

TRAINING REGULATIONS



ANIMAL PRODUCTION (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 ANIMAL PRODUCTION (SWINE) NC II

Section 1 ANIMAL PRODUCTION (SWINE) NC II QUALIFICATION

The **ANIMAL PRODUCTION (SWINE) NC II** Qualification consists of competencies that a person must achieve to handle breeders, handle farrowing sows and sucklings, raise weanlings, produce finishers, maintain healthy animal environment and apply biosecurity measures.

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
AFF321201	Apply safety measures in farm operations
AFF321202	Use farm tools and equipment
AFF321203	Perform estimation and calculations
AFF321205	Process farm wastes

Code	CORE COMPETENCIES
AFF621216	Handle breeders
AFF621217	Handle farrowing sows and sucklings
AFF621218	Raise weanlings
AFF621219	Produce finishers
AFF621220	Maintain healthy animal environment
AFF321302	Apply bio-security measures

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

- **Swine Raiser/Farmer**
- **Swine Production Technician**
- **Swine Farm Specialist**

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 **ANIMAL PRODUCTION (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

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul 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
<p>2. Underpinning Knowledge and Attitudes</p>	<ul 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
<p>3. Underpinning Skills</p>	<ul 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
<p>4. Resource Implications</p>	<ul style="list-style-type: none"> 4.1. Fax machine 4.2. Telephone 4.3. Writing materials 4.4. Internet
<p>5. Methods of Assessment</p>	<ul style="list-style-type: none"> 5.1. Direct Observation 5.2. Oral interview and written test
<p>6. Context of Assessment</p>	<ul 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 judgement 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

<p>1. Critical aspects of competency</p>	<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
<p>2. Underpinning Knowledge and Attitude</p>	<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
<p>3. Underpinning Skills</p>	<ul style="list-style-type: none"> 3.1. Communicate appropriately, consistent with the culture of the workplace
<p>4. Resource Implications</p>	<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
<p>5. Methods of Assessment</p>	<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
<p>6. Context for Assessment</p>	<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
1. 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
2. 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. Underpinning Knowledge	<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 2.4 Fundamental rights at work including gender sensitivity 2.5 Personal hygiene practices
3. Underpinning 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	<p>4.1 Emergency-related drills and trainings are participated in as per established organization guidelines and procedures</p> <p>4.2 OHS personal records are completed and updated in accordance with workplace requirements</p>

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

VARIABLE	RANGE
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. Underpinning Knowledge and Attitude</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
<p>3. Underpinning 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>3. 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>4. 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>5. 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 OF COMPETENCY : **APPLY SAFETY MEASURES IN FARM OPERATIONS**

UNIT CODE : AFF321201

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

<p>1. Critical Aspects of Competency</p>	<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
<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 Implementation of regulatory controls and policies relative to treatment of area and application of chemicals 2.1.2 Proper disposal of waste materials 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
<p>3. Required Skills</p>	<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
<p>4. Resource Implications</p>	<ul style="list-style-type: none"> 4.1. Farm location 4.2. Tools, equipment and outfits appropriate in applying safety measures
<p>5. Method of Assessment</p>	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> 5.1. Practical demonstration 5.2. Third Party Report
<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 OF COMPETENCY : **USE FARM TOOLS AND EQUIPMENT**

UNIT CODE : AFF321202

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 farm equipment 2.2 Instructional manual of the farm tools and equipment are carefully read prior to operation 2.3 Pre-operation check-up 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> <p>1.1 Correctly identified appropriate farm tools and equipment</p> <p>1.2 Operated farm equipments according to manual specification</p> <p>1.3 Performed preventive maintenance</p>
<p>2. Required Knowledge and Attitudes</p>	<p>2.1 Safety Practices</p> <p>2.1.1 Ideal good work habits to demonstrate to workers easy and safety standards during operation of farm equipment</p> <p>2.2 Codes and Regulations</p> <p>2.2.1 Environmental Compliance Certificate (ECG)</p> <p>2.2.2 Effective work supervision in the operations of farm equipment</p> <p>2.3 Tools & Equipment: Uses and Specification</p> <p>2.3.1 Knowledge in calibrating and use of equipment</p> <p>2.3.2 Safety keeping of equipments every after use</p> <p>2.4 Maintenance</p> <p>2.4.1 Regular upkeep of equipments</p> <p>2.4.2 Preventive maintenance skills</p> <p>2.5 Values</p> <p>2.5.1 Positive outlook towards work</p> <p>2.5.2 Possesses pre-emptive/anticipatory skills</p>
<p>3. Required Skills</p>	<p>3.1 Ability to recognized defective farm equipment</p> <p>3.2 Perform proper management practices of safety measures</p>
<p>4. Resource Implications</p>	<p>4.1 Service/operational manual of farm tools and equipment</p> <p>4.2 Tools and equipment</p> <p>4.3 Farm implements</p>
<p>5. Method of Assessment</p>	<p>Competency in this unit may be assessed through:</p> <p>5.1 Direct observation</p> <p>5.2 Practical demonstration</p> <p>5.3 Third Party Report</p>
<p>6. Context of Assessment</p>	<p>6.1 Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision</p>

UNIT OF COMPETENCY : **PERFORM ESTIMATION AND BASIC CALCULATION**

UNIT CODE : AFF321203

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. Resource Implications	4.1 Relevant tools and equipment for basic calculation 4.2 Recommended data
5. Method of Assessment	Competency in this unit must be assessed through: 5.1 Practical demonstration 5.2 Written examination
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

UNIT OF COMPETENCY : PROCESS FARM WASTES

UNIT CODE : AFF321205

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to process farm wastes. It comprises functions such as collecting farm wastes, conducting waste identification and segregation, treating and processing farm wastes and performing housekeeping duties.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range Statement
1. Collect farm wastes	1.1. Tools and materials are prepared for collection of farm wastes. 1.2. Wastes are collected following OSHS and waste collection requirements and plan. 1.3. Dangerous and hazardous wastes are collected following the HAZMAT(hazardous material) protocol. 1.4. Appropriate personal protective equipment (PPE) are worn as prescribed by Occupational Safety and Health Standards (OSHS).
2. Identify and segregate wastes	2.1. Wastes are identified by categories according to industry standards and environmental legislation. 2.2. Wastes are segregated according to organizational requirements and relevant legislation. 2.3. Sorted waste is placed into labelled container to avoid littering and prevent cross-contamination. 2.4. Information on waste is obtained by asking authority to ensure correct identification.
3. Treat and process farm wastes	3.1. Dangerous and hazardous wastes are handled according to organizational requirements and relevant legislation following OSHS procedures. 3.2. Processing of farm wastes is done following environmental legislation and codes. 3.3. Principles of 3Rs (reduce, reuse and recycle) are applied accordingly. 3.4. Farm wastes are disposed of according to environmental legislation and codes.
4. Perform housekeeping	4.1. Appropriate warning signs and labels are displayed in conspicuous places around the workplace. 4.2. Work area is cleaned according to 5S principles. 4.3. Tools are checked, cleaned and stowed according to established industry procedures and following user's manual. 4.4. Materials are stored following industry standard

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range Statement
	<p>procedures and manufacturer's specifications.</p> <p>4.5. PPE is checked for damage prior to ensuring that clean and undamaged equipment is stored.</p> <p>4.6. Storage facility is checked to ensure no contamination in the area according to organizational requirements and legislation and codes.</p> <p>4.7. Record keeping is done according to industry requirements.</p>

