

# TRAINING REGULATIONS



## ORGANIC AGRICULTURE PRODUCTION 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 ORGANIC AGRICULTURE PRODUCTION NC II**

### **Section 1 ORGANIC AGRICULTURE PRODUCTION NCII QUALIFICATIONS**

The **ORGANIC AGRICULTURE PRODUCTION NC II** Qualification consists of competencies that a person must achieve to produce organic farm products such as chicken and vegetables including producing of organic supplements such as fertilizer, concoctions and extracts. It has two (2) elective competencies which are on raising organic hogs and raising organic small ruminants.

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 include the following:

<b>Code</b>	<b>BASIC COMPETENCIES</b>
500311105	Participate in workplace communication
500311104	Work in a team environment
500311107	Practice career professionalism
500311108	Practice occupational health and safety procedures

<b>Code</b>	<b>COMMON COMPETENCIES</b>
AGR321201	Apply safety measures in farm operations
AGR321202	Use farm tools and equipment
AGR321203	Perform estimation and calculations
TRS311201	Develop and update industry knowledge
AGR321205	Perform record keeping

<b>Code</b>	<b>CORE COMPETENCIES</b>
AGR612301	Raise organic chicken
AGR611306	Produce organic vegetables
AGR611301	Produce organic fertilizer
AGR611302	Produce organic concoctions and extracts

<b>Code</b>	<b>ELECTIVE COMPETENCIES</b>
AGR612302	Raise organic hogs
AGR612303	Raise organic small ruminants

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

- Organic Agriculture Farmer
- Organic Chicken Raiser
- Organic Hogs Raiser
- Organic Small Ruminants Raiser
- Organic Vegetables Farmer
- Organic Concoctions and Extracts Producer
- Organic Fertilizer Producer

## SECTION 2 COMPETENCY STANDARDS

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

**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.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range of Variables
1. Describe team role and scope	1.1. The <b><i>role and objective of the team</i></b> is identified from available <b><i>sources of information</i></b> 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 <b><i>workplace context</i></b> 3.3. Observed protocols in reporting using standard operating procedures 3.4. Contribute to the development of team work plans based on an understanding of team's role and objectives and individual competencies of the members.

## RANGE OF VARIABLES

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



## EVIDENCE GUIDE

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

**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.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <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 <del>is</del> are maintained in the course of managing oneself based on performance <b>evaluation</b> 1.3 Commitment to the organization and its goal is demonstrated in the performance of duties
2. Set and meet work priorities	2.1 Competing demands are prioritized to achieve personal, team and organizational goals and objectives. 2.2 <b>Resources</b> are utilized efficiently and effectively to manage work priorities and commitments 2.3 Practices along economic use and maintenance of equipment and facilities are followed as per established procedures
3. Maintain professional growth and development	3.1 <b>Trainings and career opportunities</b> are identified and availed of based on job requirements 3.2 <b>Recognitions</b> are -sought/received and demonstrated as proof of career advancement 3.3 <b>Licenses and/or certifications</b> 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"> <li>1.1 Attained job targets within key result areas (KRAs)</li> <li>1.2 Maintained intra - and interpersonal relationship in the course of managing oneself based on performance evaluation</li> <li>1.3 Completed trainings and career opportunities which are based on the requirements of the industries</li> <li>1.4 Acquired and maintained licenses and/or certifications according to the requirement of the qualification</li> </ul>
2. Required Knowledge and Attitude	<ul style="list-style-type: none"> <li>2.1 Work values and ethics (Code of Conduct, Code of Ethics, etc.)</li> <li>2.2 Company policies</li> <li>2.3 Company-operations, procedures and standards</li> <li>2.4 Fundamental rights at work including gender sensitivity</li> <li>2.5 Personal hygiene practices</li> </ul>
3. Required Skills	<ul style="list-style-type: none"> <li>3.1 Appropriate practice of personal hygiene</li> <li>3.2 Intra and Interpersonal skills</li> <li>3.3 Communication skills</li> </ul>
4. Resource Implications	<p>The following resources <b>MUST</b> be provided:</p> <ul style="list-style-type: none"> <li>4.1 Workplace or assessment location</li> <li>4.2 Case studies/scenarios</li> </ul>
5. Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> <li>5.1 Portfolio Assessment</li> <li>5.2 Interview</li> <li>5.3 Simulation/Role-plays</li> <li>5.4 Observation</li> <li>5.5 Third Party Reports</li> <li>5.6 Exams and Tests</li> </ul>
6. Context of Assessment	<ul style="list-style-type: none"> <li>6.1 Competency may be assessed in the work place or in a simulated work place setting</li> </ul>

**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.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range of Variables
1. Identify hazards and risks	1.1 <b>Safety regulations</b> and workplace safety and hazard control practices and procedures are clarified and explained based on organization procedures 1.2 <b>Hazards/risks</b> 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 <b>Contingency measures</b> 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 <b>Personal protective equipment (PPE)</b> is correctly used in accordance with organization OHS procedures and practices 3.4 Appropriate assistance is provided in the event of a workplace emergency in accordance with established organization protocol
4. Maintain OHS awareness	4.1 <b>Emergency-related drills and trainings</b> are participated in as per established organization guidelines and procedures 4.2 <b>OHS personal records</b> are completed and updated in accordance with workplace requirements

## RANGE OF VARIABLES

VARIABLE	RANGE
1. Safety regulations	May include but are not limited to: 1.1 Clean Air Act 1.2 Building code 1.3 National Electrical and Fire Safety Codes 1.4 Waste management statutes and rules 1.5 Philippine Occupational Safety and Health Standards 1.6 DOLE regulations on safety legal requirements 1.7 ECC regulations
2. Hazards/Risks	May include but are not limited to: 2.1 Physical hazards – impact, illumination, pressure, noise, vibration, temperature, radiation 2.2 Biological hazards- bacteria, viruses, plants, parasites, mites, molds, fungi, insects 2.3 Chemical hazards – dusts, fibers, mists, fumes, smoke, gasses, vapors 2.4 Ergonomics <ul style="list-style-type: none"> <li>• Psychological factors – over exertion/ excessive force, awkward/static positions, fatigue, direct pressure, varying metabolic cycles</li> <li>• Physiological factors – monotony, personal relationship, work out cycle</li> </ul>
3. Contingency measures	May include but are not limited to: 3.1 Evacuation 3.2 Isolation 3.3 Decontamination 3.4 (Calling designed) emergency personnel
4. PPE	May include but are not limited to: 4.1 Mask 4.2 Gloves 4.3 Goggles 4.4 Hair Net/cap/bonnet 4.5 Face mask/shield 4.6 Ear muffs 4.7 Apron/Gown/coverall/jump suit 4.8 Anti-static suits
5. Emergency-related drills and training	5.1 Fire drill 5.2 Earthquake drill 5.3 Basic life support/CPR 5.4 First aid 5.5 Spillage control 5.6 Decontamination of chemical and toxic 5.7 Disaster preparedness/management
6. OHS personal records	6.1 Medical/Health records 6.2 Incident reports 6.3 Accident reports 6.4 OHS-related training completed

## EVIDENCE GUIDE

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

## COMMON COMPETENCIES

**UNIT TITLE : APPLY SAFETY MEASURES IN FARM OPERATIONS**

**UNIT CODE : AGR321201**

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

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Determine areas of concern for safety measures	1.1. <b>Work tasks</b> are identified in line with farm operations 1.2. <b>Place</b> for safety measures are determined in line with farm operations 1.3. <b>Time</b> for safety measures are determined in line with farm operations 1.4. Appropriate <b>tools, materials and outfits</b> 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. <b>Emergency procedures</b> 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. <b>Waste materials</b> are disposed according to manufacturers, government and farm requirements



