul style="list-style-type: none"> 2.4.1 Regular check-up and repair of tools, materials and outfit before and after use 2.4.2 Practicing 5s
3. Required Skills	<ul style="list-style-type: none"> 3.1 Ability to recognize effective tools, materials and outfit 3.2 Ready skills required to read labels, manuals and other basic safety information
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> 4.1 Practical demonstration 4.2 Third Party Report
5. Resource Implications	<ul style="list-style-type: none"> 5.1 Farm location 5.2 Tools, equipment and outfits appropriate in applying safety measures
6. Context of Assessment	<ul style="list-style-type: none"> 6.1. Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision

UNIT TITLE : USE FARM TOOLS AND EQUIPMENT

UNIT CODE : AGR321202

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to use farm tools and equipment. It includes selection, operation and preventive maintenance of farm tools and equipment.

ELEMENT	PERFORMANCE CRITERIA
1. Select and use farm tools	1.1 Identified appropriate farm tools according to requirement/use 1.2 Farm tools are checked for faults and defective tools reported in accordance with farm procedures 1.3 Appropriate tools and equipment are safely used according to job requirements and manufacturers conditions
2. Select and operate farm equipment	2.1 Identify appropriate <i>farm equipment</i> 2.2 Instructional manual of the farm tools and equipment are carefully read prior to operation 2.3 <i>Pre-operation check-up</i> is conducted in line with manufacturers manual 2.4 Faults in farm equipment are identified and reported in line with farm procedures 2.5 Farm equipment used according to its function 2.6 Followed safety procedures
3. Perform preventive maintenance	3.1 Tools and equipment are cleaned immediately after use in line with farm procedures 3.2 Routine check-up and maintenance are performed 3.3 Tools and equipment are stored in designated areas in line with farm procedures

RANGE OF VARIABLES

VARIABLE	RANGE
1. Farm equipment	1.1 Engine 1.2 Pumps 1.3 Generators 1.4 Sprayers
2. Farm tools	2.1 Sickle 2.2 Cutters 2.3 Weighing scales 2.4 Hand tools 2.5 Measuring tools 2.6 Garden tools
3. Pre-operation check-up	3.1 Tires 3.2 Brake fluid 3.3 Fuel 3.4 Water 3.5 Oil 3.6 Lubricants 3.7 Battery

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Correctly identified appropriate farm tools and equipment 1.2 Operated farm equipments according to manual specification 1.3 Performed preventive maintenance
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1 Safety Practices <ul style="list-style-type: none"> 2.1.1 Ideal good work habits to demonstrate to workers easy and safety standards during operation of farm equipment 2.2 Codes and Regulations <ul style="list-style-type: none"> 2.2.1 Environmental Compliance Certificate (ECG) 2.2.2 Effective work supervision in the operations of farm equipment 2.3 Tools & Equipment: Uses and Specification <ul style="list-style-type: none"> 2.3.1 Knowledge in calibrating and use of equipment 2.3.2 Safety keeping of equipments every after use 2.4 Maintenance <ul style="list-style-type: none"> 2.4.1 Regular upkeep of equipments 2.4.2 Preventive maintenance skills 2.5 Practicing 5S and 3R's 2.6 Values <ul style="list-style-type: none"> 2.6.1 Positive outlook towards work 2.6.2 Possesses pre-emptive/anticipatory skills
<p>3. Required Skills</p>	<ul style="list-style-type: none"> 3.1 Ability to recognized defective farm equipment 3.2 Perform proper management practices of safety measures
<p>4. Method of Assessment</p>	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> 4.1 Direct observation 4.2 Practical demonstration 4.3 Third Party Report
<p>5. Resource Implications</p>	<ul style="list-style-type: none"> 5.1 Service/operational manual of farm tools and equipment 5.2 Tools and equipment 5.3 Farm implements
<p>6. Context of Assessment</p>	<ul style="list-style-type: none"> 6.1 Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision

UNIT TITLE : PERFORM ESTIMATION AND BASIC CALCULATION

UNIT CODE : AGR321203

UNIT DESCRIPTOR: This unit covers the knowledge, skills and attitudes required to perform basic workplace calculations.

ELEMENT	PERFORMANCE CRITERIA
1. Perform estimation	1.1 Job requirements are identified from written or oral communications 1.2 Quantities of materials and resources required to complete a work task are estimated 1.3 The time needed to complete a work activity is estimated 1.4 Accurate estimate for work completion are made 1.5 Estimate of materials and resources are reported to appropriate person
2. Perform basic workplace calculation	2.1 Calculations to be made are identified according to job requirements 2.2 Correct method of calculation identified 2.3 System and units of measurement to be followed are ascertained 2.4 Calculation needed to complete work tasks are performed using the four basic process of addition, division, multiplication and subtraction 2.5 Calculate whole fraction, percentage and mixed when are used to complete the instructions 2.6 Number computed in self checked and completed for alignment

RANGE OF VARIABLES

VARIABLE	RANGE
1. Calculations	1.1 Quantity of feeds 1.2 Amount of fertilizer 1.3 Amount of medicines
2. Method of calculation	2.1 Addition 2.2 Subtraction 2.3 Multiplication 2.4 Division 2.5 Ratio and proportion
3. System of measurement	3.1 English 3.2 Metric
4. Units of measurement	4.1 Area 4.2 Volume 4.3 Weight

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Performed estimation 1.2 Performed basic workplace calculation 1.3 Applied corrective measures as maybe necessary
2. Required Knowledge and Attitudes	2.1 Mathematics 2.1.1 Basic mathematical operations 2.1.2 Percentage and ratios 2.1.3 Unit Conversion 2.1.4 Basic accounting principles and procedures 2.1.4.1 Production cost 2.1.4.2 Sales 2.1.4.3 Accounts receivables/payables 2.2 Systems, Processes and Operations 2.2.1 Knowledge in different management practices and operational procedures 2.3 Values 2.3.1 Safety consciousness 2.3.2 Time consciousness and management 2.3.3 Cost consciousness 2.3.4 Precision
3. Required Skills	3.1 Ability to perform basic calculation 3.2 Communicate effectively
4. Method of Assessment	Competency in this unit must be assessed through: 4.1 Practical demonstration 4.2 Written examination
5. Resource Implications	5.1 Relevant tools and equipment for basic calculation 5.2 Recommended data
6. Context of Assessment	6.1 Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision

CORE COMPETENCIES

- UNIT OF COMPETENCY** : **CONFIRM READINESS OF SOW/GILT FOR ARTIFICIAL INSEMINATION**
- UNIT CODE** : AGR621210
- UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes required to confirm the readiness of sow/gilt for artificial insemination. It includes validation information on animal and assessing animal condition.