RANGE OF VARIABLES

VARIABLE	SCOPE
1. Tools and materials	Tools and materials include: <ol style="list-style-type: none"> 1.1. Tools <ul style="list-style-type: none"> • Spade • Wheel borrow • Broomstick • Sprayer or pressurized pump 1.2. Materials <ul style="list-style-type: none"> • Sacks • Containers • Disinfectants • Detergents • First-aid kit • Chemical spill kit • Personal Protective Equipment <ul style="list-style-type: none"> ○ Goggles ○ Disposal gloves ○ Face mask ○ Rubber boots ○ Overall
2. Agricultural wastes	May include: <ol style="list-style-type: none"> 2.1. Plant materials 2.2. Hay 2.3. Weeds 2.4. Twigs 2.5. Twines 2.6. Empty wooden crates 2.7. Animal manure 2.8. Feed refuse 2.9. Spoiled feeds (Forage and feed supplements) 2.10. Spent bedding materials 2.11. Empty sacks 2.12. Trash fish 2.13. Fish meal 2.14. Effluent
3. Dangerous and hazardous wastes	<ol style="list-style-type: none"> 5.1. Pesticides 5.2. Syringes 5.3. Expired biologics 5.4. Expired veterinary drugs 5.5. Spoiled milk 5.6. Diseased plant and plant parts 5.7. Empty veterinary bottles/syringes
4. Categories	<ol style="list-style-type: none"> 3.1. Re-usable 3.2. Recyclable 3.3. Solid 3.4. Liquid

VARIABLE	SCOPE
5. Processing of wastes	4.1. Composting 4.2. Compacting 4.3. Liquefying 4.4. Shredding 4.5. Carbonizing 4.6. Charcoaling
6. Record	6.1. Record of farm wastes generated and disposed 6.2. Record of incidence of infection and accidents 6.3. Record of chemical spillage 6.4. Record of destroyed carcasses 6.5. Inventory of tools, materials and equipment

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. Collected farm waste 1.2. Identified and segregated farm waste 1.3. Processed farm waste 1.4. Performed housekeeping
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1. Knowledge, Theory, Practices and Systems Operations <ul style="list-style-type: none"> 2.1.1. Tools and materials use in wastes management 2.1.2. Categories of farm wastes 2.1.3. Wastes collection and segregation procedures 2.1.4. Farm-waste handling, storage and disposal procedures 2.1.5. Dangerous and hazardous wastes, hazardous materials (hazmat) protocols 2.1.6. Principles of 5S and 3R 2.2. Communications <ul style="list-style-type: none"> 2.4.1 Preparation of inventory reports and production records 2.4.2 Report on untoward incidence in the area 2.3. Mathematics and Mensuration <ul style="list-style-type: none"> 2.3.1. Profitability of the operation 2.3.2. Volume of farm wastes 2.4. Safety Practices <ul style="list-style-type: none"> 2.4.1. Personal Protective Equipment (PPE) 2.4.2. Material Safety Data Sheets(MSDS) 2.5. Codes and Regulations <ul style="list-style-type: none"> 2.5.1. Appropriate legal regulatory body such as BAI, EMB and DOH,BFAD 2.5.2. Occupational Safety and Health Standards 2.5.3. RA 9003 2.5.4. RA 6969 2.6. Materials, Tools & Equipment: Uses, Specifications and Maintenance <ul style="list-style-type: none"> 2.6.1. Tools and Equipment <ul style="list-style-type: none"> 2.6.1.1.Can understand and follow instructional manuals 2.6.1.2.Safe keeping of equipment every after use 2.6.2. Materials <ul style="list-style-type: none"> 2.6.2.1.Where to source good quality supplies, materials and equipment needed in the maintenance of the poultry house and farm 2.6.3. Maintenance <ul style="list-style-type: none"> 2.6.3.1. Regular upkeep of equipment and facilities 2.6.3.2. Preventive maintenance skills for farm area 2.7. Values <ul style="list-style-type: none"> 2.7.1. Safety and health consciousness 2.7.2. Resourcefulness 2.7.3. Diligence 2.7.4. Time consciousness 2.7.5. Cost-consciousness

	<p>2.7.6. Personal integrity in doing routine management practices</p> <p>2.7.7. Perseverance in executing routine works</p> <p>2.7.8. Ability to work with others harmoniously</p>
3. Required Skills	<p>3.1 Occupational health and safety</p> <p>3.2 Skills in using tools and equipment</p> <p>3.3 Calculations</p> <p>3.4 Communicate effectively</p>
4. Resource Implications	<p>The following resources should be provided:</p> <p>4.1 Farm area</p> <p>4.2 Different farm wastes</p> <p>4.3 Farm-waste processing area</p> <p>4.4 Tools, supplies and materials use in farm wastes collection, segregation and processing</p> <p>4.5 Housekeeping tools and supplies</p> <p>4.6 PPE</p>
5. Method of Assessment	<p>Competency in this unit may be assessed through:</p> <p>5.1 Observation and questioning</p> <p>5.2 Third-Party Report</p> <p>5.3 Demonstration and oral questioning</p>
6. Context of Assessment	<p>6.1 Competency maybe assessed individually in the actual workplace or in accredited farms or institution</p>

CORE COMPETENCIES

UNIT OF COMPETENCY : **HANDLE BREEDERS**

UNIT CODE : AFF621216

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to select the genetically superior breeders and replacement stocks, proper handling and feeding of boar, sows and gilts, providing care and monitoring the health of the breeders

ELEMENT	PERFORMANCE CRITERIA
	<i>Italicized</i> terms are elaborated in the Range Statement
1. Perform preparatory breeding activities	1.1 Acclimatization of newly-arrived stocks is done following industry standard as prescribed by veterinarian or an animal health technician. 1.2 Animals are given routine medication as prescribed by veterinary. 1.3 Suitable breeds are selected based on industry standards and choice of enterprise. 1.4 Breeder stocks are selected based on industry and enterprise standards
2. Breed sows and gilts	2.1 Signs of heat are monitored based on standards protocol. 2.2 Heat-detection techniques are performed following established protocol. 2.3 Sows/Gilts are bred using breeding systems based on choice of enterprise.
3. Prepare and train boar for breeding	3.1 Boar is trained to mount a female or a dummy sow 3.2 Boar is given prescribed vaccines and medications 3.3 Ideal weight and age are determined according industry standards. 3.4 Optimum boar to sow ratio is observed following standard monitoring scheme.
4. Monitor signs of pregnancy	4.1 Signs of pregnancy are monitored according to standards protocol. 4.2 Pregnancy diagnosis is performed according to standard procedures.
5. Maintain and monitor animal health condition	5.1. Periodic activities are performed following work plan and breeding schedules. 5.2. Animal stocks are fed based on physiological growths and production cycle . 5.3. Non-performing breeders are selected for culling

	<p>based on industry standards</p> <p>5.4. Changes in animal behavior is monitored following standard procedures and GAHP.</p>
6. Record Data	<p>6.1 Stock inventory is updated <i>according to</i> established farm recording system</p> <p>6.2 Breeding schedule is monitored and recorded following work plan.</p> <p>6.3 Production performance of breeders are recorded and reported according to enterprise protocol.</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Acclimatization	1.1 Isolation of animals in quarantine pens 1.2 Observance of animals for abnormal behavior 1.3 Testing for possible disease 1.4 Vaccination depending on disease outbreak in the areas 1.5 Boar semen evaluation
2. Routine medication	2.1 Deworming 2.2 Vaccination
3. Breeds	3.1 Landrace 3.2 Large white 3.3 Duroc 3.4 Pietrain 3.5 New Hampshire 3.6 Hybrids (Hypor, PIC, etc)
4. Breeder stocks	4.1 Female breeder 4.2 Male breeder or boar
5. Signs of heat	5.1 Grunting and mounting of other sows 5.2 Swelling and reddening of the vulva 5.3 Loss of appetite 5.4 Erect ears 5.5 Appearance of mucous discharge from the vagina 5.6 Can only be moved with great efforts 5.7 Frequent attempts to urinate with little or no discharge at all
6. Heat detection techniques	6.1 Haunch-pressure test 6.2 Riding-the-back test 6.3 Semen-on-the-snout 6.4 Teaser Method
7. Breeding systems	7.1 Inbreeding 7.2 Purebreeding 7.3 Crossbreeding 7.4 Upgrading
8. Signs of pregnancy	8.1 Absence of heat/estrus 8.2 Increase in weight 8.3 Enlargement of the abdomen 8.4 Development of mammary glands
9. Pregnancy diagnosis	9.1 Pregnancy control 9.2 Physical signs of pregnancy 9.3 Boar exposure 9.4 Doppler 9.5 Scanner
10. Periodic activities	10.1 Transfer to dry and pregnant unit 10.2 Regulate in feed intake based on stage of production 10.3 Vaccination 10.4 Deworming 10.5 Mange Treatment (External Parasites) 10.6 Sow cleaning 10.7 Transfer to farrowing pens