## RANGE OF VARIABLES

VARIABLE	RANGE
1. Work tasks	May be selected from any of the following sectors: 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 Wrenches Screw driver Pliers 4.2. Materials Bottles Plastic Bags Syringe 4.3. Outfit Masks Gloves Boots Overall coats Hat 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> <p>1.1 Determined areas of concern for safety measures</p> <p>1.2 Applied appropriate safety measures according to industry requirements</p> <p>1.3 Prepared tools, materials and outfit needed</p> <p>1.4 Performed proper disposal of used materials</p> <p>1.5 Safekeep/cleaned tools, materials and outfit in designated facilities</p>
<p>2. Required Knowledge and Attitudes</p>	<p>2.1 Safety Practices</p> <p>    2.1.1 Implementation of regulatory controls and policies relative to treatment of area and application of chemicals</p> <p>    2.1.2 Proper disposal of waste materials</p> <p>2.2 Codes and Regulations</p> <p>    2.2.1 Compliance to health program of DOH and DENR</p> <p>    2.2.2 Hazard identification</p> <p>    2.2.3 Emergency procedures</p> <p>2.3 Tools &amp; Equipment: Uses and Specification</p> <p>    2.3.1 Masks, gloves, boots, overall coats for health protection</p> <p>2.4 Maintenance</p> <p>    2.4.1 Regular check-up and repair of tools, materials and outfit before and after use</p>
<p>3. Required Skills</p>	<p>3.1 Ability to recognize effective tools, materials and outfit</p> <p>3.2 Ready skills required to read labels, manuals and other basic safety information</p>
<p>4. Method of Assessment</p>	<p>Competency in this unit must be assessed through:</p> <p>4.1 Practical demonstration</p> <p>4.2 Third Party Report</p>
<p>5. Resource Implications</p>	<p>5.1 Farm location</p> <p>5.2 Tools, equipment and outfits appropriate in applying safety measures</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 TITLE** : **USE FARM TOOLS AND EQUIPMENT**  
**UNIT CODE** : **AGR321202**  
**UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes required to use farm tools and equipment. It includes selection, operation and preventive maintenance of farm tools and equipment.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range of Variables
1. Select and use farm tools	1.1. Appropriate farm tools are identified 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. Appropriate <b>farm equipment</b> identified 2.2. Instructional manual of the farm tools and equipment are carefully read prior to operation 2.3. <b>Pre-operation check-up</b> 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**

<b>VARIABLE</b>	<b>RANGE</b>
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

1. Critical Aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1. Correctly identified appropriate farm tools and equipment</li> <li>1.2. Operated farm equipments according to manual specification</li> <li>1.3. Performed preventive maintenance</li> </ul>
2. Required Knowledge and Attitudes	<ul style="list-style-type: none"> <li>2.1. Safety Practices <ul style="list-style-type: none"> <li>2.1.1. Ideal good work habits to demonstrate to workers easy and safety standards during operation of farm equipment</li> </ul> </li> <li>2.2. Codes and Regulations <ul style="list-style-type: none"> <li>2.2.1. Environmental Compliance Certificate (ECG)</li> <li>2.2.2. Effective work supervision in the operations of farm equipment</li> </ul> </li> <li>2.3. Tools &amp; Equipment: Uses and Specification <ul style="list-style-type: none"> <li>2.3.1. Knowledge in calibrating and use of equipment</li> <li>2.3.2. Safety keeping of equipments every after use</li> </ul> </li> <li>2.4. Maintenance <ul style="list-style-type: none"> <li>2.4.1. Regular upkeep of equipments</li> <li>2.4.2. Preventive maintenance skills</li> </ul> </li> <li>2.5. Values <ul style="list-style-type: none"> <li>2.5.1. Positive outlook towards work</li> <li>2.5.2. Possesses pre-emptive/anticipatory skills</li> </ul> </li> </ul>
3. Required Skills	<ul style="list-style-type: none"> <li>3.1. Ability to recognized defective farm equipment</li> <li>3.2. Perform proper management practices of safety measures</li> </ul>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> <li>4.1. Direct observation</li> <li>4.2. Practical demonstration</li> <li>4.3. Third Party Report</li> </ul>
5. Resource Implications	<p>Service/operational manual of farm tools and equipment</p> <ul style="list-style-type: none"> <li>5.1. Tools and equipment</li> <li>5.2. Farm implements</li> </ul>
6. Context of Assessment	<ul style="list-style-type: none"> <li>6.1. Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision</li> </ul>

**UNIT TITLE** : **PERFORM ESTIMATION AND BASIC CALCULATION**  
**UNIT CODE** : **AGR321203**  
**UNIT DESCRIPTOR** : This unit covers the knowledge, skills and attitudes required to perform basic workplace calculations.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range of Variables
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. <b>Calculations</b> to be made are identified according to job requirements 2.2. Correct <b>method of calculation</b> identified 2.3. <b>System and units of measurement</b> 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	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1. Performed estimation</li> <li>1.2. Performed basic workplace calculation</li> <li>1.3. Applied corrective measures as maybe necessary</li> </ul>
2. Required Knowledge and Attitudes	<ul style="list-style-type: none"> <li>2.1. Mathematics               <ul style="list-style-type: none"> <li>2.1.1. Basic mathematical operations</li> <li>2.1.2. Percentage and ratios</li> <li>2.1.3. Unit Conversion</li> <li>2.1.4. Basic accounting principles and procedures                   <ul style="list-style-type: none"> <li>2.1.4.1. Production cost</li> <li>2.1.4.2. Sales</li> <li>2.1.4.3. Accounts receivables/payables</li> </ul> </li> </ul> </li> <li>2.2. Systems, Processes and Operations               <ul style="list-style-type: none"> <li>2.2.1. Knowledge in different management practices and operational procedures</li> </ul> </li> <li>2.3. Values               <ul style="list-style-type: none"> <li>2.3.1. Safety consciousness</li> <li>2.3.2. Time consciousness and management</li> <li>2.3.3. Cost consciousness</li> <li>2.3.4. Precision</li> </ul> </li> </ul>
3. Required Skills	<ul style="list-style-type: none"> <li>3.1. Ability to perform basic calculation</li> <li>3.2. Communicate effectively</li> </ul>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> <li>4.1. Practical demonstration</li> <li>4.2. Written examination</li> </ul>
5. Resource Implications	<ul style="list-style-type: none"> <li>5.1. Relevant tools and equipment for basic calculation</li> <li>5.2. Recommended data</li> </ul>
6. Context of Assessment	<ul style="list-style-type: none"> <li>6.1. Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision</li> </ul>



**UNIT OF COMPETENCY : DEVELOP AND UPDATE INDUSTRY KNOWLEDGE**

**UNIT CODE : AGR TRS311201**

**UNIT DESCRIPTOR :** This unit of competency deals with the knowledge, skills and attitude required to access, increase and update industry knowledge. It includes seek information on the industry and update industry knowledge.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range of Variables
1. Seek information on the industry	1.1 <b><i>Sources of information</i></b> on the industry are correctly identified and accessed 1.2 <b><i>Information</i></b> to assist effective work performance is obtained in line with job requirements 1.3 Specific information on sector of work is accessed and updated 1.4 Industry information is correctly applied to day-to-day work activities
2. Update industry knowledge	2.1 Informal and/or formal research is used to update general knowledge of the industry 2.2 Updated knowledge is shared with customers and colleagues as appropriate and incorporated into day-to-day working activities

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Sources of information	Information sources may include but not limited to: <ul style="list-style-type: none"> <li>1.1 media</li> <li>1.2 reference books</li> <li>1.3 libraries</li> <li>1.4 industry associations</li> <li>1.5 industry journals</li> <li>1.6 internet</li> <li>1.7 personal observation and experience</li> </ul>
2. Information	<ul style="list-style-type: none"> <li>2.1. Different sectors of the industry and the services available in each sector</li> <li>2.2. Relationship between the industry and other industries</li> <li>2.3. Industry working conditions</li> <li>2.4. Legislation that affects the industry               <ul style="list-style-type: none"> <li>2.4.1. IDOFS</li> <li>2.4.2. Permaculture</li> <li>2.4.3. KNF</li> <li>2.4.4. PNFI</li> <li>2.4.5. Biodynamics</li> </ul> </li> <li>2.5. Local laws and ordinances               <ul style="list-style-type: none"> <li>2.5.1. PNS</li> <li>2.5.2. GAHP</li> <li>2.5.3. Animal Welfare Act of 1998</li> <li>2.5.4. NOAP</li> <li>2.5.5. HACCP</li> <li>2.5.6. Organic Agriculture Act</li> <li>2.5.7. ICS</li> </ul> </li> <li>2.6. Integrated Organic Technology System</li> <li>2.7. Industrial relations issues and major organizations</li> <li>2.8. Career opportunities within the industry</li> <li>2.9. Work ethic required to work in the industry and industry expectations of staff</li> <li>2.10. Quality assurance</li> </ul>

## EVIDENCE GUIDE

1. Critical aspects of Competency	Assessment requires evidence that the candidate/trainee : 1.1 Knew key sources of information on the industry 1.2 Updated industry knowledge 1.3 Accessed and used industry information
2. Required Knowledge and Attitude	2.1. Overview of quality assurance in the industry 2.2. Role of individual staff members 2.3. Industry information sources
3. Required Skills	3.1. Time management 3.2. Ready skills needed to access industry information 3.3. Basic competency skills needed to access the internet
4. Resource Implications	4.1 Sources of information on the industry 4.2 Industry knowledge
5. Methods of Assessment	5.1 Interview/questions 5.2 Practical demonstration 5.3 Portfolio of industry information related to trainee's work
6. Context for Assessment	6.1. Assessment may be done in the workplace or in a simulated workplace setting (assessment centers)

**UNIT OF COMPETENCY :**      **PERFORM RECORD KEEPING**

**UNIT CODE**                    **:**      **AGR321205**

**UNIT DESCRIPTOR**        **:**      This unit covers the knowledge, skills and attitude required to carry-out inventory activities, maintain production record and prepare financial records.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range Statement
1. Carry out inventory activities	1.1 Inventory <b>inputs</b> are determined according enterprise requirements. 1.2 Defective tools and equipment are determined according to operation manuals 1.3 Facilities are inspected according to according standard codes and laws.
2. Maintain production record	2.1 Production plan are prepared according to enterprise requirements. 2.2 Schedule for <b>production activities</b> are prepared based from enterprise requirements and plan. 2.3 <b>Production report</b> are prepared in accordance with enterprise reporting procedures 2.4 <b>Input</b> and <b>production</b> are monitored using monitoring chart.
3. Prepare financial records	3.1. <b>Production cost</b> are computed using established computation procedures. 3.2. Revenue is computed using established computation procedures.