ELEMENT	PERFORMANCE CRITERIA
	<i>Italicized</i> terms are elaborated in the Range of Variable
1. Validate information on animal	1.1. Information on confirming readiness of sow/gilt for artificial insemination was collected in clear and logical sequence. 1.2. Client's and animal's profile are recorded using the prescribed forms and in accordance with standard operating procedures. 1.3. Transactions and coordination is made in accordance to communication etiquette . 1.4. Accurate interpretation and decision is made based on the gathered information.
2. Assess animal condition	2.1 Physical condition of the animal is evaluated based on recommended standards . 2.2 Signs of estrus are confirmed. 2.3 Heat detection is conducted to determine the animal is on standing heat. 2.4 Task is performed without causing injuries to the animal, technician and others. 2.5 Accurate interpretation and decision is made based on the result of the actual heat detection.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Animal profile	This includes the following information: 1.1 Identification number(ID number) 1.2 Age/date of birth 1.3 Approximate weight 1.4 Breed/Strain 1.5 Number of parities 1.6 Date of last weaning 1.7 Dam and sire 1.8 Date of last estrus 1.9 Date of last breeding
2. Transactions and coordination	This refers to the following: 2.1 Face to face 2.2 Telephone/Cellphone conversation 2.3 Text messaging
3. Communication etiquette	This may include, but not limited to: 3.1 Politeness 3.2 Courtesy 3.3 Maintain composure 3.4 Patience
4. Recommended standards	This includes the following: 4.1 Body weight 4.2 Body condition score 4.3 Apparently healthy 4.4 Age 4.5 At least 2 nd estrus (for gilt)
5. Signs of estrus	This includes the following: 5.1 Swelling and redness of vulvar lips 5.2 Frequent urination 5.3 Standing still when mounted 5.4 Mucus discharge from the vagina 5.5 Restlessness 5.6 Loss of appetite 5.7 Mounting other animals 5.8 Number of days in estrus
6. Heat detection	This includes the following: 6.1 Back pressure test 6.2 Riding on the back test 6.3 Use of teaser boar 6.4 Use of pheromones (eg. boar saliva, boar semen, synthetic pheromones)

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Made accurate estrus detection
2. Required Knowledge and Attitudes	2.1 Signs of estrus 2.2 Breeds 2.3 Animal conditions 2.4 Heat detection techniques 2.5 Practicing 5S and 3Rs 2.6 Communication 2. 5.1. Preparation of inventory reports, production and performance records. 2.7 Safety practices 2. 6.1. Personal protective paraphernalia or device (Rubber boots) 2.8 Breeding calendar 2.9 Codes and Regulations 2. 8.1. Animal Welfare Act (RA 8485) 2. 8.2. Environmental regulations (waste management act, etc.) 2.9 Attitudes 2.9.1. Punctuality 2.9.2. Personal hygiene 2.9.3. Ability to work well with others harmoniously
3. Required Skills	3.1. Using Personal Protective Equipment 3.2. Arithmetic (Multiplication, Division, Addition and Subtraction) 3.3. Communicate effectively 3.4. Usage of communication equipment
4. Method of Assessment	Competency in this unit must be assessed through: 4.1. Oral interview 4.2. Practical demonstration with questioning 4.3. Observation with questioning 4.4. Third party report 4.5. Portfolio
5. Resource Implication	5.1. Practice animals 5.2. Farm facilities 5.3. Rubber boots and scrub suits 5.4. Communication equipment 5.5. Forms
6. Context of Assessment	6.1. Competency may be assessed individually in the actual workplace or through accredited farms/institution.

UNIT OF COMPETENCY : **COLLECT BOAR SEMEN**

UNIT CODE : AGR621211

UNIT DESCRIPTOR : This unit covers the outcomes in the preparation and transport of AI equipment, tools, supplies and materials, including hygiene and safety requirements to ensure the integrity and quality of the semen prior to the AI procedure.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variable
1. Carry-out preparatory activities	1.1 Boar is cleaned and dried in accordance with the hygiene and safety requirements. 1.2 AI Paraphernalia are prepared according to standard procedure. 1.3 Preparatory activities is performed for semen collection in accordance with the hygiene and safety requirements .
2. Perform collection of board semen	2.1 Boar is led to the collecting pen 2.2 Preputial fluid is removed according to procedure. 2.3 Penile area is massaged to encourage ejaculation of semen. 2.4 Semen is collected according to standard procedures. 2.5 Semen evaluated to determine semen quality . 2.6 Required form for semen collection is accomplished and filed. 2.7 Semen collection is performed to ensure safety of the boar, technician and other individuals.
3. Handle boar semen for transport	3.1 Collected semen is transfer to pre-warmed semen bottles . 3.2 Semen is properly packed according to required temperature.