11. Physiological growth	11.1 Gilts 11.2 Junior boars 11.3 Sows 11.4 Senior boars
12. Production cycle	12.1 Dry period 12.2 Gestation period 12.3 Lactation period
13. Production performance	13.1 Breeding performance record (computation of breedings per month, farrowings per year, recycles per month and rebred per month) 13.2 Reproduction parameters (litter size at birth, at weaning, pigs per sow per year, birth weight)

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. Performed preparatory breeding activities 1.2. Bred sows and gilts 1.3. Prepared and trained boar for breeding 1.4. Monitored signs of pregnancy 1.5. Maintained and monitored animal health condition 1.6. Recorded data
<p>2 Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1 Communication <ul style="list-style-type: none"> 2.1.1 Preparation of stock inventory, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency 2.2 Safety Practices <ul style="list-style-type: none"> 2.2.1 Implementation of regulatory controls and policies relative to proper handling, use and disposal of biologics and other veterinary drugs and supplies 2.2.2 Proper attire inside the farm premises 2.3 Mathematics and Mensuration <ul style="list-style-type: none"> 2.3.1 Computation of sow productivity index, feed conversion efficiency, parameters of reproductive efficiency and financial viability of the swine enterprise 2.4 Codes and Regulations <ul style="list-style-type: none"> 2.4.1 Compliance to animal health program, standards and accreditation program of the Bureau of Animal Industry (BAI) and Local Government Units (LGUs) 2.4.2 Compliance with environmental standards set by the DENR and LGUs 2.4.3 Compliance with standards set by the Bureau of Agriculture and Fishery Products Standards (BAFPS) 2.5 Systems, Processes and Operations <ul style="list-style-type: none"> 2.5.1 Selection of breeder and replacement stocks, general care and herd health 2.6 Tools and Equipment: Uses and Specifications <ul style="list-style-type: none"> 2.6.1 Artificial Insemination Kit – for successful insemination of gilts and sows 2.6.2 Microscope for qualitative semen evaluation 2.6.3 Automatic drinkers and feeders 2.6.4 Feed scoops 2.6.5 Pregnancy detector 2.6.6 Automatic syringe and needles

	<p>2.6.7 Driving board and rubber slapper</p> <p>2.7 Maintenance</p> <p>2.7.1 Regular check-up and repair of tools and equipment</p> <p>2.8 Materials: Uses and Specifications</p> <p>2.8.1 Office equipment and supplies for regular monitoring of production performance and economic viability of the swine operation</p> <p>2.9 Values</p> <p>2.9.1 Safety consciousness on vaccine handling and other biological</p> <p>2.9.2 Accuracy in medication and treatment of hog's diseases</p> <p>2.9.3 Competence and self-confidence towards selection of breeding stocks</p> <p>2.9.4 Honesty in marketing and financial transactions</p> <p>2.9.5 Perseverance and industriousness on care and management of the general heard</p>
3 Required Skills	<p>3.1 Work safety</p> <p>3.2 Skills in using tools and equipment</p> <p>3.3 Calculations</p> <p>3.4 Communicating ideas and info</p>
5. Resource Implications	<p>4.1. Farm</p> <p>4.2. Pens and corrals</p> <p>4.3. Dummy</p> <p>4.4. Trained boars for artificial insemination</p> <p>4.5. In-heat, sows/gilts</p> <p>4.6. Artificial insemination kit</p> <p>4.7. Tools and equipment appropriate to swine breeding</p> <p>4.8. Microscope</p>
4 Method of Assessment	<p>Competency in this unit must be assessed through:</p> <p>5.1. Practical demonstration related to underpinning knowledge, skills and attitudes</p> <p>5.2. Assessment by immediate superiors with regards to the work accomplishment</p> <p>5.3. Interviews with the participants on actual work or training settings</p>
6. Context of Assessment	<p>6.1 Competency maybe assessed individually in the workplace or in a simulated workplace individually or as a part of a team under limited supervision</p>

UNIT OF COMPETENCY : **HANDLE FARROWING SOWS AND SUCKLINGS**

UNIT CODE : AFF621217

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to raise swine effectively and efficiently. It includes preparing animals for farrowing; performance of farrowing activities; caring of piglets to weaning and recording of technical and production data.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range Statement
1. Prepare animals for farrowing	1.1. Farrowing stalls or pens are cleaned and disinfected following standard hygienic procedures. 1.2. <i>Bathing of sows</i> is conducted following Good Animal Husbandry Practices (GAHP) 1.3. Pregnant sows are transferred to farrowing stalls or pens according to industry standards. 1.4. Feed intake is determined based on farm protocols 1.5. <i>Signs of approaching farrowing</i> are monitored. 1.6. <i>Farrowing materials and supplies</i> are prepared based on work requirements. 1.7. Appropriate personal protective equipment (PPE) are worn following Occupational Safety and Health Standard (OSHS).
2. Perform farrowing-related activities	2.1. <i>Farrowing problems</i> are monitored following enterprise protocol. 2.2. Feed intake is adjusted based on nutrient requirements of animals. 2.3. Sow or gilt is manually assisted based on animal requirement. 2.4. <i>Management of newborn piglets</i> are conducted according to GAHP. 2.5. Placenta and dead piglets are disposed following DENR regulations.
3. Raise piglets to weaning	3.1 Proper temperature/micro-climate is provided based on the Minimum Requirements for the Welfare of Pigs and the Code of Good Animal Husbandry Practices (GAHP) 3.2 Colostrum and milk intake are ensured based from GAHP. 3.3 Iron preparations are injected based on industry standards and manufacturer's specification. 3.4 Castrate male animals based on the Minimum Requirements for the Welfare of Pigs and the Code of Good Animal Husbandry Practices (GAHP)