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Inputs	1.1 Plant <ul style="list-style-type: none"> <li>1.1.1 Planting materials</li> <li>1.1.2 Fertilizer</li> <li>1.1.3 Concoctions (Pesticides and insecticides )</li> <li>1.1.4 Beneficial microorganisms</li> </ul> 1.2 Animals <ul style="list-style-type: none"> <li>1.1.5 Stocks</li> <li>1.1.6 Feeds</li> <li>1.1.7 Concoctions</li> <li>1.1.8 Medications</li> <li>1.1.9 Beneficial microorganisms</li> </ul> 1.2 Miscellaneous materials
2. Production activities	2.1. Plant <ul style="list-style-type: none"> <li>○ Planting</li> <li>○ Fertilizer application</li> <li>○ Pesticides application</li> <li>○ Implementation of bio-security measures</li> <li>○ Irrigation/watering</li> <li>○ Weeding</li> <li>○ Harvesting</li> <li>○ Post-harvesting</li> </ul> 2.2. Animal <ul style="list-style-type: none"> <li>○ Feeding</li> <li>○ Cleaning and Sanitization</li> <li>○ Implementation of bio-security measures</li> <li>○ Growth and health condition</li> <li>○ Harvesting</li> <li>○ Post harvesting</li> </ul> 2.3. Miscellaneous activities
3. Production report	3.1. Categorize and record quality of harvest 3.2. volume /quantity of products harvested
4. Input	4.1. Input(plant) <ul style="list-style-type: none"> <li>○ Fertilizer</li> <li>○ Concoctions (Pesticides and insecticides )</li> <li>○ Beneficial microorganisms</li> </ul> 4.2. Input(animal) <ul style="list-style-type: none"> <li>○ Feeds</li> <li>○ Concoctions</li> <li>○ Medications</li> <li>○ Beneficial microorganisms</li> </ul> 4.3. Miscellaneous inputs
5. Production	5.1 Growth rate 5.2 Survival rate
6. Production cost	6.1. Labor 6.2. Inputs 6.3. Tools, equipment and facility depreciation cost 6.4. Administrative cost 6.5. Miscellaneous

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> <li>1.1. Determined inventory inputs according enterprise requirements</li> <li>1.2. Determined defective tools and equipments according to operation manuals.</li> <li>1.3. Inspected facilities according to standard codes and laws.</li> <li>1.4. Prepared production plan and report according to enterprise requirements and reporting procedures.</li> </ol>
<p>2. Required Knowledge and Attitudes</p>	<ol style="list-style-type: none"> <li>2.1. Knowledge, Theory, Practices and Systems Operations               <ol style="list-style-type: none"> <li>2.1.1. Kinds of tools and equipment</li> <li>2.1.2. Defects of tools and equipment</li> <li>2.1.3. Monitoring method</li> <li>2.1.4. Farm planning and budgeting</li> <li>2.1.5. Methods and process of production</li> <li>2.1.6. Quality control</li> <li>2.1.7. Basic bookkeeping</li> <li>2.1.8. Practice 3Rs and 5S</li> <li>2.1.9. Program of work activities are implemented as scheduled</li> </ol> </li> <li>2.2. Communication               <ol style="list-style-type: none"> <li>2.2.1. Prepare and submit required reports</li> <li>2.2.2. Documentation of production and financial data</li> </ol> </li> <li>2.3. Mathematics and Mensuration               <ol style="list-style-type: none"> <li>2.3.1. Basic mathematical operations</li> <li>2.3.2. Metric system</li> <li>2.3.3. Computation for production of organic fertilizer</li> <li>2.3.4. Unit conversion</li> </ol> </li> <li>2.4. Safety Practices               <ol style="list-style-type: none"> <li>2.4.1. Safety during inspections of tools, farm implements and equipment.</li> </ol> </li> <li>2.5. Codes and Regulations               <ol style="list-style-type: none"> <li>2.5.1. Codes and laws on quality control</li> <li>2.5.2. Codes and laws on inspection of facilities</li> </ol> </li> <li>2.6. Materials, Tools &amp; Equipment: Uses, Specifications and Maintenance               <ol style="list-style-type: none"> <li>2.6.1. Tools and Equipment                   <ol style="list-style-type: none"> <li>2.6.1.1. Can understand and follow instructional manuals</li> </ol> </li> <li>2.6.2. Materials                   <ol style="list-style-type: none"> <li>2.6.2.1. Where to source good quality supplies and materials needed in record keeping</li> </ol> </li> <li>2.6.3. Maintenance                   <ol style="list-style-type: none"> <li>2.6.3.1. Maintenance of records</li> </ol> </li> </ol> </li> <li>2.7. Values               <ol style="list-style-type: none"> <li>2.7.1. Time consciousness and management</li> <li>2.7.2. Resourcefulness</li> <li>2.7.3. Cost consciousness</li> <li>2.7.4. Diligence</li> <li>2.7.5. Determined</li> </ol> </li> </ol>

3. Required Skills	<ul style="list-style-type: none"> <li>3.1 Work safety</li> <li>3.2 Skills in determining defective tools and equipment</li> <li>3.3 Measuring and calculations</li> <li>3.4 Estimation</li> <li>3.1. Basic mathematical skills</li> <li>3.2. Skills in preparation of reports</li> <li>3.3. Bookkeeping</li> <li>3.4. Oral and written communication</li> </ul>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> <li>4.1. Demonstration with questioning</li> <li>4.2. Written examination</li> </ul>
5. Resource Implications	<ul style="list-style-type: none"> <li>5.1 All supplies, materials and farm implements needed during farm operations should be readily available at the farm site: <ul style="list-style-type: none"> <li>5.1.1 Farm site</li> <li>5.1.2 Office supplies, materials, tools and farm equipment</li> </ul> </li> <li>5.2 Protective clothing equipment and materials. All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm.</li> <li>5.3 Technical supervisors should have skills and ability in the successful implementation of work program activities.</li> </ul>
6. Context of Assessment	<ul style="list-style-type: none"> <li>6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers</li> </ul>

## CORE COMPETENCIES

This section gives the details of the contents of the core units of competency required in Organic Agriculture Production NCII.

**UNIT OF COMPETENCY :**       **RAISE ORGANIC CHICKEN**

**UNIT CODE**                       **:**       **AGR612301**

**UNIT DESCRIPTOR**       **:**       This unit covers the knowledge, skills and attitudes required to raise organic chicken efficiently and effectively. It includes selecting healthy stocks, determine suitable chicken house requirements, install cage equipment, feed chicken, manage health and growth of chicken and harvesting activities.

ELEMENT	PERFORMANCE CRITERIA
	<i>Italicized</i> terms are elaborated in the Range of Variables
1. Select healthy stocks and suitable housing	1.1. Breed/strains breeds are identified as per PNS-Organic Agriculture-Livestock and GAHP Guidelines 1.2. Healthy chicks are selected based on <b><i>industry acceptable indicator for healthy chicks.</i></b> 1.3. Suitable site for chicken house are determined based on PNS recommendations. 1.4. Chicken house design is prepared based PNS recommendations. 1.5. <b><i>House equipment</i></b> installation design is prepared in line with PNS recommendation and actual scenario.
2. Set-up cage equipment	2.1. House equipment are installed in line with housing equipment installation design 2.2. <b><i>Bedding materials</i></b> are secured based on availability in the locality 2.3. Bedding is prepared in accordance with housing equipment housing design 2.4. <b><i>Brooding facility</i></b> is set-up in accordance with the housing equipment installation design.
3. Feed chicken	3.1. Suitable <b><i>feed materials</i></b> are selected based on availability in the locality and nutrient requirements of chicken 3.2. Feed materials are prepared following enterprise prescribed formulation 3.3. Animals are fed based on <b><i>feeding management program</i></b> 3.4. Feeding is monitored following enterprise procedure
4. Grow and harvest chicken	4.1. Growth rate is monitored based on enterprise procedures 4.2. <b><i>Health care program</i></b> are implemented based on enterprise procedures 4.3. <b><i>Sanitation and cleanliness program</i></b> are implemented based on enterprise procedure 4.4. <b><i>Organic waste</i></b> for fertilizer formulation are collected. 4.5. Suitable chicken for harvest are selected based on market specifications. 4.6. Production record is accomplished according to enterprise procedure.



## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Industry acceptable indicator for healthy chicks	1.1. Bright eyes 1.2. Clean, downy feathers 1.3. Uniformity (90%-95%) 1.4. Alert 1.5. 21 day old chicks from organic farm from PNS/BAFPS 07:2003 ICS 65.020 (Organic Agriculture-Specification)
2. House equipment	2.1. Feeding troughs 2.2. Waterers 2.3. Containers of concoction
3. Bedding materials	3.1. Rice hull 3.2. Saw dust 3.3. Coco coir 3.4. Rice straw
4. Brooding facility	4.1. Bulb 4.2. Charcoal 4.3. Rice hull
5. Feed materials	5.1. Protein Sources (e.g. madre de agua; ipil-ipil) other leguminous plants 5.2. Carbohydrate sources – rootcrops 5.3. Mineral sources – e.g. Calcium-eggshells, sea shells; potassium –tubers (banana)
6. Feeding management program	6.1. Restricted 6.2. Adlibitum 6.3. Combination
7. Health care program	7.1. Deworming 7.2. Vitamins/mineral supplementation using concoctions
8. Sanitation and cleanliness program	8.1. Cleaning 8.2. Application of beneficial micro-organism 8.3. Collection of manure
9. Organic waste	9.1. Animal manure 9.2. Waste/Rotten vegetables and fruits

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Selected healthy stocks</li> <li>1.2 Determined suitable chicken house requirements</li> <li>1.3 Set-up cage equipment</li> <li>1.4 Fed chicken</li> <li>1.5 Managed health and growth of chicken</li> <li>1.6 Harvested chicken</li> </ul>
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> <li>2.1. Knowledge, Theory, Practices and Systems Operations <ul style="list-style-type: none"> <li>2.1.1. Different breeds of chickens</li> <li>2.1.2. Criteria/indicators of healthy chicks</li> <li>2.1.3. Characteristics of a suitable site</li> <li>2.1.4. Housing designs and housing equipment</li> <li>2.1.5. Housing equipment for chicken</li> <li>2.1.6. Simple carpentry</li> <li>2.1.7. Housing equipment for chicken</li> <li>2.1.8. Types of bedding materials</li> <li>2.1.9. Bedding preparation</li> <li>2.1.10. Procedures in setting-up of brooding facilities</li> <li>2.1.11. Characteristics of feed materials</li> <li>2.1.12. Preparation of feeds</li> <li>2.1.13. Advantages and disadvantages of different feeding management</li> <li>2.1.14. Knowledge on record-keeping</li> <li>2.1.15. Organic-based health care products/materials</li> <li>2.1.16. Practice 3Rs and 5S</li> <li>2.1.17. Parts and functions of specific tools and farm implements use in raising organic chicken</li> <li>2.1.18. Program of work activities are implemented as scheduled</li> </ul> </li> <li>2.2. Communication <ul style="list-style-type: none"> <li>2.2.1. Prepare and submit required reports</li> <li>2.2.2. Documentation on chicken production/raising</li> <li>2.2.3. Record keeping and filing</li> </ul> </li> <li>2.3. Mathematics and Mensuration <ul style="list-style-type: none"> <li>2.3.1. Basic mathematical operations</li> <li>2.3.2. Computation for production of chicken</li> <li>2.3.3. Unit conversion</li> <li>2.3.4. Simple/basic calculation</li> </ul> </li> <li>2.4. Safety Practices <ul style="list-style-type: none"> <li>2.4.1. Proper application use of tools, farm implements and equipment.</li> <li>2.4.2. Proper use of carpentry and electrical tools</li> <li>2.4.3. Wear appropriate PPE</li> <li>2.4.4. Proper waste disposal</li> </ul> </li> <li>2.5. Codes and Regulations <ul style="list-style-type: none"> <li>2.5.1. Comply with Organic Law</li> <li>2.5.2. Good Animal Husbandry Practices (GAHP)</li> <li>2.5.3. DENR, zoning ordinances</li> <li>2.5.4. PNS/BAFPS 07:2003 ICS 65.020 (Organic</li> </ul> </li> </ul>

	<p>Agriculture-Specification)</p> <p>2.5.5. Animal Welfare Act – Minimum Standards on the Welfare of Poultry</p> <p>2.5.6. PNS – Livestock</p> <p>2.6. Materials, Tools &amp; Equipment: Uses, Specifications and Maintenance</p> <p>2.6.1. Tools and Equipment</p> <p>2.6.1.1. Can understand and follow instructional manuals</p> <p>2.6.1.2. Safe keeping of equipments every after use</p> <p>2.6.2. Materials</p> <p>2.6.2.1. Where to source good quality supplies, materials and equipment needed in the operation of the farm</p> <p>2.6.3. Maintenance</p> <p>2.6.3.1. Regular upkeep of equipments and facilities</p> <p>2.6.3.2. Preventive maintenance skills</p> <p>2.7. Values</p> <p>2.7.1. Safety consciousness</p> <p>2.7.2. Time consciousness and management</p> <p>2.7.3. Resourcefulness</p> <p>2.7.4. Cost consciousness</p> <p>2.7.5. Diligence</p> <p>2.7.6. Determined</p> <p>2.7.7. Observes hygiene</p>
3. Required Skills	<p>3.1. Work safety</p> <p>3.2. Skills in using tools and equipment</p> <p>3.3. Skills in identifying breeds</p> <p>3.4. Skills in ocular inspection</p> <p>3.5. Measuring and drawing skills</p> <p>3.6. Carpentry</p> <p>3.7. Basic electricity</p> <p>3.8. Monitoring skills</p> <p>3.9. Practicing occupational, health and safety procedures</p> <p>3.10. Record keeping</p> <p>3.11. Calculations</p> <p>3.12. Basic mathematical skills</p> <p>3.13. Skills in preparation of reports</p> <p>3.14. Oral and written communication</p>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ol style="list-style-type: none"> <li>1. Demonstration with oral questioning</li> <li>2. Written examination</li> </ol>
5. Resource Implications	<p>5.1 All supplies, materials and farm implements needed during farm operations should be readily available at the farm site:</p> <p>5.1.1 Chicken farm area (free range)</p> <p>5.1.2 Chicken house</p> <p>5.1.3 Brooding facility</p> <p>5.1.4 Practice animal</p> <p>5.1.5 Knapsack sprayer</p>

	<p>5.1.6 Tools, supplies and materials</p> <ul style="list-style-type: none"> <li>• Pencil</li> <li>• Papers</li> <li>• Record books</li> <li>• Plant materials</li> <li>• Bedding materials</li> <li>• Brooding materials -1 gal. capacity tin can; charcoal</li> <li>• Protective gloves</li> <li>• Masks</li> <li>• Rubber boots</li> <li>• Weighing scale</li> <li>• Carpentry tools</li> <li>• Push-Pull Ruled Tape</li> <li>• Calculators</li> <li>• Pail</li> <li>• Feeding trough</li> <li>• Water containers</li> <li>• Bite/push nipples</li> <li>• Shovel</li> <li>• Wheel barrow</li> <li>• Chopping board</li> <li>• Electrical tools and supplies</li> </ul> <p>5.2 Organic chicken raising manual</p> <p>5.3 Protective clothing equipment and materials</p> <p>5.4 All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm</p> <p>5.5 Technical supervisors should have skills and ability in the successful implementation of work program activities</p>
6. Context of Assessment	6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers

**UNIT OF COMPETENCY :**      **PRODUCE ORGANIC VEGETABLES**

**UNIT CODE**                    :      **AGR611306**

**UNIT DESCRIPTOR**         :      This unit covers the knowledge, skills and attitude required to establish nursery, plant seedlings, perform plant care and perform harvest and post-harvest.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized terms are elaborated in the Range of Variables</i>
1. Establish nursery	1.1. Seeds are selected in accordance with the PNS, and NSQCS/BPI. 1.2. Seedbeds are prepared in accordance with planting requirements based on Vegetable Production manual (VPM). 1.3. <b>Care and maintenance of seedlings</b> are done in accordance with enterprise practice. 1.4. Potting media are prepared in accordance with enterprise procedure.
2. Plant seedlings	2.1 <b>Land preparation</b> is carried out in accordance with enterprise practice 2.2 Beneficial micro-organisms are introduced prior to planting in accordance with enterprise procedure 2.3 Seedlings are transplanted/planted based on VPM recommendations 2.4 Seedlings are watered based on VPM recommendations
3. Perform plant care and management	3.1 Water management is implemented according to plan. 3.2 Effective <b>control measures</b> are determined on specific pest and diseases as described under the “pest, disease and weed management” of the PNS 3.3 All missing hills are replanted to maintain the desired plant population of the area 3.4 Plant rejuvenation/rationing are maintained according to PNS. 3.5 <b>Organic fertilizers</b> are applied in accordance with fertilization policy of the PNS
4. Perform harvest and post-harvest activities	4.1. Products are checked using maturity indices according to to PNS, PNS-organic agriculture and enterprise practice. 4.2. Marketable products are harvested according to PNS, PNS-organic agriculture and enterprise practice. 4.3. Harvested vegetables are classified according to PNS, PNS-organic agriculture and enterprise practice. 4.4. Appropriate harvesting tools and materials are used according to PNS. 4.5. <b>Post harvest practices</b> are applied according to PNS and GAP recommendations 4.6. Production record is accomplished according to enterprise procedures.