RANGE OF VARIABLES

VARIABLE	RANGE
1. All Paraphernalia	This may include, but not limited to: 1.1. Collecting cup 1.2. Semen filter 1.3. Distilled water 1.4. Gloves (Powder -free vinyl and plastic gloves) 1.5. Disposable hand towel 1.6. Neutral pH soap
2. Preparatory activities	These refer to the following: 2.1 Wear personal protective paraphernalia(i.e. farm clothes/ and rubber boots) 2.2 Penile area is clean and dry 2.3 Trim sheath hair when necessary 2.4 Wear powder-free vinyl and plastic gloves 2.5 Pre-warm sterilized collecting cups prior to collection(to avoid thermal shock) 2.6 Adjust dummy height
3. Evaluated	This includes the following: 3.1. Visually 3.2. Microscopically
4. Semen quality	This refers to the following: 4.1 Volume of semen 4.2 Color of semen 4.3 Smell of semen 4.4 Microscopic(sperm motility)
5. Semen bottles	This may include, but not limited to: 5.1 Squeeze bottles 5.2 Flexi- tube 5.3 Flat pack
6. Packed	This refers to the following methods of handling semen after extraction: 6.1 Wrapped with wet paper or cloth inside ice box without ice (if short distance, that is within 30 minutes travel). 6.2 Put in an ice or styrofoam box with ice (if long distance, that is more than 30 minutes travel).
7. Required form	Required form containing data such as: 7.1 Breed and age of boar 7.2 Date of collection 7.3 Semen quality 7.4 Number of doses produced 7.5 Source 7.6 Boar ID
8. Hygiene and safety requirements	This refers to the following: 8.1 Personal Hygiene(eg. no long nails, washing hands with neutral pH soap) 8.2 Discard preputial fluid prior to collection 8.3 Cleanliness and sanitation of collection area

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Demonstrated semen collection and handling.
2. Required Knowledge and Attitudes	2.1. Frequency of semen collection based on age of boar 2.2. Collection techniques 2.3. Semen quality 2.4. Semen handling 2.5. Animal handling 2.6. Use and function of simple microscope 2.7. Safety precautionary measures on handling boars 2.8. Practicing 5S and 3Rs 2.9. Communication 2.4.1. Preparation of records. 2.10. Safety Practices 2.5.1. Wear rubber boots as safety measure 2.5.2. Wear gloves to prevent zoonotic disease transmission 2.11. Codes and Regulations 2. 6.1. Animal Welfare Act (RA 8485) 2. 6.2. Environmental regulations (ex. waste management act) 2.12. Attitudes 2.7.1. Agility 2.7.2. Patience 2.7.3. Humane handling of animals
3. Required Skills	3.1. Using Personal Protective Equipment 3.2. Record keeping 3.3. Animal handling skills 3.4. Communication skills 3.5. Using microscope
4. Method of Assessment	Competency in this unit must be assessed through: 4.1. Oral interview 4.2. Practical demonstration with questioning 4.3. Observation with questioning 4.4. Third party report 4.5. Portfolio
5. Resource Implication	5.1. Practice Animals 5.2. Microscope 5.3. Farm facilities 5.4. Ice or styrofoam box 5.5. AI paraphernalia and other supplies 5.6. Personal protective paraphernalia and devices 5.7. Forms and logbook
6. Context of Assessment	6.1. Competency may be assessed individually in the actual workplace or through accredited farms/institution.

- UNIT OF COMPETENCY** : **PERFORM ARTIFICIAL INSEMINATION ON SOW/GILT**
- UNIT CODE** : AGR621212
- UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes on the performance of artificial insemination (AI). It includes preparation and deposition of semen and the performing of post-artificial insemination (AI) activities.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variable
1. Conduct preparatory activities	1.1. Semen to be used is secured in accordance with clients' requirements/requests. 1.2. AI paraphernalia is prepared in accordance to established procedures. 1.3. Preparatory activities is performed for AI in accordance with the hygiene and safety requirements.
2. Deposit semen	3.1. Sow/gilt is stimulated prior to AI. 3.2. Semen is deposited into the female reproductive tract following recommended procedure. 3.3. Task is performed without causing injuries to the animal, technician and others.
3. Perform post-artificial insemination (AI) activities	4.1. Cleaning of the external genitalia is performed using suitable materials. 4.2. Wastes disposal is performed according to existing environmental regulations . 4.3. Task is performed without causing injuries to the animal, technician and others 4.4. Clients are advised about the management of animals after AI. 4.5. AI activities are documented using prescribed forms.

RANGE OF VARIABLES

VARIABLE	RANGE
1. AI paraphernalia	This may include, but not limited to 1.1. Catheter 1.2. Lubricant 1.3. Semen 1.4. Transport box 1.5. Clean damp cloth or paper towel
2. Preparatory activities	This may include, but not limited to: 2.1. Wear rubber boots 2.2. Practice hygienic procedures for AI technician 2.3. Cleaning of vulvar area of sow 2.4. Ensure cleanliness of insemination area 2.5. Pre-warm semen
3. Stimulated	This refers to the following techniques: 3.1. Back pressure 3.2. Riding the back 3.3. Use of weights on the back of the sow (such as sandbag, breeding saddle) 3.4. Clitoral stimulation 3.5. Haunch pressure 3.6. Use of pheromones (eg. boar saliva, sex odors, aerosol) 3.7. Semen on snout
4. Environmental regulations	This may include but not limited to the following: 4.1. Water 4.1.1. RA 9275 (Clean Water Act) 4.1.2. DAO 1990-35 (Revised effluent regulation) 4.1.3. DAO 2004-25 (Discharge permit) 4.2. Solid 4.2.1. RA 9003 (Ecological Solid Waste Management Act of 2000 IRR RA 9003)
5. Management of animals	This includes the following: 5.1. Minimize stress (eg. trauma, movement) 5.2. Proper feeding 5.3. Perform heat detection after 18-24 days 5.4. Humane handling of animals