	<p>3.5 Piglets are fed based on their physiological growth requirements</p> <p>3.6 Piglets are weaned based on industry standards.</p>
4. Maintain Health	<p>4.1 Changes in piglet behavior is monitored following enterprise protocol.</p> <p>4.2 Animal condition are monitored thru changes in fecal color, odor and consistency of piglets according to industry standard procedures.</p> <p>4.3 Uniformity of litter is monitored based on enterprise requirements.</p> <p>4.4 Sow discharges is monitored following instructions of veterinarian.</p> <p>4.5 Vaccination programs are implemented based on veterinary recommendation.</p>
5. Record data	<p>5.1. Farrowing card is updated following enterprise procedures.</p> <p>5.2. Farrowing schedules are monitored with reference to work plan.</p> <p>5.3. Production performance are recorded and reported to immediate authority.</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Bathing sows	1.1 Washing and cleaning of mammary gland 1.2 Washing and cleaning of external genitalia 1.3 Washing and cleaning other parts of animal bodies
2. Signs of farrowing	2.1 Biting of hurdles and guard rails 2.2 Sows assume “dog-sitting” position 2.3 Prominent distention and enlargement of the udder 2.4 Enlargement and swelling of the vulva 2.5 Frequent urination 2.6 Milk letdown 2.7 Mucous discharge with meconium
3. Farrowing materials and supplies	3.1 Old newspaper 3.2 Brooders 3.3 Three 50-watt incandescent bulb 3.4 Tooth clipper 3.5 Mild antiseptic 3.6 Tatting materials
4. Farrowing problems	4.1 Sow 4.2 Abnormal vaginal discharge 4.3 Mastitis – inflammation of the mammary gland 4.4 Agalactia – absence of milk production 4.5 Dystocia – difficult birth or farrowing 4.6 Piglets 4.7 Crushing 4.8 Cannibalism 4.9 Weak
5. Management of newborn piglets	5.1 Drying or wiping with powder or cloth 5.2 Navel cord care 5.3 Tooth clipping 5.4 Tattooing piglet identification (tattooing, ear notch,) 5.5 Brooding 5.6 Tail docking (as per enterprise requirements)
6. Changes in piglet animal behavior	6.1 Listlessness 6.2 Increase in body temperature 6.3 Loss of appetite 6.4 Solitary or separation from the group 6.5 Huddling 6.6 Thumping 6.7 Shivering
7. Animal condition	7.1 Constipation 7.2 Diarrhea – liquid, pasty
8. Changes in fecal color and odor	8.1 Color <ul style="list-style-type: none"> • Yellowish • Greenish • Fatty • Orange • Whitish

	8.2	Odor <ul style="list-style-type: none"> • Offensive (fishy odor) • Non-offensive
9. Production performance	10.1	Weaning weights
	10.2	Percentage runts

EVIDENCE GUIDE

<p>1 Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> 1.1. Prepared animals for farrowing 1.2. Performed farrowing-related activities 1.3. Raised piglets to weaning 1.4. Maintained health 1.5. Recorded data
<p>2 Required Knowledge and Attitudes</p>	<ol style="list-style-type: none"> 2.1. Communication <ol style="list-style-type: none"> 2.1.1 Preparation of farrowing card, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency 2.2. Safety Practices <ol style="list-style-type: none"> 2.2.1 Implementation of regulatory controls and policies relative to proper handling, use and disposal of biologics and other veterinary drugs and supplies 2.2.2 Proper disposal of placenta and dead fetuses 2.2.3 Proper attire inside the farm premises 2.3. Mathematics and Mensuration <ol style="list-style-type: none"> 2.3.1 Computation of sow productivity index, feed conversion efficiency, parameters of reproductive efficiency and financial viability of the swine enterprise 2.4. Codes and Regulations <ol style="list-style-type: none"> 2.4.1 Compliance to animal health program, standards and accreditation program of the Bureau of Animal Industry (BAI) and Local Government Units (LGUs) 2.4.2 Compliance with environmental standards set by the DENR and LGUs 2.4.3 Compliance with standards set by the Bureau of Agriculture and Fishery Products Standards (BAFPS) 2.5. Systems, Processes and Operations <ol style="list-style-type: none"> 2.5.1 General care and herd health management from piglet to marketable age and weight 2.6. Tools and Equipment: Uses and Specifications <ol style="list-style-type: none"> 2.6.1 Weighing scale (10 kg cap.) – for monitoring of piglets 2.6.2 Automatic drinkers and feeders 2.6.3 Feed scoops 2.6.4 Power sprayer 2.6.5 Tooth clipper, forceps, scissor and other tools for identification of animals 2.7. Maintenance <ol style="list-style-type: none"> 2.7.1 Regular check-up and repair of tools and equipment 2.8. Materials: Uses and Specifications

	<p>2.8.1 Office equipment and supplies for regular monitoring of production performance and economic viability of the swine operation</p> <p>2.9. Values</p> <p>2.9.1 Safety consciousness on vaccine handling and other biological</p> <p>2.9.2 Accuracy in medication and treatment of hog's diseases</p> <p>2.9.3 Honesty in marketing and financial transactions</p> <p>2.9.4 Perseverance and industriousness on care and management of the general heard</p>
3 Required Skills	<p>3.1 Work safety</p> <p>3.2 Skills in using tools and equipment</p> <p>3.3 Calculations</p> <p>3.4 Communicating ideas and info</p>
4 Resource Implications	<p>4.1. Farm</p> <p>4.2. Pens and cages</p> <p>4.3. Tools and equipment appropriate to forrowing of sow and sucklings.</p> <p>4.4. Sows with piglets</p>
5 Method of Assessment	<p>Competency in this unit may be assessed through:</p> <p>5.1. Practical demonstration related to underpinning knowledge, skills and attitudes</p> <p>5.2. Assessment by immediate superiors with regards to the work accomplishment</p> <p>5.3. Interviews with the participants on actual work or training settings</p>
6 Context of Assessment	<p>6.1 Competency maybe assessed individually in the workplace or in a simulated workplace individually or as a part of a team under limited supervision</p>

UNIT OF COMPETENCY : **RAISE WEANLINGS**

UNIT CODE : AFF621218

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to strategically prevent post-weaning lag, effectively and efficiently, thus ensuring a healthy starter stocks for finishing. It includes preparation of piglets for weaning; handling of newly-weaned piglets; maintaining health and record keeping.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range Statement
1. Prepare piglets for weaning	1.2 Pens are cleaned and disinfected based on farm specifications 1.3 Materials and equipment are adjusted and supplied 1.4 Weaners are grouped based on farm specifications. 1.5 Weaners are transferred in compliance with the Animal Welfare Act 1.6 Animals are fed according to animal requirements.
2. Maintain conducive atmosphere and facilities for feeding	2.1 Pen is cleaned regularly following standard hygienic procedures. 2.2 Proper temperature is provided based on the Minimum Standards on the Welfare of Pigs and Code of Good Animal Husbandry Practices (GAHP) 2.3 Feeders are checked and adjusted to ensure proper functioning 2.4 Feed ration is gradually shifted and increased based on animal requirements 2.5 Fresh and clean water is provided at all times (ad libitum)
3. Maintain health of newly-weaned piglets	3.2 Animal condition is monitored following enterprise procedures. 3.3 Uniformity of litter is monitored following farm procedures. 3.4 Weaners are dewormed based on farm protocols 3.5 Vaccination programs are implemented based on veterinary recommendations.
4. Record data	4.1 Weanling records are updated using standard enterprise 4.2 Weaning schedules are monitored 4.3 Production performance of weanlings are monitored and reported according to enterprise procedures.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Materials and equipment	1.1 Automatic drinkers 1.2 Feeders 1.3 Heat lamps/bulbs 1.4 Brooders 1.5 Identification markers 1.6 Disinfectants
2. Adjusted	2.1. Increase quantity of feeds 2.2. Decrease quantity of feeds
3. Feed ration shifted	3.1. Booster to pre-starter 3.2. Starter-grower 3.3. Grower-Finisher
4. Animal condition	4.1. Changes in animal behavior <ul style="list-style-type: none"> • Listlessness • Increase in body temperature • Loss appetite • Solitary separation from the group • Huddling • Thumping 4.2. Changes fecal consistency <ul style="list-style-type: none"> • Constipation • Diarrhea – liquid, pasty 4.3. Changes in fecal color <ul style="list-style-type: none"> • Yellowish • Greenish • Fatty • Orange • Whitish
5. Production performance	7.1 Average daily gain 7.2 Feed conversion ratio