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Care and maintenance of seedlings	1.1. Handling 1.2. Watering 1.3. Organic foliar fertilizing 1.4. Pest management
2. Land preparation	2.1. Clearing 2.2. Plowing 2.3. Harrowing 2.4. Farrowing
3. Control measures	3.1. Crop rotation 3.2. Application of beneficial micro organisms 3.3. Inter-cropping 3.4. Planting botanical repellants 3.5. Displaying organic attractants and repellants 3.6. Preserve existing predators 3.7. Mulching
4. Organic fertilizers	4.1. Basal 4.2. Foliar
5. Post harvest practices	5.1 Postharvest operations 5.2 Using of charts and manuals 5.3 Trimming, sorting, sizing and washing 5.4 Packaging labeling and storing

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency:</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Established nursery</li> <li>1.2 Planted seedlings</li> <li>1.3 Performed plant care activities</li> <li>1.4 Performed harvest and post-harvest activities</li> </ul>
<p>2. Required Knowledge and Attitude</p>	<ul style="list-style-type: none"> <li>2.1 Knowledge, Theory, Practices and Systems Operations <ul style="list-style-type: none"> <li>2.1.1. Germination testing</li> <li>2.1.2. Seedbed preparation procedure</li> <li>2.1.3. Proper handling of seedlings and plants</li> <li>2.1.4. Proper water management and procedures</li> <li>2.1.5. Organic method of pest and disease management</li> <li>2.1.6. Organic method of nutrient management</li> <li>2.1.7. Potting media preparation and procedure</li> <li>2.1.8. Land preparation activities</li> <li>2.1.9. Procedure in applying beneficial micro-organisms</li> <li>2.1.10. Principles of bio-dynamics</li> <li>2.1.11. Transplanting and planting procedures</li> <li>2.1.12. Types of pest and diseases</li> <li>2.1.13. Organic method of preventing and controlling pest and diseases</li> <li>2.1.14. Maturity indices</li> <li>2.1.15. Proper handling of harvesting tools and materials</li> <li>2.1.16. Practices in post harvest of vegetables</li> <li>2.1.17. Principles and guides in post harvest handling of perishables</li> <li>2.1.18. Practice 3Rs and 5S</li> <li>2.1.19. Parts and functions of specific tools and farm implements use in producing organic vegetables</li> <li>2.1.20. Program of work activities are implemented as scheduled</li> </ul> </li> <li>2.2 Communication <ul style="list-style-type: none"> <li>2.2.4. Prepare and submit required reports</li> <li>2.2.5. Documentation on vegetable production</li> <li>2.2.6. Proper book keeping</li> </ul> </li> <li>2.3 Mathematics and Mensuration <ul style="list-style-type: none"> <li>2.3.5. Basic mathematical operations</li> <li>2.3.6. Computation for production of chicken</li> <li>2.3.7. Unit conversion</li> <li>2.3.8. Simple/basic calculation</li> </ul> </li> <li>2.4 Safety Practices <ul style="list-style-type: none"> <li>2.4.5. Proper application use of tools, farm implements and equipment.</li> <li>2.4.6. Proper use of carpentry and electrical tools</li> <li>2.4.7. Wear appropriate PPE</li> <li>2.4.8. Proper waste disposal</li> </ul> </li> <li>2.5 Codes and Regulations</li> </ul>

	<p>2.5.7. Comply with Organic Law</p> <p>2.5.8. DENR, zoning ordinances</p> <p>2.5.9. PNS/BAFPS 07:2003 ICS 65.020 (Organic Agriculture-Specification)</p> <p>2.5.10. Vegetable Production Manual</p> <p>2.6 Materials, Tools &amp; Equipment: Uses, Specifications and Maintenance</p> <p>2.6.4. Tools and Equipment</p> <p>2.6.1.3. Can understand and follow instructional manuals</p> <p>2.6.1.4. Safe keeping of equipments every after use</p> <p>2.6.5. Materials</p> <p>2.6.2.2. Where to source good quality supplies, materials and equipment needed in the operation of the farm</p> <p>2.6.6. Maintenance</p> <p>2.6.3.3. Regular upkeep of equipments and facilities</p> <p>2.6.3.4. Preventive maintenance skills</p> <p>2.7 Values</p> <p>2.7.8. Safety consciousness</p> <p>2.7.9. Time consciousness and management</p> <p>2.7.10. Resourcefulness</p> <p>2.7.11. Cost consciousness</p> <p>2.7.12. Confidence</p> <p>2.7.13. Diligence</p> <p>2.7.14. Honesty</p> <p>2.7.15. Determined and perseverance</p> <p>2.7.16. Observes hygiene</p> <p>2.7.17. Ability to work with others harmoniously</p>
3. Required Skills	<p>3.1. Skills in land preparation</p> <p>3.2. Planting skills</p> <p>3.3. Application of fertilizer</p> <p>3.4. Watering</p> <p>3.5. Care and maintenance</p> <p>3.6. Skills in harvesting and post harvesting</p> <p>3.7. Work safety</p> <p>3.8. Skills in using tools and equipment</p> <p>3.9. Book keeping and record handling</p> <p>3.10. Calculations</p> <p>3.11. Effective Communication</p>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <p>4.1. Practical demonstration with oral questioning</p> <p>4.2. Interview</p>
5. Resource Implications	<p>5.1. All supplies, materials and farm implements needed during farm operations should be readily available at the farm site.</p> <p>5.1.1 Equipment and facilities such as:</p> <ul style="list-style-type: none"> <li>• Booth/temporary shed</li> <li>• Cart (Kariton &amp; paragus)</li> </ul>



	<ul style="list-style-type: none"> <li>• Comb-tooth harrow</li> <li>• Computer</li> <li>• Crates</li> <li>• Farm/ field</li> <li>• Greenhouse/ nursery</li> <li>• Harvesting equipment</li> <li>• Irrigation system (sprinkler, mist/ drip irrigation)</li> <li>• Mower (grass cutter)</li> <li>• Over head projector (OHP)</li> <li>• Portable chain saw</li> <li>• Post-Harvest treatment equipment</li> <li>• Power sprayer</li> <li>• Rotavator</li> <li>• Service vehicle</li> <li>• Sorting equipment</li> <li>• Spike tooth harrow</li> <li>• Storage room</li> <li>• Surface irrigation system</li> </ul> <p>5.1.2 Tools and instruments such as:</p> <ul style="list-style-type: none"> <li>• Bolos</li> <li>• Broomstick</li> <li>• Calculator</li> <li>• Container</li> <li>• Cutting tools</li> <li>• Digging tools</li> <li>• Drying meter</li> <li>• Fruit crate</li> <li>• Harvesting tools</li> <li>• Hat</li> <li>• Knapsack sprayer</li> <li>• Knife</li> <li>• Light hoe</li> <li>• Moisture meter</li> <li>• Petri-dish</li> <li>• pH meter</li> <li>• Pick mattock</li> <li>• Picking knife</li> <li>• Plow</li> <li>• Plumbing tools</li> <li>• Post-Harvest treatment tools</li> <li>• Protective gadgets</li> <li>• Pruning shears</li> </ul> <p>5.1.3 Supplies and Materials such as:</p> <ul style="list-style-type: none"> <li>• Agri bags, plastic</li> <li>• Bamboo stick</li> <li>• Basket</li> <li>• Bond paper</li> <li>• Catching nets</li> <li>• Clips</li> <li>• Coconut dust</li> </ul>
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	<ul style="list-style-type: none"> <li>• Compost</li> <li>• Fertilizers</li> <li>• First aid supplies/ medicine</li> <li>• Flower inducer</li> <li>• Fungicides</li> <li>• Gloves</li> <li>• Growing media (garden soil, sewed sand, compost, soil, manure and sawdust/rice)</li> <li>• Killing bottles</li> <li>• Marking pens</li> <li>• Masks</li> <li>• Mulching material</li> <li>• Hair nets</li> <li>• Packaging materials, assorted</li> <li>• Pail</li> </ul> <p>5.2. All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm</p> <p>5.3. Technical supervisors should have skills and ability in the successful implementation of work program activities</p>
6. Context of Assessment	6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers

**UNIT OF COMPETENCY :**      **PRODUCE ORGANIC FERTILIZER**

**UNIT CODE**                    **:**      **AGR611301**

**UNIT DESCRIPTOR**        **:**      This unit covers the knowledge, skills and attitude required to produce organic fertilizers which include tasks such as preparing composting area and raw materials and carrying-out composting activities and finally, harvesting of fertilizer.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range Statement
1. Prepare composting area and raw materials	1.1 Site is selected based on compost fertilizer production requirements and 1.2 Site lay-out is prepared based on location. 1.3 Bed is prepared in accordance with production requirements 1.4 Materials are gather based on production requirements and PNS for organic fertilizer 1.5 <b>Prepare raw materials</b> following enterprise procedure and PNS for organic fertilizer
2. Compost and harvest fertilizer	2.1 Appropriate <b>composting methods</b> are applied based on production requirements 2.2 Compost is monitored based PNS indicators of fully decomposed fertilizer 2.3 Quality of harvest is checked based on PNS indicators of fully decomposed fertilizer 2.4 <b>Processing of compost fertilizer</b> are carried- out based on production requirement. 2.5 Record keeping is performed according to enterprise procedure.

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Prepare raw materials	1.1 Shred/cut materials 1.2 Weighing
2. Composting methods	2.1. Rapid composting methods 2.2. Double dug composting 2.3. Six month composting 2.4. Substrate composting
3. Process compost fertilizer	3.1 Collection 3.2 Air drying 3.3 Sieving 3.4 Bagging 3.5 Labeling 3.6 Storing

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Prepared composting area</li> <li>1.2 Carried out preparation of raw materials</li> <li>1.3 Carried out composting process</li> <li>1.4 Harvested organic fertilizer</li> </ul>
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> <li>2.1. Knowledge, Theory, Practices and Systems Operations <ul style="list-style-type: none"> <li>2.1.1. Characteristics of composting site</li> <li>2.1.2. Good drainage systems</li> <li>2.1.3. Availability and accessibility of site</li> <li>2.1.4. Area with minimum contamination</li> <li>2.1.5. Types of soil</li> <li>2.1.6. Area with minimal sunlight</li> <li>2.1.7. Leveling of the site</li> <li>2.1.8. Determine volume of production</li> <li>2.1.9. Design layout based on composting method</li> <li>2.1.10. Types of raw materials</li> <li>2.1.11. Preparing bed</li> <li>2.1.12. Composting methods</li> <li>2.1.13. Harvesting and storing of organic fertilizer</li> <li>2.1.14. Record keeping</li> <li>2.1.15. Practice 3Rs and 5S</li> <li>2.1.16. Parts and functions of specific tools and farm implements use in manufacturing organic fertilizer</li> <li>2.1.17. Program of work activities are implemented as scheduled</li> </ul> </li> <li>2.2. Communication <ul style="list-style-type: none"> <li>2.2.1. Prepare and submit required reports</li> <li>2.2.2. Record keeping and documentation of all operations</li> </ul> </li> <li>2.3. Mathematics and Mensuration <ul style="list-style-type: none"> <li>2.3.1. Basic mathematical operations</li> <li>2.3.2. Computation for production of organic fertilizer</li> <li>2.3.3. Unit conversion</li> </ul> </li> <li>2.4. Safety Practices <ul style="list-style-type: none"> <li>2.4.1. Proper application use of tools, farm implements and equipment.</li> <li>2.4.2. Wear appropriate PPE</li> <li>2.4.3. Proper waste disposal</li> </ul> </li> <li>2.5. Codes and Regulations <ul style="list-style-type: none"> <li>2.5.1. Comply with Organic Law</li> <li>2.5.2. PNS guidelines on organic fertilizer</li> </ul> </li> <li>2.6. Materials, Tools &amp; Equipment: Uses, Specifications and Maintenance <ul style="list-style-type: none"> <li>2.6.1. Tools and Equipment <ul style="list-style-type: none"> <li>2.6.1.2. Can understand and follow instructional manuals</li> <li>2.6.1.3. Safe keeping of equipments every after use</li> </ul> </li> <li>2.6.2. Materials</li> </ul> </li> </ul>

	<p>2.6.2.2. Where to source good quality supplies, materials and equipment needed in the operation of the farm</p> <p>2.6.3. Maintenance</p> <p>2.6.3.2. Regular upkeep of equipments and facilities</p> <p>2.6.3.3. Preventive maintenance skills</p> <p>2.7. Values</p> <p>2.7.1. Safety consciousness</p> <p>2.7.2. Time consciousness and management</p> <p>2.7.3. Resourcefulness</p> <p>2.7.4. Cost consciousness</p> <p>2.7.5. Diligence</p> <p>2.7.6. Determined</p> <p>2.7.7. Observes hygiene</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 Basic mathematical skills</p> <p>3.5 Skills in preparation of reports</p> <p>3.6 Oral and written communication</p>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <p>4.1 Demonstration with questioning</p> <p>4.2 Written exam</p> <p>4.3 Oral interview</p>
5. Resource Implications	<p>5.1 All supplies, materials and farm implements needed during farm operations should be readily available at the farm site:</p> <p>5.1.1 Production area for compost making</p> <p>5.1.2 Office supplies, tools and farm equipment</p> <p>5.1.3 Supplies and materials in producing organic fertilizer</p> <p>5.2 Protective clothing equipment and materials All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm</p> <p>5.3 Technical supervisors should have skills and ability in the successful implementation of work program activities</p>
6. Context of Assessment	<p>6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers</p>

**UNIT OF COMPETENCY :**     **PRODUCE ORGANIC CONCOCTIONS AND EXTRACTS**

**UNIT CODE :**                 **AGR611301**

**UNIT DESCRIPTOR :**        This unit covers the knowledge, skills and attitude required to produce organic concoctions and extracts for owned farm consumptions and not for commercial purposes or selling.

<b>ELEMENTS</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range Statement
1. Prepare for the production of various concoctions	1.1. Work and storage areas are cleaned, sanitized and secured. 1.2. <b>Raw materials</b> used are cleaned and freed from synthetic chemicals 1.3. <b>Tools, materials and equipment</b> used are cleaned, freed from contaminations and must be of “food grade” quality 1.4. Personal hygiene are observed according to OHS procedures.
2. Process concoctions	2.1. Raw materials are prepared in accordance with enterprise practice. 2.2. Fermentation period is set based on enterprise practice. 2.3. <b>Various concoctions</b> are fermented following to organic practices. 2.4. Concoctions are harvested based on fermentation period of the concoction.
3. Package concoctions	3.1. Concoctions are contained in sanitized bottles and containers. 3.2. Packaged concoctions are labeled and tagged in accordance with enterprise practice. 3.3. Packaged concoctions are stored in appropriate place and temperature following organic practices. 3.4. Production of concoctions are recorded using enterprise procedures.