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Demonstrated preparation and deposition of semen in the female reproductive tract within the time frame.
2. Required Knowledge and Attitudes	2.1. Procedures of semen preparation and deposition. 2.2. Reproductive system and cycle of swine 2.3. Waste management (ex. 3Rs) 2.4. Practicing 5S 2.5. Communication 2. 4.1. Preparation of inventory reports, production and performance records. 2.6. Safety Practices 2. 5.1. Personal protective paraphernalia or device 2. 5.2. Humane handling of the animal 2.7. Codes and Regulations 2. 6.1. Animal Welfare Act (RA 8485) 2. 6.2. Environmental regulations 2.8. Values 2.7.1. Punctuality 2.7.2. Personal hygiene 2.7.3. Ability to work well with others harmoniously
3. Required Skills	3.1. Using Personal Protective Equipment 3.2. Arithmetic 3.3. Communication skills
4. Method of Assessment	Competency in this unit must be assessed through: 4.1. Oral interview 4.2. Practical demonstration with questioning 4.3. Observation with questioning 4.4. Third party report 4.5. Portfolio
5. Resource Implication	5.1 Practice animals 5.2 Farm facilities 5.3 Artificial Insemination paraphernalia and supplies 5.4 Personal Protective Paraphernalia 5.5 Forms
6. Context of Assessment	6.1 Competency may be assessed individually in the actual workplace or through accredited farms/institution.

- UNIT OF COMPETENCY** : **PREPARE DOCUMENTATIONS AND REPORTS ON SOW/GILT ARTIFICIAL INSEMINATION (AI) ACTIVITIES**
- UNIT CODE** : AGR621213
- UNIT DESCRIPTOR** : This unit covers the required documentation for technicians in the conduct of artificial insemination and related activities.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variable
1. Collect and process data	1.1. Necessary forms are secured. 1.2. Data is collected and processed as required in the forms. 1.3. Evidence for breed registry is secured (applicable to technicians of private farms)
2. Accomplish and submit forms	2.1. Forms are accomplished and submitted to local government unit. 2.2. Summary report is prepared and submitted using required forms. 2.3. File copies of accomplished forms and summary report are kept and compiled by technicians according to required filing procedures.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Data	This refers to the following: 1.1. Date and time of AI 1.2. Boar ID 1.3. Client's name, address and contact number 1.4. Number of parities 1.5. Breed 1.6. Name of Technician 1.7. Body score 1.8. Litter size and born alive
2. Summary of report	This may include, but not limited to: 2.1. Summary of AI service data 2.2. Litter size 2.3. Farrowing rate 2.4. Conception rate

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Demonstrate data collection and processing. 1.2. Made entries to required forms for submission. 1.3. Prepare summary report for submission.
2. Required Knowledge and Attitudes	2.1. Familiarity with all the necessary forms. 2.2. Familiarity with gestation lengths of swine 2.3. Familiarity with breeds of swine 2.4. Knowledge on basic animal husbandry practices 2.5. Practicing 5S and 3Rs 2.6. Systematic, thorough, and prompt in the accomplishment and submission of reports 2.7. Accuracy of data entries in the forms 2.8. Ability to meet deadlines
3. Required Skills	3.1. Basic record-keeping 3.2. Arithmetic (Multiplication, Division, Addition and Subtraction) 3.3. Communication skills
4. Method of Assessment	Competency in this unit must be assessed through: 4.1. Oral interview 4.2. Written examination 4.3. Demonstration with questioning 4.4. Third party report 4.5. Portfolio
5. Resource Implication	5.1. Required forms 5.2. Calculator 5.3. Breeding calendars 5.4. Ballpens/Pencils
6. Context of Assessment	6.1. Competency may be assessed individually in the actual workplace or through accredited farms/institution.

ELECTIVE COMPETENCY

UNIT OF COMPETENCY: CONDUCT COMMUNITY AWARENESS PROGRAM ON ARTIFICIAL INSEMINATION

UNIT CODE : AGR621214

UNIT DESCRIPTOR : This unit involves the skills, knowledge and attitudes required to conduct community awareness program on artificial insemination to the wider public. It includes competencies in gathering of information, approaching the target clients and promoting artificial insemination.

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for the conduct of community awareness programs	<p><i>Italicized</i> terms are elaborated in the Range of Variables</p> <p>1.1. Community consultation is conducted to ensure that programs meet their needs.</p> <p>1.2. Coordination with local government and relevant personnel is carried-out to determine objectives of the program.</p> <p>1.3. Programs are structured and finalized with reference to the objectives.</p> <p>1.4. Relevant equipment, aids and other materials to be used are sourced and organized.</p>
2. Carry-out community awareness programs	<p>2.1. Information on artificial insemination is presented to the target clients in a clear and logical sequence.</p> <p>2.2. Programs are conducted using effective public speaking techniques.</p> <p>2.3. Effective approach is used to assist the community in understanding the program.</p> <p>2.4. Opportunities are provided for the community to seek clarification on important points.</p> <p>2.5. Routine clients questions are answered and supplemented with relevant information as needed.</p> <p>2.6. Queries outside the area of responsibility or expertise are referred to appropriate personnel/area.</p> <p>2.7. Objections and adverse reactions are handled fittingly.</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Community	This may include, but not limited to: 1.1 Individuals <ul style="list-style-type: none"> • Farmers • Animal enthusiasts/hobbyists • Other interested individuals 1.2 Groups and institutions: <ul style="list-style-type: none"> • Farmer's Cooperatives • Community groups • Schools and Training Providers • Local Government Units • Non-government institutions • Private associations
2. Community consultation	Community consultation is done : 2.1 To determine community expectations and needs 2.2 To raise community awareness on existing programs
3. Equipment, aids and other materials	These may include the following but not limited to: 3.1 Equipment: <ul style="list-style-type: none"> • video and audio materials • whiteboard • DVD player and monitor 3.2 Aids and materials: <ul style="list-style-type: none"> • charts and posters • diagrams • handouts • information kits • models (ex. Model of Reproductive tract) • pamphlets • videos
4. Public speaking technique	This may include, but not limited to: 4.1 audience interaction 4.2 body language 4.3 eye contact 4.4 inflection 4.5 pace of speech 4.6 tone of voice
5. Approach	May include but are not limited to: 5.1 personal visitation 5.2 film viewing/visual presentation 5.3 information materials (eg. Pamphlets) 5.4 over the telephone and text messaging 5.5 demonstration/orientation
6. Routine clients questions	Routine clients questions may relate to: 6.1 price 6.2 features 6.3 advantages and benefits