EVIDENCE GUIDE

<p>1 Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> 1.1. Prepared piglets for weaning 1.2. Managed newly-weaned piglets 1.3. Maintained health of newly-weaned piglets 1.4. Recorded data
<p>2 2. Required Knowledge and Attitudes</p>	<ol style="list-style-type: none"> 2.1 Communication <ol style="list-style-type: none"> 2.1.1 Preparation of weaners' card, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency 2.2 Safety Practices <ol style="list-style-type: none"> 2.2.1 Implementation of regulatory controls and policies relative to proper handling, use and disposal of biologics and other veterinary drugs and supplies 2.2.2 Proper attire inside the farm premises 2.3 Mathematics and Mensuration <ol style="list-style-type: none"> 2.3.1 Computation of mortality rates, piglets weaned per sow per year, feed conversion efficiency, and financial viability of the swine enterprise 2.4 Codes and Regulations <ol style="list-style-type: none"> 2.4.1 Compliance to animal health program, standards and accreditation program of the Bureau of Animal Industry (BAI) and Local Government Units (LGUs) 2.4.2 Compliance with environmental standards set by the DENR and LGUs 2.4.3 Compliance with standards set by the Bureau of Agriculture and Fishery Products Standards (BAFPS) 2.5 Systems, Processes and Operations <ol style="list-style-type: none"> 2.5.1 General care and herd health management from piglet to weaning age and weight 2.6 Tools and Equipment: Uses and Specifications <ol style="list-style-type: none"> 2.6.1 Automatic drinkers and feeders 2.6.2 Power sprayer 2.6.3 Feeding scoops 2.6.4 Weighing scale (500 kg cap.) – 2.6.5 Tooth clipper, forceps, scissor and other tools for identification of animals 2.6.6 Automatic syringe and needles 2.7 Maintenance <ol style="list-style-type: none"> 2.7.1 Regular check-up and repair of tools and equipment

	<p>2.8 Materials: Uses and Specifications</p> <p>2.8.1 Office equipment and supplies for regular monitoring of production performance and economic viability of the swine operation</p> <p>2.9 Values</p> <p>2.9.1 Safety consciousness on vaccine handling and other biological</p> <p>2.9.2 Accuracy in medication and treatment of hog's diseases</p> <p>2.9.3 Competence and self-confidence towards selection of good weaners</p> <p>2.9.4 Honesty in marketing and financial transactions</p> <p>2.9.5 Perseverance and industriousness on care and management of the general heard</p>
3 Required Skills	<p>3.1 Work safety</p> <p>3.2 Skills in using tools and equipment</p> <p>3.3 Calculations</p> <p>3.4 Communicating ideas and info</p>
4 Resource Implications	<p>4.1 Farm</p> <p>4.2 Pens</p> <p>4.3 Tools and equipment appropriate in raising weanlings</p> <p>4.4 Piglets (weanlings)</p>
5 Method of Assessment	<p>Competency in this unit may be assessed through:</p> <p>5.1 Practical demonstration related to underpinning knowledge, skills and attitudes</p> <p>5.2 Assessment by immediate superiors with regards to the work accomplishment</p> <p>5.3 Interviews with the participants on actual work or training settings</p>
6 Context of Assessment	<p>6.1 Competency maybe assessed individually in the workplace or in a simulated workplace individually or as a part of a team under limited supervision</p>

UNIT OF COMPETENCY : PRODUCE FINISHERS

UNIT CODE : AFF621219

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to care for finishers effectively and efficiently. It includes preparing animals for finishing; proper management and feeding finishers, providing care and monitoring the health of the animals and profitable marketing of hogs either as replacements stocks/breeders or market hogs.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range Statement
1. Prepare animals for finishing	1.1. Suitable growers are selected for finishing based on weight and age. 1.2. Finishers building are cleaned and disinfected following enterprise procedures. 1.3. Materials and equipment are adjusted and supplied according to work requirements. 1.4. Growers are grouped based on industry standards and enterprise specifications. 1.5. Growers are transferred based on the Minimum Standards on the Welfare of Pigs and Code of Good Animal Husbandry Practices (GAHP)
2. Maintain conducive atmosphere and facilities	2.1. Pen is cleaned regularly following hygienic procedures. 2.2. Proper temperature is monitored and provided based on the Minimum Standards on the Welfare of Pigs and Code of Good Animal Husbandry Practices (GAHP) 2.3. Height of drinkers are checked and adjusted to ensure proper functioning based on the Minimum Standards on the Welfare of Pigs and Code of Good Animal Husbandry Practices (GAHP) 2.4. Enough floor space is provided based on the Minimum Standards on the Welfare of Pigs and Code of Good Animal Husbandry Practices (GAHP) 2.5. Weak animals are isolated based on industry standards.
3. Feed finishers	3.1 Feeders are checked and adjusted to ensure proper functioning 3.2 Animals are fed according to a standard feeding system . 3.3 Feed ration is adjusted and shifted based on farm protocols and physiological growth.

	3.4 Medicated feeds are withdrawn according to veterinarian instructions.
4. Maintain herd health care and medication program	<p>4.1 Changes in animal behavior are monitored following Animal Welfare Act and GAHP.</p> <p>4.2 Changes in posture of animal is monitored Animal Welfare Act and GAHP.</p> <p>4.3 Changes in respiration of animal is monitored Animal Welfare Act and GAHP.</p> <p>4.4 Changes in skin color is monitored Animal Welfare Act and GAHP.</p> <p>4.5 Uniformity of stocks is monitored following enterprise protocol.</p> <p>4.6 Vaccination and medication programs are implemented based on veterinarian instructions</p>
5. Prepare animals for marketing	<p>5.2 Animal weight is determined using weighing scales.</p> <p>5.3 Marketable animals are prepared and reserved following marketing requirements and procedures.</p> <p>5.4 Loading facility and ramp are prepared with reference to Animal Welfare Act.</p> <p>5.5 Animals are moved to loading facility following Animal Welfare Act.</p> <p>5.6 Ensure the transportation vehicle is cleaned and disinfected prior to entering farm premises in line with GAHP.</p>
6. Record Data	<p>6.1 Finishing records are is updated following enterprise protocol.</p> <p>6.2 Production parameters for finishers are monitored with reference to production requirements.</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Materials and Equipment	1.1 driving board 1.2 rubber slappers 1.3 feeders 1.4 drinkers 1.5 disinfectants 1.6 identification markers
2. Feeding systems	2.1 Ad libitum feeding 2.2 Restricted feeding 2.3 Combined 2.4 Wet feeding 2.5 Dry feeding
3. Changes in animal behavior	3.1 Listlessness 3.2 Increase in body temperature 3.3 Loss appetite 3.4 Solitary separation from the group 3.5 Mucosal discharge on the eyes and snout 3.6 Diarrhea 3.7 Constipation
4. Changes in posture	4.1 Lateral recumbency 4.2 Sternal recumbency 4.3 Dog – sitting 4.4 Extended head 4.5 Circling movements
5. Changes in respiration	5.1 Rapid breathing 5.2 Abdominal breathing 5.3 Other upper respiratory sounds 5.4 Abnormal respiratory excretions
6. Changes in skin color	6.1 Pale 6.2 Bluish 6.3 Yellowish 6.4 Reddish 6.5 Grayish/Crusted
7. Production parameters	7.1 Feed Conversion Ration(FCR) 7.2 Average Daily Gain (ADG) 7.3 Percentage mortalities