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Raw materials	1.1. Natural Growth Enhancer-Fermented Plant Juice (FPJ) <ul style="list-style-type: none"> <li>1.1.1 At least three kinds of plants but not limited to kangkong, camote tops, alugbati, malunggay, banana trunks, bamboo shoots and other fast growing green plants</li> <li>1.1.2 Molasse/mascuvado/ brown sugar</li> </ul> 1.2. Natural Taste Enhancer- Fermented Fruit Juice (FFJ) <ul style="list-style-type: none"> <li>1.2.1 Ripe and sweet fruits but not limited to banana, papaya, watermelon, ampalaya , tomato.</li> <li>1.2.2 Molasses/mascuvado/ brown sugar</li> </ul> 1.3. Kuhol / Fish Amino Acid (KAA/FAA) <ul style="list-style-type: none"> <li>1.3.1 Trash Fish and gills, scales, offal of big fishes, golden kuhol meat</li> <li>1.3.2 Molasses/mascuvado/ brown sugar</li> </ul> 1.4. Natural Immune Booster – Oriental Herbal Nutrient (OHN) <ul style="list-style-type: none"> <li>1.4.1 Garlic, ginger,</li> <li>1.4.2 Pure coconut vinegar</li> <li>1.4.3 Mascuvado</li> </ul> 1.5. Natural Calcium Phosphate Micro Nutrients (CALPHOS) <ul style="list-style-type: none"> <li>1.4.1 animal bones, egg shell, sea shell, kuhol shell</li> <li>1.4.2 Natural vinegar</li> </ul> 1.6. Beneficial Microorganism <ul style="list-style-type: none"> <li>1.5.2 1 kl. cooked, cool rice</li> <li>1.5.3 Molasses/mascuvado/ crude sugar</li> </ul> 1.7. Natural Enzymes – Lactic Acid Bacteria Serum (LABS) <ul style="list-style-type: none"> <li>1.6.1 900 ml. fresh milk</li> <li>1.6.2 100 ml clear liquid from fermented rice</li> <li>1.6.3 1 liter molasses/brown sugar/mascuvado</li> </ul>
2. Tools and equipment	2.1 Natural Growth Enhancer-Fermented Plant Juice (FPJ) <ul style="list-style-type: none"> <li>2.1.1 Plastic pail</li> <li>2.1.2 Wooden ladle</li> <li>2.1.3 Manila paper or cheese cloth</li> <li>2.1.4 String or rubber bands</li> <li>2.1.5 Weighing scale</li> <li>2.1.6 Chopping board</li> <li>2.1.7 Knife</li> <li>2.1.8 Marker</li> <li>2.1.9 Strainer or nylon screen</li> <li>2.1.10 tone (weight)</li> </ul> 2.2 Natural Taste Enhancer- Fermented Fruit Juice (FFJ) <ul style="list-style-type: none"> <li>2.2.1 Plastic pail</li> <li>2.2.2 Wooden ladle</li> <li>2.2.3 Manila paper or cheese cloth</li> <li>2.2.4 String or rubber bands</li> <li>2.2.5 Weighing scale</li> <li>2.2.6 Chopping board</li> <li>2.2.7 Knife</li> <li>2.2.8 Marker</li> <li>2.2.9 Strainer or nylon screen</li> <li>2.2.10 tone</li> </ul> 2.3 Fish Amino Acid (FAA) <ul style="list-style-type: none"> <li>2.3.1 Plastic pail</li> <li>2.3.2 Wooden ladle</li> <li>2.3.3 Manila paper or cheese cloth</li> </ul>



	<ul style="list-style-type: none"> <li>2.3.4 String or rubber bands</li> <li>2.3.5 Weighing scale</li> <li>2.3.6 Chopping board</li> <li>2.3.7 Knife</li> <li>2.3.8 Marker</li> <li>2.3.9 Strainer or nylon screen</li> <li>2.3.10 Stone</li> <li>2.4 Natural Immune Booster – Oriental Herbal Nutrient (OHN) <ul style="list-style-type: none"> <li>2.4.1 Plastic pail</li> <li>2.4.2 Wooden ladle</li> <li>2.4.3 Manila paper or cheese cloth</li> <li>2.4.4 String or rubber bands</li> <li>2.4.5 Weighing scale</li> <li>2.4.6 Chopping board</li> <li>2.4.7 Knife</li> <li>2.4.8 Marker</li> <li>2.4.9 Strainer or nylon screen</li> </ul> </li> <li>2.5 Natural Calcium Phosphate Micro Nutrients (CALPHOS) <ul style="list-style-type: none"> <li>2.5.1 Plastic pail</li> <li>2.5.2 Manila paper or cheese cloth</li> <li>2.5.3 String or rubber bands</li> <li>2.5.4 Weighing scale</li> <li>2.5.5 Chopping board</li> <li>2.5.6 Knife</li> <li>2.5.7 Marker</li> <li>2.5.8 Strainer or nylon screen</li> </ul> </li> <li>2.6 Beneficial Microorganism <ul style="list-style-type: none"> <li>2.6.1 Wooden ladle</li> <li>2.6.2 Manila paper or cheese cloth</li> <li>2.6.3 String or rubber bands</li> <li>2.6.4 Weighing scale</li> <li>2.6.5 Marker</li> <li>2.6.6 wooden box or bamboo split-open or plastic tray</li> </ul> </li> <li>2.7 Natural Enzymes – Lactic Acid Bacteria Serum (LABS) <ul style="list-style-type: none"> <li>2.7.1 Plastic container</li> <li>2.7.2 Manila paper or cheese cloth</li> <li>2.7.3 String or rubber bands</li> <li>2.7.4 Weighing scale</li> <li>2.7.5 Strainer or nylon screen</li> </ul> </li> </ul>
3 Various concoctions	<ul style="list-style-type: none"> <li>6.1. Fermented Fruit Juice-FFJ)</li> <li>6.2. Fish Amino Acid (FAA)</li> <li>6.3. Oriental Herbal Nutrient-OHN)</li> <li>6.4. Natural Calcium Phosphate Micro-nutrients (CALPHOS)</li> <li>6.5. Beneficial Microorganism</li> <li>6.6. Natural Enzymes (Lactic Acid Bacteria Serum-LABS)</li> </ul>

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1. Prepared for the production of various concoctions</p> <p>1.2. Processed concoctions</p> <p>1.3. Packaged concoctions</p>
<p>2. Required Knowledge and Attitudes</p>	<p>2.1. Knowledge, Theory, Practices and Systems Operations</p> <p>2.1.1. Types and uses/benefits of concoctions</p> <p>2.1.2. Sanitization procedure</p> <p>2.1.3. Sterilization procedure</p> <p>2.1.4. Tools and materials needed in producing concoctions</p> <p>2.1.5. Importance of cleanliness, sanitization and hygiene in producing concoction</p> <p>2.1.6. Good Manufacturing Practices</p> <p>2.1.7. Preparation methods of different types of concoctions</p> <p>2.1.8. Raw material collection</p> <p>2.1.9. Extraction procedure</p> <p>2.1.10. Concoction formulation</p> <p>2.1.11. Fermentation procedure</p> <p>2.1.12. Putrification process</p> <p>2.1.13. Harvesting procedures</p> <p>2.1.14. Importance of proper labeling</p> <p>2.1.15. Importance of proper storage</p> <p>2.1.16. Record keeping</p> <p>2.1.17. Practice 3Rs and 5S</p> <p>2.1.18. Parts and functions of specific tools and farm implements use in manufacturing organic fertilizer</p> <p>2.1.19. Program of work activities are implemented as scheduled</p> <p>2.2. Communication</p> <p>2.2.1. Record keeping</p> <p>2.2.2. Prepare and submit required reports</p> <p>2.2.3. Documentation of harvesting operations</p> <p>2.3. Mathematics and Mensuration</p> <p>2.3.1. Basic mathematical operations</p> <p>2.3.2. Computation for production of organic fertilizer</p> <p>2.3.3. Unit conversion</p> <p>2.4. Safety Practices</p> <p>2.4.1. Proper application use of tools, farm implements and equipment.</p> <p>2.4.2. Safety precautions relevant to harvesting concoctions</p> <p>2.4.3. Wear appropriate PPE</p> <p>2.4.4. Proper waste disposal</p> <p>2.5. Codes and Regulations</p> <p>2.5.1. Comply with Organic Law</p> <p>2.5.2. Within the codes and regulations set by Bureau of Plant Industry</p> <p>2.6. Materials, Tools &amp; Equipment: Uses, Specifications and Maintenance</p> <p>2.6.1. Tools and Equipment</p> <p>2.6.1.1. Can understand and follow instructional manuals</p> <p>2.6.1.2. Safe keeping of equipments every after use</p>

	<p>2.6.2. Materials</p> <p>2.6.2.1. Where to source good quality supplies, materials and equipment needed in the operation of the farm</p> <p>2.6.3. Maintenance</p> <p>2.6.3.1. Regular upkeep of equipments and facilities</p> <p>2.6.3.2. Preventive maintenance skills</p> <p>2.7. Values</p> <p>2.7.1. Safety consciousness</p> <p>2.7.2. Time consciousness and management</p> <p>2.7.3. Resourcefulness</p> <p>2.7.4. Cost consciousness</p> <p>2.7.5. Diligence</p> <p>2.7.6. Determined</p> <p>2.7.7. Observes hygiene</p>
3. Required Skills	<p>3.1. Using appropriate tools</p> <p>3.2. Mensurations and calculations</p> <p>3.3. Calibration of measuring instruments</p> <p>3.4. Work safety</p> <p>3.5. Skills in preparation of reports and record keeping</p> <p>3.6. Oral and written communication</p>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <p>4.1 Observation</p> <p>4.2 Interview</p> <p>4.3 Demonstration with questioning</p>
5. Resource Implications	<p>5.1 All supplies, materials and farm implements needed during farm operations should be readily available at the farm site:</p> <p>5.1.1 Concoction area</p> <p>5.1.2 Tools, supplies and materials</p> <ul style="list-style-type: none"> <li>• Weighing scale (1000 kg. cap.) – for monitoring ingredients weight</li> <li>• Plastic Pail – for storing purposes</li> <li>• Knife – for cutting purposes</li> <li>• Wooden Ladle – for mixing purposes</li> <li>• Manila Paper or Cheesecloth – for covering or wrapping purposes</li> <li>• Rubber Band or String – for sealing purposes</li> <li>• Strainer or nylon screen</li> <li>• Wooden box or bamboo split open or plastic tray</li> <li>• Marker – for marking purposes</li> <li>• Concoction manual</li> </ul> <p>5.2 Protective clothing equipment and materials. All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm</p> <p>5.3 Technical supervisors should have skills and ability in the successful implementation of work program activities</p>
6. Context of Assessment	<p>6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers</p>

## ELECTIVE COMPETENCIES

This section gives the details of the contents of the elective units of competency required in Organic Agriculture Production NCII.