EVIDENCE PLAN

1. Critical aspects of Competency	Assessment requires evidence that the candidate: 1.1 Prepared for the conduct of the community aware 1.2 Carry-out community awareness programs
2. Required Knowledge and Attitudes	2.1. Data collection methods to support the development of materials 2.2. Legislation relevant to the subject matter of the presentation 2.3. Organisational policies and procedures relating to presenting information to the public 2.4. Principles of animal welfare and ethics 2.5. Practicing 5S and 3Rs 2.6. Range of presentation aids and materials available to support the presentation 2.7. Range of communication strategies 2.8. Relevant and current community awareness programs 2.9. Technical information relevant to the presentation or subject matter. 2.10. Attitude <ul style="list-style-type: none"> • Courtesy • Patience • Innovative • Resourceful
3. Required Skills	3.1. Listening-questioning techniques. 3.2. Verbal and non-verbal communication skills <ul style="list-style-type: none"> • negotiation techniques. • types and clients needs • handling clients objections 3.3. Public speaking skills to include <ul style="list-style-type: none"> • opening techniques to awaken clients interest • strategies to focus clients specific needs • answering clients questions • handling customer objections and adverse reactions 3.4. Skills in making simple visual aids (eg. drawing)
4. Resource Implications	The following resource MUST be provided: 4.1 a work environment 4.2 relevant documentation, such as procedures manuals 4.3 a range of clients with different requirements 4.4 promotional materials (pamphlets) 4.5 communication equipment (telephone, cellphone)
5. Methods of Assessment	Competency may be assessed through: 5.1. Observation 5.2. Demonstration with questioning 5.3. Third-party reports 5.4. Oral questioning/Interview 5.5. Portfolio assessment
6. Context of Assessment	6.1. Assessment may be performed in the workplace or simulated workplace situation 6.2 Assessment activities are carried out through TESDA's accredited assessment center

UNIT OF COMPETENCY : **RENDER ASSISTANCE TO VETERINARY PROCEDURES RELATED TO REPRODUCTIVE PROBLEMS**

UNIT CODE : AGR621215

UNIT DESCRIPTOR : This unit covers the required knowledge, skills and attitude to perform assistance of veterinary procedures related to swine reproductive problems, through identification, reporting and administering of treatment and preventive procedures under the supervision of a Licensed Veterinarian.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variable
1. Recognize swine reproductive problems/diseases	1.1. Forms are secured from veterinarian 1.2. Swine assessment/observation is made and findings are noted on the prescribed forms 1.3. Accomplished forms are submitted to veterinarian. 1.4. Safety precautionary measures are observed using the prescribed PPEs
2. Administer drugs and biologics connected with reproductive problems or disease.	2.1. Recommendations/prescriptions from the veterinarian are obtained 2.2. Drugs and biologics are secured according to veterinarian's prescription 2.3. Drugs and biologics are administered according to veterinarian's instructions 2.4. Client are given advice after administration of drugs and biologics 2.5. Veterinarian is given feedback regarding the services rendered 2.6. Daily/Monthly accomplishment report is prepared and submitted using required forms. 2.7. File copies of accomplished forms and summary report are kept and compiled by technicians according to required filing procedures.

RANGE OF VARIABLES

VARIABLE	RANGE
1. PPE	May include the following, but not limited to: 1.1. Rubber boots 1.2. Surgical gloves 1.3. Face mask
2. Drugs and biologics	This includes the following: 2.1. Antibiotics 2.2. Vaccines 2.3. Vitamins 2.4. Parasiticides (external and internal) 2.5. Hormones
3. Advice	This includes the following: 3.1. Observe after treatment of recommended dose of antibiotics 3.2. Observe adverse reactions after vaccinations 3.3. Observe for response after vitamin administration 3.4. Observe for presence of internal and external parasites after treatment dose.

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1. Recognized swine reproductive problems/diseases. 1.2. Administered drugs and biologics.
2. Required Knowledge and Attitudes	2.1. Familiarity with all the necessary forms. 2.2. Familiarity with administration techniques of drugs and biologics 2.3. Familiarity with symptoms of swine reproductive problems 2.4. Systematic, thorough, and prompt in the accomplishment and submission of reports 2.5. Practicing 5S and 3Rs 2.6. Accuracy of data entries in the forms 2.7. Ability to meet deadlines
3. Required Skills	3.1. Basic record-keeping 3.2. Arithmetic (Multiplication, Division, Addition and Subtraction) 3.3. Visual estimation of weight 3.4. Skills in administration techniques of drugs and biologics 3.5. Communication skills
4. Method of Assessment	Competency in this unit must be assessed through: 4.1. Oral interview 4.2. Written examination 4.3. Demonstration with questioning 4.4. Third party report 4.5. Portfolio
5. Resource Implication	5.1. Required forms 5.2. Veterinary prescription 5.3. Calculator 5.4. Veterinary drugs and biologics 5.5. Veterinary tools (syringe, needles, forceps, etc.) 5.6. PPE (rubber boots, rubber gloves, face mask) 5.7. Ballpens/Pencils 5.8. Practice animals
6. Context of Assessment	6.1. Competency may be assessed individually in the actual workplace or through accredited farms/institution.

SECTION 3. TRAINING STANDARDS

These guidelines are set to provide the Technical and Vocational Education and Training (TVET) providers with information and other important requirements to consider when designing training programs for **ARTIFICIAL INSEMINATION (SWINE) NC II**.