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> 1.1. Prepared animals for finishing 1.2. Managed finishers 1.3. Fed finishers 1.4. Maintained herd health management and medication program 1.5. Sold animals 1.6. Recorded Data
<p>2. Required Knowledge and Attitudes</p>	<ol style="list-style-type: none"> 2.1 Communication <ol style="list-style-type: none"> 2.1.1 Preparation of stock inventory, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency 2.2 Safety Practices <ol style="list-style-type: none"> 2.2.1 Implementation of regulatory controls and policies relative to proper handling, use and disposal of biologics and other veterinary drugs and supplies 2.2.2 Proper attire inside the farm premises 2.3 Mathematics and Mensuration <ol style="list-style-type: none"> 2.3.1 Computation feed conversion efficiency, average daily gain, feed profit and financial viability of the swine enterprise 2.4 Codes and Regulations <ol style="list-style-type: none"> 2.4.1 Compliance to animal health program, standards and accreditation program of the Bureau of Animal Industry (BAI) and Local Government Units (LGUs) 2.4.2 Compliance with environmental standards set by the DENR and LGUs 2.4.3 Compliance with standards set by the Bureau of Agriculture and Fishery Standards 2.5 Systems, Processes and Operations <ol style="list-style-type: none"> 2.5.1 Selection of good starters, general care and herd health management from to marketable age and weight 2.6 Tools and Equipment: Uses and Specifications <ol style="list-style-type: none"> 2.6.1 Automatic drinkers and feeders 2.6.2 Feed scoops 2.6.3 Power sprayer 2.6.4 Driving board 2.6.5 Automatic and disposable syringes 2.6.6 Weighing balance(500 kg cap.) – for monitoring and marketing of hogs

	<p>2.7 Maintenance 2.7.1 Regular check-up and repair of tools and equipment</p> <p>2.8 Materials: Uses and Specifications 2.8.1 Office equipment and supplies for regular monitoring of production performance and economic viability of the swine operation</p> <p>2.9 Values 2.9.1 Safety consciousness on vaccine handling and other biological 2.9.2 Accuracy in medication and treatment of hog's diseases 2.9.3 Competence and self-confidence towards selection of breeding stocks 2.9.4 Honesty in marketing and financial transactions 2.9.5 Perseverance and industriousness on care and management of the general heard</p>
3. Required Skills	<p>3.1 Work safety 3.2 Skills in using tools and equipment 3.3 Calculations 3.4 Communicating ideas and info</p>
4. Resource Implications	<p>4.1. Farm facility 4.2. Tools and equipment appropriate to finisher production 4.3. Starters – finishers</p>
5. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <p>5.1. Practical demonstration related to underpinning knowledge, skills and attitudes 5.2. Assessment by immediate superiors with regards to the work accomplishment 5.3. Interviews with the participants on actual work or training settings</p>
6. Context of Assessment	<p>6.1 Competency maybe assessed individually in the workplace or in a simulated workplace individually or as a part of a team under limited supervision.</p>

UNIT OF COMPETENCY : MAINTAIN HEALTHY ANIMAL ENVIRONMENT

UNIT CODE : AFF621220

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to maintain healthy environment effectively and efficiently. It includes proper attainment of relative humidity, controlling the required temperature and ventilation, sustaining quality air and water supplies, application of chemicals to eliminate vermin and proper disposal of the hazardous wastes.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range Statement
1. Maintain relative humidity	1.1 Relative humidity is measured using hygrometer for calibration 1.2 Curtains and blowers are adjusted following production requirements. 1.3 Monitoring schedules for RH readings is followed according to work plan.
2. Control temperature	2.1 Temperature is measured is using thermometer. 2.2 Curtains, blowers and window shutter are adjusted following production requirements. 2.3 Monitoring schedules for temperature readings is followed according to work plan. 2.4 In extreme conditions, contingency procedures are implemented
3. Sustain air quality	3.1 Approximate air quality is evaluated using sensory means . 3.2 Common air pollutants are recognized following standards procedures. 3.3 Sources of air pollutants are identified, neutralized and removed according to DENR standards. 3.4 Affected animals are referred to veterinarian.
4. Sustain water quality	4.1. Schedule for routine testing of water is observed according to work plan. 4.2. Water samples are properly collected according to established protocols. 4.3. Water samples are submitted for testing to authority. 4.4. Regular cleaning and disinfection of pipes and tanks are done according to established protocols.
5. Maintain ventilation	5.1 Curtain management is performed according to the animal requirements. 5.2 Maintenance of blowers is done regularly.
6. Control vermin	6.1 Breeding places of vermin are eliminated following

	<p>enterprise procedures.</p> <p>6.2 Farm wastes that attract vermins are disposed properly</p> <p>6.3 Perimeter fences are routinely checked and repaired to prevent entry of stray animals</p> <p>6.4 Applications of appropriate chemicals are used according to FPA guidelines.</p> <p>6.5 Breeding grounds of mosquitoes are eliminated following standard procedures.</p>
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RANGE OF VARIABLES

VARIABLE	RANGE
1. Contingency procedures	1.1 Showering of all animals 1.2 Cooling of roof 1.3 Cooling of water source 1.4 Installation of additional blower fans 1.5 Provision of wallowing pools
2. Sensory means	2.1. Chest tightness 2.2. Lachrymation, 2.3. Offensive odor
3. Common air pollutants	3.1. Dust, 3.2. Ammonia, 3.3. Hydrogen sulfide, 3.4. Airborne pathogen
4. Disinfection	4.1 Chlorination 4.2 Liming 4.3 Disinfectants <ul style="list-style-type: none"> ○ QUAT ○ ammonium compounds, ○ peroxygen
5. Vermins	5.1. Rats 5.2. Stray animals 5.3. Flies 5.4. Mosquitoes
6. Breeding grounds of mosquitoes	6.1. Stagnant bodies of water 6.2. Damp areas 6.3. Clogged drainage

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 Maintained relative humidity 1.2 Controlled temperature 1.3 Sustained air quality 1.4 Sustained water quality 1.5 Maintained ventilation 1.6 Controlled vermin
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1 Communication <ul style="list-style-type: none"> 2.1.1 Preparation of stock inventory, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency 2.2 Safety Practices <ul style="list-style-type: none"> 2.2.1 Implementation of regulatory controls and policies relative to proper handling, use and disposal of biologics and other veterinary drugs and supplies 2.2.2 Proper disposal of placenta and dead fetuses 2.3 Mathematics and Mensuration <ul style="list-style-type: none"> 2.3.1 Computation of sow productivity index, feed conversion efficiency, parameters of reproductive efficiency and financial viability of the swine enterprise 2.3.2 Codes and Regulations Compliance to animal health program, standards and accreditation program of the Bureau of Animal Industry (BAI) and Local Government Units (LGUs) 2.4 Systems, Processes and Operations <ul style="list-style-type: none"> 2.4.1 Breeding procedures (AI, Natural and Combination) 2.4.2 Transferring of animals in compliance of Animal Welfare 2.4.3 Selection of breeder and replacement stocks, general care and herd health management from piglet to marketable age and weight 2.5 Tools and Equipment: Uses and Specifications <ul style="list-style-type: none"> 2.5.1 Carpentry tools 2.6 Maintenance <ul style="list-style-type: none"> 2.6.1 Regular check-up and repair of tools and equipment 2.7 Materials: Uses and Specifications <ul style="list-style-type: none"> 2.7.1 Office equipment and supplies for regular monitoring of production performance and economic viability of the swine operation

	<p>2.8 Blue Printing</p> <p>2.8.1 Infrastructure plans and lay-out approved based on existing regulatory policies and proper zoning scheme of the government and local ordinances</p> <p>2.9 Values</p> <p>2.9.1 Honesty in marketing and financial transactions</p> <p>2.9.2 Perseverance and industriousness on care and management of the general herd</p>
3. Required Skills	<p>3.1 Work safety</p> <p>3.2 Skills in using tools and equipment</p> <p>3.3 Calculations</p> <p>3.4 Communicating ideas and information</p>
4. Resource Implications	<p>4.1. Farm</p> <p>4.2. Carpentry tools</p>
5. Method of Assessment	<p>Competency in this unit may be assessed through:</p> <p>5.1. Practical demonstration related to underpinning knowledge, skills and attitudes</p> <p>5.2. Assessment by immediate superiors with regards to the work accomplishment</p> <p>5.3. Interviews with the participants on actual work or training settings</p>
6. Context of Assessment	<p>6.1 Competency maybe assessed individually in the workplace or in a simulated workplace individually or as a part of a team under limited supervision.</p>

UNIT OF COMPETENCY : **APPLY BIO-SECURITY MEASURES**

UNIT CODE : AFF321302

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to apply bio-security measures in livestock farm operations. It includes identifying bio-security threats and hazards, applying disease prevention practices, applying prevention practices in disease transmission and maintaining records.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Identify bio-security threats and hazards	1.1 Immediate threats to the health of the animal are identified and reported to immediate authority. 1.2 Bio-security threats are identified based on established organizational policy.
2. Apply disease prevention practices	2.1 Preparation of supplies and materials and application of disinfectants are done according to standard operating procedures 2.2 Vehicle and foot vats disinfections are prepared and monitored regularly according to standard operating practice 2.3 Hygiene and sanitation of farm, farm personnel and visitors are followed based on standard operating practice 2.4 All types of vehicles and equipment entering the farm are disinfected according to standard operating procedures 2.5 New stocks to be introduced into the herd are quarantined and vaccinated according to standard operating procedures 2.6 Vaccination programs and health programs are implemented as instructed by veterinarian.
3. Apply preventive disease transmission practices	3.1 Samples are collected and prepared for serological monitoring of notifiable diseases. 3.2 Preventive measures on notifiable diseases as declared by BAI are followed based on industry and BAI standard 3.3 Medication and vaccination programs are followed strictly as recommended by manufacturers and veterinarian 3.4 Hygiene and sanitation of farm, farm personnel and visitors are followed based on standard operating

	<p>practice</p> <p>3.5 Sick and unfit stocks are culled and isolated in accordance to Animal Welfare Act and standard operating procedure</p> <p>3.6 Dead stocks and by-products are disposed using proper disposal method</p> <p>3.7 Tools and equipment used in sick and dead animals are properly clean and disinfected.</p> <p>3.8 Communication with supervising veterinarian are done regularly following enterprise requirements.</p>
4. Maintain records	<p>4.1 Appropriate records in checklist format are kept, collated and updated regularly in accordance with organizational policy</p> <p>4.2 Reporting to veterinarian or supervisor are carried out based on industry standards.</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Immediate threats	1.1 Natural calamities 1.2 Physical threat 1.3 Unforeseen events (prevailing diseases, outbreaks)
2. Bio-security threats	2.1 Animals other than stocks being taken cared of 2.2 Diseases 2.2.1 Bacterial 2.2.2 Viral diseases 2.2.3 Parasitic diseases 2.2.4 Parasitism 2.3 Finished products/By-products of animal production 2.4 Traffic flow of potential carriers 2.4.1 People 2.4.2 Stocks 2.4.3 Equipment 2.4.4 Vehicles 2.5 Birds, pests and rodents
3. Supplies and materials	3.1 Syringes 3.2 Needles 3.3 Drugs and other medical supplies
4. Tools and equipment	4.1 Boots 4.2 Rust remover 4.3 Power sprayer 4.4 Portable sprayer 4.5 Torch
5. Disinfectants	5.1 Chemical disinfectants 5.1.1 Phenols 5.1.2 Iodophore 5.1.3 Aldehydes 5.1.4 Organic salts 5.1.5 Quarternary products 5.1.6 Combined disinfectants 5.2 Physical disinfectants 5.2.1 Torch 5.2.2 Disposable suits 5.2.3 Boots 5.2.4 Paints 5.2.5 Rust remover 5.3 Lime for animal disposal
6. Stocks	6.1 Replacement breeder 6.2 Outsourced piglets/ 6.3 Outsourced fatteners

7. Vaccination program	7.1 Market pig program 7.2 Breeder stocks program
8. Health program	8.1 Medication program 8.2 Deworming program
9. Standard operating procedures	9.1 Annual health certificate 9.2 At least 3 days downtime 9.3 Change of clothes before entering farm 9.4 Hand washing before and after each activities 9.5 Shower –in and shower-out 9.6 Wearing of appropriate footwear 9.7 Foot baths in all entry points 9.8 Self-isolation when sick 9.9 Not allowed to raise pigs in their house 9.10 Not allowed to bring in fresh or cooked meat 9.11 Not allowed to entertain personal visitors inside the farm
10. Sick and unfit stocks	10.1 Listlessness 10.2 Increase body temperature 10.3 Loss appetite 10.4 Solitary separation from the group 10.5 Mucosal discharge on the eyes and snout 10.6 Swollen body parts 10.7 Appearance of vesicles
11. Disposal method	11.1 Bury animals 11.2 Use mortality pit
12. Appropriate records	12.1 Swine population 12.2 Vaccination 12.3 Medication 12.4 Standard routine procedure

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 Identified bio-security threats and hazards 1.2 Applied disease prevention practices 1.3 Applied preventive disease transmission practices 1.4 Maintained records
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1 Communication <ul style="list-style-type: none"> 2.1.1 Accomplishing the check list 2.2 Safety Practices <ul style="list-style-type: none"> 2.2.1 Knowledge in handling disinfectants and other veterinary supplies 2.2.2 Knowledge of proper waste handling and management 2.3 Mathematics and Mensuration <ul style="list-style-type: none"> 2.3.1 Proper calculation of inclusion rates of disinfectants and chemicals 2.4 Codes and Regulations <ul style="list-style-type: none"> 2.4.1 Appropriate legal and supervising regulatory body pertinent to bio-security program such as BAI, PAHC, and DENR 2.5 Systems, Processes and Operations <ul style="list-style-type: none"> 2.5.1 Selection of replacement or new stocks 2.5.2 Implementation of appropriate animal health program 2.6 Materials: Uses and Specifications <ul style="list-style-type: none"> 2.6.1 Drugs and medical supplies 2.6.2 Office supplies and materials – for regular inventory and monitoring of animal health program 2.7 Tools and Equipment: Uses and Specifications <ul style="list-style-type: none"> 2.7.1 Rust remover 2.7.2 Power sprayer 2.7.3 Torch 2.8 Values <ul style="list-style-type: none"> 2.8.1 Honesty in reporting 2.8.2 Confidence in selecting healthy replacement or new stocks 2.8.3 Personal integrity and perseverance in performing routine bio-security measures 2.8.4 Ability to work well with others harmoniously
<p>3. Required Skills</p>	<ul style="list-style-type: none"> 3.1 Work safety 3.2 Calculations 3.3 Communicate effectively
<p>4. Resource Implication</p>	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> 5.1. Farm location with required facilities 5.2. Supplies and materials applied for bio-security

	measures
5. Method of Assessment	Competency in this unit may be assessed through: 5.1. Observation/Demonstration 5.2. Third party report 5.3. Portfolio
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 **ANIMAL PRODUCTION (SWINE) NC II**.

3.1 CURRICULUM DESIGN

Nominal Training Duration: 18 hrs – Basic Competencies
48 hrs – Common Competencies
240 hrs – Core Competencies

306 hrs - Total Duration

Course Description:

This course is designed to enhance the knowledge, desirable attitudes and skills of animal production technician in accordance with industry standards. It covers competencies in handling breeders, handling farrowing sows and sucklings, raising weanlings, producing finishers, maintaining animal healthy environment and applying bio-security measures.