3.1 CURRICULUM DESIGN

Course Title: **ARTIFICIAL INSEMINATION (SWINE)** NC Level **NC II**

Nominal Training Duration:	18 hrs	Basic Competencies
	14 hrs	Common Competencies
	95 hrs	Core Competencies
	<u>127 hrs</u>	Total training duration
	48 hrs	Elective Competencies

Course Description:

This course is designed to enhance the knowledge, desirable attitudes and skills of artificial insemination technician (student/learner) in accordance with industry standards. It includes core competencies in confirming readiness of animal for artificial insemination, collecting boar semen, performing artificial insemination (AI) on sow/gilt and preparing documentations and reports on sow/gilt artificial insemination (AI) activities. It has an elective competencies on conduct of community awareness program on artificial insemination and rendering assistance to veterinary procedures related to productive problems. It also includes competencies in workplace communication, teamwork, practicing professionalism, safety in the use of hand tools and equipment, housekeeping and basic mathematical operations and calculations.

BASIC COMPETENCIES (18 hrs.)

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Participate in workplace communication	1.1 Obtain and convey workplace information. 1.2 Complete relevant work related documents. 1.3 Participate in workplace meeting and discussion.	<ul style="list-style-type: none"> • Group discussion • Interaction 	<ul style="list-style-type: none"> • Demonstration • Observation • Interviews/questioning

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
2. Work in a team environment	2.1 Describe and identify team role and responsibility in a team. 2.2 Describe work as a team member.	<ul style="list-style-type: none"> • Discussion • Interaction 	<ul style="list-style-type: none"> • Demonstration • Observation • Interviews/questioning
3. Practice career professionalism	3.1 Integrate personal objectives with organizational goals. 3.2 Set and meet work priorities. 3.3 Maintain professional growth and development.	<ul style="list-style-type: none"> • Discussion • Interaction 	<ul style="list-style-type: none"> • Demonstration • Observation • Interviews/questioning
4. Practice occupational health and safety	4.1. Identify hazards and risks 4.2. Evaluate hazard and risks 4.3. Control hazards and risks 4.4. Maintain occupational health and safety awareness	<ul style="list-style-type: none"> • Discussion • Plant tour • Symposium 	<ul style="list-style-type: none"> • Observation • Interview

**COMMON COMPETENCIES
(14hrs.)**

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Apply safety measures in farm operations	1.1. Apply appropriate safety measures 1.2. Safekeep/ maintain/ dispose tools, materials and outfit.	<ul style="list-style-type: none"> • Self-paced/ modular • Lecture/ Discussion • Interaction • Practical Demonstration • Visit/tour 	<ul style="list-style-type: none"> • Oral/Written Interviews • Direct Observation • Practical Demonstration
2. Use farm tools and equipment	2.1. Select and use farm tools 2.2. Select and operate farm equipment 2.3. Perform preventive maintenance procedures/practices	<ul style="list-style-type: none"> • Self-paced / modular • Lecture/ Discussion • Interaction • Practical Demonstration • Visit/tour 	<ul style="list-style-type: none"> • Oral/Written Interviews • Direct Observation • Practical Demonstration

3. Perform estimation and basic calculation	3.1. Perform estimation 3.2. Perform basic workplace calculation	<ul style="list-style-type: none"> • Self-paced/modular • Lecture/Discussion • Interaction • Practical Exercise 	<ul style="list-style-type: none"> • Oral/Written examination • Practical exercise
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**CORE COMPETENCIES
(95 hrs.)**

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Confirm readiness of sow/gilt for artificial insemination	1.1. Validate information on animals for artificial insemination 1.2. Assess animal condition for artificial insemination	<ul style="list-style-type: none"> • Lectures • Role playing • Hands-on • Lectures/Discussion • Videos/Illustrations • Demonstration 	<ul style="list-style-type: none"> • Oral interview • Demonstration with questioning • Observation with questioning
2. Collect boar semen	2.1. Carry out preparatory activities 2.2. Perform collection of boar semen 2.3. Handle boar semen for transport	<ul style="list-style-type: none"> • Lecture • Laboratory exercise • Demonstration • Hands-on 	<ul style="list-style-type: none"> • Demonstration with questions • Oral evaluation • Oral Interview
3. Perform artificial insemination (AI) on sow/gilt	3.1. Conduct preparatory activities 3.2. Deposit semen 3.3. Perform post – artificial insemination (AI) activities	<ul style="list-style-type: none"> • Lecture /discussion • Demonstration • Hands-on 	<ul style="list-style-type: none"> • Demonstration with questions • Oral evaluation • Oral Interview
4. Prepare documentations and reports on sow/gilt artificial insemination(AI) activities	4.1. Collect and process data 4.2. Accomplish and submit forms	<ul style="list-style-type: none"> • Lecture/demo • Group Discussion • Hands-on 	<ul style="list-style-type: none"> • Written examination • Demonstration

**ELECTIVE COMPETENCY
(48 hrs.)**

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Conduct community awareness program on artificial insemination	1.1 Prepare for the conduct of community awareness programs 1.2 Carry-out community awareness programs	<ul style="list-style-type: none"> • Lecture/ demo • Group Discussion • Hands-on 	<ul style="list-style-type: none"> • Written examination • Demonstration
2. Render assistance to veterinary procedures related to reproductive problems	2.1 Identify visual signs suggestive of reproductive problems. 2.2 Report the identified visual signs of reproductive problems to a licensed veterinarian. 2.3 Administer treatment and preventive procedures as duly recommended in writing by a licensed veterinarian	<ul style="list-style-type: none"> • Lecture/ demo • Group Discussion • Hands-on 	<ul style="list-style-type: none"> • Written examination • Demonstration • Workshop

3.2 TRAINING DELIVERY

The delivery of training should adhere to the design of the curriculum. Delivery should be guided by the 10 basic principles of competency-based TVET.