BASIC COMPETENCIES

18 hours

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
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
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COMMON COMPETENCIES

48 hours

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Apply safety measures in farm operations	1.1 Apply appropriate safety measures while working in farm 1.2 Safe keep/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 Prepare and use farm tools 2.2 Prepare 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
4. Process farm wastes	4.1 Collect farm wastes 4.2 Identify and segregate wastes 4.3 Treat and process farm wastes 4.4 Perform housekeeping	<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

CORE COMPETENCIES
240 hours

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Handle Breeders	1.1 Perform preparatory breeding activities 1.2 Breed sows and gilts 1.3 Prepare and train boar for breeding 1.4 Monitor signs of pregnancy 1.5 Maintain and monitor animal health condition 1.6 Record data	<ul style="list-style-type: none"> • Hands- on • Lectures/ Discussion • Videos/ Illustrations • Demonstration 	<ul style="list-style-type: none"> • Written examination • Oral evaluation • Demonstration with questions
2. Handle Farrowing Sows and Sucklings	2.1 Prepare animals for farrowing 2.2 Perform farrowing related activities 2.3 Raise piglets to weaning 2.4 Maintain Health 2.5 Record Data	<ul style="list-style-type: none"> • Hands- on • Lectures/ Discussion • Videos/ Illustrations • Demonstration 	<ul style="list-style-type: none"> • Written examination • Oral evaluation • Demonstration with questions
3. Raise Weanlings	3.1 Prepare piglets for weaning 3.2 Maintain conducive atmosphere and facilities for feeding 3.3 Maintain health of newly-weaned piglets 3.4 Record Data	<ul style="list-style-type: none"> • Hands- on • Lectures/ Discussion • Videos/ Illustrations • Demonstration 	<ul style="list-style-type: none"> • Written examination • Oral evaluation • Demonstration with questions
4. Produce Finishers	4.1 Prepare animals for finishing 4.2 Maintain conducive atmosphere and facilities 4.3 Feed finishers 4.4 Maintain herd health care and medication program 4.5 Prepare animals for marketing 4.6 Record data	<ul style="list-style-type: none"> • Hands- on • Lectures/ Discussion • Videos/ Illustrations • Demonstration 	<ul style="list-style-type: none"> • Written examination • Oral evaluation • Demonstration with questions
5. Maintain Animal Healthy Environment	5.1 Maintain relative humidity 5.2 Control temperature 5.3 Sustain air quality 5.4 Sustain water quality 5.5 Maintain ventilation 5.6 Control vermin	<ul style="list-style-type: none"> • Hands- on • Lectures/ Discussion • Videos/ Illustrations • Demonstration 	<ul style="list-style-type: none"> • Written examination • Oral evaluation • Demonstration with questions

6. Apply Bio-Security Measures	6.1 Identify bio-security threats and hazards 6.2 Apply disease prevention practices 6.3 Apply preventive disease transmission practices 6.4 Maintain records	<ul style="list-style-type: none"> • Hands- on • Lectures/ Discussion • Videos/ Illustrations • Demonstration 	<ul style="list-style-type: none"> • Written examination • Oral evaluation • Demonstration with questions
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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;
- Able to communicate, both orally and in writing; and
- Physically fit and mentally healthy as certified by a Public Health Officer

3.1 LIST OF TOOLS, EQUIPMENT AND MATERIALS

ANIMAL PRODUCTION (SWINE) NC II

Recommended list of tools, equipment and materials for the training of 25 trainees for Animal Production (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%)
		1	Power sprayer	6 pcs.	Germicidal Soap
		1	Generator set	6 packs	Paper towels
		1	Refrigerator (16 to 17 degree C)	5 boxes	Glass slides
		1	Fire extinguisher	5 boxes	Cover slips
		1	Set Audio visuals with screen	2	Trash can
		1	White board	50 pcs.	Disposal waste bags
		12 sets	Chairs and tables	2 pcs.	Broomstick
		2 Units	Computer	2 pcs.	Brooms
		1	Printer	6 pcs.	Brush
		1	Photocopier	6	Board marker
		1 unit	Dryer-Sterilizer	2 rolls	MaskingTapes
		1	Semen transport box	12 pcs	Pencil/ballpen
				5 reams	Bond paper
				2 spray	Pheromones

				bottles	
				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
		2	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

ANIMAL PRODUCTION(SWINE) NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	AREA IN SQ. METERS	TOTAL AREA IN SQ. METERS	GRAND TOTAL AREA IN SQ.M.
• Building (permanent)	13.00 x 15.00	195.00		195.00
○ Student/Trainee Working Space	2.00 x 2.00 per student/trainee	4.00 per student	100.00	
○ Lecture Room	7.00 x 5.00	35.00	35.00	
○ Learning Resource Center	3.00 x 5.00	15.00	15.00	
○ Tool room/Storage room	5 x 5	25 x 1	25	
○ Wash area, Toilet & Locker room	2 x 5	10 x 2	20	
• Housing with facilities				
• Farm area				300

Note: **1ha./100 sows

Prior to accreditation, a training provide must have a Memorandum of Agreement with private swine farm with a at least **five-sow level farm** as practice farm/workplace for the trainees.

3.6 TRAINER'S QUALIFICATIONS FOR AGRICULTURE SECTOR

Trainers who will deliver the training on ANIMAL PRODUCTION (SWINE) NC II should have the following :

- Must be a holder of National TVET Trainer Certificate I (TM I and NC)
- Preferrably computer literate
- Must be physically and mentally fit

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 Animal Production (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. The qualification of Animal Production (Swine) NC II may be attained through:
 - 4.2.1. Accumulation of Certificates of Competency (COCs) in the following areas:
 - 4.2.1.1. Handle Breeders
 - 4.2.1.2. Handle farrowing sows and sucklings
 - 4.2.1.3. Raise weanlings
 - 4.2.1.4. Produce finishers
 - 4.2.1.5. Maintain healthy animal environment
 - 4.2.1.6. Apply biosecurity measures

Successful candidates shall be awarded Certificates of Competency (COCs) bearing the signature of the Regional Director and Chair of the recognized local industry body.
 - 4.2.2. Demonstration of competence through project-type assessment covering all required units of the qualification.
- 4.3. Assessment shall focus on the core units of competency. The basic and common units shall be integrated or assessed concurrently with the core units.
- 4.4. 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
 - 4.4.2 Experienced Workers (wage employed or self-employed)
- 4.5. 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).

COMPETENCY MAP
Animal Production (Swine) NCII

**BASIC
COMPETENCIES**

Participate in workplace communication	Work in a team environment	Practice career professionalism	Practice occupational health and safety procedures
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**COMMON
COMPETENCIES**

Apply Safety Measures in Farm Operations	Use Farm Tools and Equipment	Perform Estimation and Basic Calculation	Process Farm Wastes
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**CORE
COMPETENCIES**

Handle Breeders	Handle Farrowing Sows and Sucklings	Raise Weanlings
Produce Finishers	Maintain Healthy Animal Environment	Apply Biosecurity Measures

GLOSSARY OF TERMS

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

Boar – uncastrated male swine usually kept for breeding

Colostrum – first milk from a female animal after giving birth

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

Immunization – prevention of diseases by providing appropriate vaccines to animals

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

Nutrients – food elements or substance found in the feeds such as protein, carbohydrates, fats and others

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

Sow – a mature female hog that had given birth

Swine – a collective term for hogs

Vaccination – a preventive measure to inoculate an animal with a mildly toxic preparation of bacteria or a virus of specific disease to prevent or to lessen the effects of the disease

Waterer – equipment used in providing water to animals

Weanling – refers to a young animal of either sex which has been separated from the mother at the end of the lactation period

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- Competency Assessment and Certification Office