- The training is based on curriculum developed from the competency standards;
- Learning is modular in its structure;
- Training delivery is learner-centered and should accommodate individualized and self-paced learning strategies;
- Training is based on work that must be performed;
- Training materials are directly related to the competency standards and the curriculum modules;
- Assessment is based in the collection of evidence of the performance of work to the industry required standard;
- Training program allows for recognition of prior learning (RPL) or current competencies;
- Training allows for multiple entry and exit; and
- Training programs are registered with UTPRAS.

The competency-based TVET system recognizes various types of delivery modes, both on and off-the-job as long as the learning is driven by the competency standards specified by the industry. The following training modalities may be adopted when designing training programs:

- The dualized mode of training delivery is preferred and recommended. Thus programs would contain both in-school and in-industry training or fieldwork components. Details can be referred to the Dual Training System (DTS) Implementing Rules and Regulations.
- Modular/self-paced learning is a competency-based training modality wherein the trainee is allowed to progress at his own pace. The trainer facilitates the training delivery
- Peer teaching/mentoring is a training modality wherein fast learners are given the opportunity to assist the slow learners.
- Supervised industry training or on-the-job training is an approach in training designed to enhance the knowledge and skills of the trainee through actual experience in the workplace to acquire specific competencies prescribed in the training regulations.
- Distance learning is a formal education process in which majority of the instruction occurs when the students and instructor are not in the same place. Distance learning may employ correspondence study, or audio, video or computer technologies.
- Project-Based Instruction is an authentic instructional model or strategy in which students plan, implement and evaluate projects that have real world applications.

3.3 TRAINEE ENTRY REQUIREMENTS

Trainees or students wishing to enroll in this course should possess the following requirements:

- Able to read and write;
- With good moral character;
- Ability to communicate, both oral and written; and
- Physically fit and mentally healthy as certified by a Public Health Officer

3.1 LIST OF TOOLS, EQUIPMENT AND MATERIALS

ARTIFICIAL INSEMINATION (SWINE) NC II

Recommended list of tools, equipment and materials for the training of 12 trainees for Artificial Insemination (Swine) NC II

QTY	TOOLS	QTY	EQUIPMENT	QTY	MATERIALS
100 pcs.	Catheters	4	Microscope	50 bottles	Semen bottles
1 set	First aid kit	12 sets	Personal Protective Paraphernalia (scrub suits, powder-free vinyl gloves, rubber boots)	1pc	Female Reproductive Organ Specimens
12 pcs.	Training bag	12	Laboratory gown	2 sets	Pail and dipper
1	Shovel	1	Vehicle	10 m	Hose
1	sandbag	1	Camera	6 bottles	Isopropyl alcohol (70%)
				6 pcs.	Germicidal Soap
		1	Power sprayer	6 packs	Paper towels
		1	Generator set	5 boxes	Glass slides
		1	Refrigerator (16 to 17 degree C)	5 boxes	Cover slips
		1	Fire extinguisher	2	Trash can
		1	Set Audio visuals with screen	50 pcs.	Disposal waste bags
		1	White board	2 pcs.	Broomstick
		12 sets	Chairs and tables	2 pcs.	Brooms
		2 Units	Computer	6 pcs.	Brush
		1	Printer	6	Board marker
		1	Photocopier	2 rolls	Masking Tapes
		1 unit	Dryer-Sterilizer	12 pcs	Pencil/ballpen

QTY	TOOLS	QTY	EQUIPMENT	QTY	MATERIALS
		1	Semen transport box	5 reams	Bond paper
				2 spray bottles	Pheromones
				2 bottles	Semen (for the snout for heat detection)
				100 bottles	Semen (for AI)
				4 pcs	Pre-warmed collecting cup
				1 box	Semen filter
				1 box	Rubber band
				30 L.	Distilled water
				1 box	Plastic gloves
				12 pcs.	Nutrient agar plates
				2 bottles	Lubricant
				4	Laboratory thermometer
					Ice
					Damp cloth/ used newspaper
				6 rolls	Tissue paper
			Models/actual objects		Learning Materials
		6	Practice animals (boar)	12 pcs	Training manuals
		5	Practice animals (Sow/gilt)	1	Animal charts
		1	Dummy sow	1	Animal breeds
				1	Video materials
				12 pcs	Forms (animal information sheets, sow card, boar card)

3.5 TRAINING FACILITIES

ARTIFICIAL INSEMINATION (SWINE) NC II

Based on a class size of 12 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	TOTAL AREA IN SQ. METERS
• Collecting pen	2 x 3	6
• Boar pen	3 x 4 per animal x 6	72
• Sow/gilt stall	2 x 0.65 x 5 animal	6.6
• Gilt's pen	1 .1 sq.m. per head x 5	5.5
• Lecture Room	7.00 x 5.00	35.00
• AI Laboratory room	6 x 8	48
• Storage room	4 x 3	12
• Learning resource center	3 x 4	12

3.6 TRAINER'S QUALIFICATIONS FOR AGRICULTURE SECTOR

ARTIFICIAL INSEMINATION (SWINE) NC II

TRAINER QUALIFICATION (TM I)

- Must be a holder of Artificial Insemination NC II or Animal Science Graduate
- Must have undergone training on Training Methodology I (TM I)
- *Must be computer literate
- Must be physically and mentally fit
- *Must have at least 2 years job/industry experience

* *Optional.* Only when required by the hiring institution.

Reference: TESDA Board Resolution No. 2004 03

3.7. INSTITUTIONAL ASSESSMENT

Institutional assessment is undertaken by trainees to determine their achievement of units of competency . A certificate of achievement is issued for each unit of competency.

SECTION 4 ASSESSMENT AND CERTIFICATION ARRANGEMENTS

- 4.1. To attain the National Qualification of Artificial Insemination (Swine) NC II, the candidate must demonstrate competence in all the units listed in Section 1. Successful candidates shall be awarded a National Certificate signed by the TESDA Director General.
- 4.2. Assessment shall focus on the core units of competency. The basic and common units shall be integrated or assessed concurrently with the core units.
- 4.3. The following are qualified to apply for assessment and certification:
 - 4.4.1 Graduates of formal, non-formal and informal including enterprise-based training programs with six (6) months work exposure, with consideration of success in conception and farrowing rate.
 - 4.4.2 Experienced Workers (wage employed or self-employed)
- 4.4. The guidelines on assessment and certification are discussed in detail in the Procedures Manual on Assessment and Certification and Guidelines on the Implementation of the Philippine TVET Qualification and Certification System (PTQCS).

Supermarket of Competencies AGRI-FISHERY Sector

CORE COMPETENCIES

Conduct Awareness Program on Artificial Insemination	Establish readiness of animal for artificial insemination	Collect swine semen	Perform artificial insemination (AI)	Prepare artificial insemination (AI) documentations and reports
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COMMON COMPETENCIES

Apply Safely Measures in farm operations	Use Farm Tools and Equipment	Perform Estimation and Basic Calculation
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BASIC COMPETENCIES

Participate in workplace communication	Work in team environment	Practice career professionalism	Practice occupational health and safety procedures
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DEFINITION OF TERMS

Artificial Insemination – introduction of sperm cells into the female's reproductive tract (cervix) artificially using a plastic or rubber catheter

Barrow – a male swine, castrated (testicles removed) before it reaches sexual maturity

Boar – uncastrated male swine usually kept for breeding

Crossbreed – a group of animals produced by mating two or more different breeds or strains of animals

Culling – is the removal of undesirable or inferior animals in the herd based on important economic traits and overall performance

Estrus – period of time when the female will accept male. Also known as heat period

Farrowing – the act of giving birth in pigs or swine

Gestation Period – refers to the period of carrying the young in the womb

Gilt – a young female hog that has not given birth yet

Inbreeding – mating of closely related animals in a herd

Livestock – domestic animals kept for use on a farm and raised for sale and profit

Litter – the offsprings at one birth of a multiparous or animal like swine

Litter Size – refers to the aggregate number of piglets per farrowing

Dry sow – a sow whose litter has been weaned but which has not yet been bred or is not pregnant

Purebreeding – is the mating of the unrelated individuals in the same breed

Ration – the total amount of feeds taken in by an animal during a 24 hour period

Selection – refers to the process of choosing males and females with desirable characteristics either for breeding or replacement stocks

Semen- is an organic fluid from male animals, also known as seminal fluid, that may contain spermatozoa; a male secretion that consists of the seminal fluid and sperm cells

Sow – a mature female hog that had given birth

Swine – a collective term for hogs

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THE TECHNICAL EXPERT PANEL (TEP)

Gil Austria, DVM

Veterinarian/Manager
Pork Producers Federation of the
Philippines

Editha E. Cabilitazan, DVM

Training Specialist III
International Training Center on Pig
Husbandry
Lipa City, Batangas

Amy G. Eguia

Training Specialist II
International Training Center on Pig
Husbandry
Lipa City, Batangas

Angel S. Morcozo, Jr.

Senior Agriculturist
Department of Agriculture, Agricultural
Training Institute

Servillano M. Javier

Agriculturist I
Lipa City Agriculture Office

Noel L. Dimzon

Veterinarian Technician
Lipa City Veterinary Office

Alvin M. Mojares

Swine Technician/Farm Owner
Mojares Farm

Aldrin E. Pagcaliwangan

Agriculturist
Lipa City Agriculture Office

The Participants in the National Validation of these Training Regulations:

Alexander C. Castillo

Center Director
International Training Center on Pig
Husbandry
Lipa City, Batangas

Hilario B. Azurin, Jr.

Agriculturist I
Municipal Agriculture Office,
Local Government Unit
Casiguran, Quezon

Floro B. Agno

Agricultural Center Chief I
Provincial Veterinary Office
Batangas

Aries P. Garcia

City Veterinarian
City Veterinary Office, Tanauan
Batangas

Lorena M. Briones

Agriculturist
Municipality Agriculture Office
Local Government Unit
Sto. Tomas, Batangas

Mariefe I. Ariate, DVM

Veterinarian
Local Government Unit
Municipal Agriculture Office
Sto. Tomas, Batangas

Elena V. Bencito
Agricultural Center Chief I
Provincial Veterinary Office
Batangas

Jefferson P. Endenerio
Agriculturist
Municipal Agriculturist Office
Sto. Tomas, Batangas

Nestor A. Maderazo
Artificial Insemination Technician
Dagatan, San Jose, Batangas

Carlito V. Lorzano
Agricultural Center Chief I
Provincial Veterinary Office
Batangas

Norita S. Escandor, DVM
Section Chief
Training Section
International Training Center on Pig
Husbandry
Lipa City, Batangas

Jade B. Castaño
Artificial Insemination Technician
Local Government Unit
Padre Garcia, Batangas

Melchor B. Lingga
Artificial Insemination Technician
Office of the City Veterinary and
Agriculture Services
Bolbok, Batangas City

Felix C. Lingao
Para Vet/Artificial Insemination
Technician
City Veterinary Office, Pangyao,
Lipa City, Batangas

Romelito R. Marasigan, DVM
Agricultural Center Chief II
Provincial Veterinary Office
Batangas

Vicente M. Jaceos
Artificial Insemination Technician
Local Government Unit
Padre Garcia, Batangas

Patricio Coniendo
Agriculturist
Municipal Agriculture Office
Local Government Unit
Padre Garcia, Batangas

The Management and Staff of the TESDA Secretariat

- Qualifications and Standards Office
- Competency Assessment and Certification Office