**UNIT OF COMPETENCY** : **RAISE ORGANIC HOGS**  
**UNIT CODE** : **AGR611302**  
**UNIT DESCRIPTOR** : This unit covers the ability to carry-out the knowledge, skills and attitude required in raising organic hogs.

ELEMENT	PERFORMANCE CRITERIA
	<i>Italicized</i> terms are elaborated in the Range of Variables
1. Select healthy domestic hog breeds and suitable housing	1.1. Hogs are identified according to breeds. 1.2. Healthy hogs are selected based on <b><i>industry acceptable indicator for healthy piglets.</i></b> 1.3. Suitable site for hog house are determined based on PNS recommendations. 1.4. Hog house design is prepared based on PNS recommendations. 1.5. <b><i>Housing equipment</i></b> installation design is prepared in line with PNS recommendation and actual farm conditions.
2. Feed hogs	2.1 Suitable <b><i>feed materials</i></b> are selected based on availability in the locality , nutrient source and according to PNS Organic Agriculture-Livestock and GAHP requirements. 2.2 Feed materials are prepared following enterprise prescribed formulation. 2.3 Animals are fed based on the standard <b><i>feeding method/management:</i></b> 2.4 Feeding is monitored following enterprise procedures.
3. Grow and finish hogs	3.1. Growth rate is monitored based on enterprise procedures 3.2. <b><i>Health care program</i></b> are implemented based on on PNS Organic Agriculture– Livestock or documented ethno-veterinary practices 3.3. <b><i>Sanitation and cleanliness program</i></b> are implemented based on PNS-livestock. 3.4. <b><i>Organic waste</i></b> for fertilizer production are collected following organic practices. 3.5. Movement of hogs are managed based on PNS Organic Agriculture– Livestock and other relevant guidelines. 3.6. Suitable hog finishers are selected based on <b><i>market specifications</i></b> 3.7. Production record is accomplished according to enterprise procedures.

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Industry acceptable indicator for healthy piglets	1.1. White pigs: 12-15 kgs at 45 days from birth; native pigs: 10 kgs at 90 days 1.2. Shiny haircoat 1.3. Gait 1.4. Uniformity (90%)
2. Housing equipment	2.1. Feeding troughs 2.2. Waterers 2.3. Containers of concoction
3. Feed materials	3.1. Protein Sources (e.g. madre de agua; ipil-ipil; other leguminous plants) 3.2. Carbohydrate sources – rootcrops 3.3. Mineral sources – e.g. Calcium-eggshells, sea shells; potassium –tubers (banana)
4. Feeding method/ management	4.1. Restricted 4.2. Adlibitum 4.3. Combination
5. Health care program	5.1 Deworming 5.2 Vitamins/mineral supplementation using concoctions
6. Sanitation and cleanliness program	6.1. Cleaning of equipment (feeding trough, waterers) 6.2. Application of beneficial micro-organism 6.3. Collection of beddings where applicable
7. Organic waste	7.1. Animal manure 7.2. Waste/Rotten vegetables and fruits
8. Market specifications	8.1. Lechon type (25-40 kgs) 8.2. Slaughter hogs (white pigs: 80-85)

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> <li>1.1. Selected healthy domestic hog breeds and suitable housing</li> <li>1.2. Fed hogs</li> <li>1.3. Grew and finished hogs</li> </ol>
<p>2. Required Knowledge and Attitudes</p>	<ol style="list-style-type: none"> <li>2.1. Knowledge, Theory, Practices and Systems Operations               <ol style="list-style-type: none"> <li>2.1.1. Different breeds of pigs</li> <li>2.1.2. Indicators/criteria of healthy piglet</li> <li>2.1.3. Characteristics of a suitable site</li> <li>2.1.4. Housing designs and housing equipment</li> <li>2.1.5. Simple/basic calculation</li> <li>2.1.6. Characteristics of feed materials</li> <li>2.1.7. Preparation of feeds</li> <li>2.1.8. Advantage/disadvantages of different feeding management</li> <li>2.1.9. Knowledge on record-keeping</li> <li>2.1.10. Organic-based health care products/materials</li> <li>2.1.11. Sanitation procedures using organic products</li> <li>2.1.12. Collection of organic wastes</li> <li>2.1.13. Characteristics of good finishers</li> <li>2.1.14. Practice 3Rs and 5S</li> <li>2.1.15. Parts and functions of specific tools and farm implements use in raising organic hogs</li> <li>2.1.16. Program of work activities are implemented as scheduled</li> <li>2.1.17. Selection of breeder and replacement stocks, general care and herd health management from hog to marketable age and weight</li> </ol> </li> <li>2.2. Communication               <ol style="list-style-type: none"> <li>2.1.1 Preparation of stock inventory, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency</li> </ol> </li> <li>2.3. Safety Practices               <ol style="list-style-type: none"> <li>2.1.2 Implementation of regulatory controls and policies relative to proper handling, use and disposal of permitted veterinary medications.</li> <li>2.1.3 Proper disposal of placenta and dead fetuses</li> </ol> </li> <li>2.4. Mathematics and Mensuration               <ol style="list-style-type: none"> <li>2.1.4 Computation of FCR productivity index, feed conversion efficiency, herbal medicine mixtures, parameters of reproductive efficiency and financial viability of the organic hog enterprise.</li> <li>2.1.5 Simple/basic calculation</li> </ol> </li> <li>2.5. Codes and Regulations               <ol style="list-style-type: none"> <li>2.1.6 RA 10068: Organic Agriculture Act of 2010</li> <li>2.1.7 Code of Good Animal Husbandry Practices</li> <li>2.1.8 Animal Welfare Act – Minimum Standards on the Welfare of Pigs</li> <li>2.1.9 PNS-Livestock</li> <li>2.1.10 Local legislations</li> </ol> </li> </ol>

	<ul style="list-style-type: none"> <li>2.1.11 Good Animal Husbandry Practices (GAHP)</li> <li>2.1.12 DENR, zoning ordinances</li> <li>2.6. . Materials, Tools &amp; Equipment: Uses, Specifications and Maintenance <ul style="list-style-type: none"> <li>2.6.1. Tools and Equipment <ul style="list-style-type: none"> <li>2.6.1.1. Weighing balance (500 kg cap.) – for monitoring and marketing of hogs</li> <li>2.6.1.2. Carpentry tools</li> <li>2.6.1.3. Calculators</li> <li>2.6.1.4. Feeding troughs</li> <li>2.6.1.5. Water containers</li> <li>2.6.1.6. Driving board</li> <li>2.6.1.7. Knapsack sprayer</li> </ul> </li> <li>2.6.2. Maintenance <ul style="list-style-type: none"> <li>2.6.2.1. Regular check-up and repair of tools and equipment</li> </ul> </li> <li>2.6.3. Materials: Uses and Specifications <ul style="list-style-type: none"> <li>2.6.3.1. Equipment and supplies for regular monitoring of production performance and economic viability of the hog operation</li> </ul> </li> </ul> </li> <li>2.7. Values <ul style="list-style-type: none"> <li>2.7.1. Values on stewardship of farm resources that will promote ecologically sound, socially acceptable, economically viable, and technically feasible production of food</li> <li>2.7.2. Accuracy in medication and treatment of hog’s diseases using permitted veterinary treatments and herbal medicines</li> <li>2.7.3. Refraining from the use of prohibited substances like chemical pesticides, and pharmaceuticals</li> <li>2.7.4. Competence and self-confidence towards selection of finishing stocks</li> <li>2.7.5. Honesty in marketing and financial transactions</li> <li>2.7.6. Perseverance and industriousness on care and management of the general heard</li> </ul> </li> </ul>
2 Required Skills	<ul style="list-style-type: none"> <li>2.1 Skills in identifying the breeds</li> <li>2.2 Ocular inspection</li> <li>2.3 Measuring and drawing skills</li> <li>2.4 Calculations</li> <li>2.5 Monitoring</li> <li>2.6 Work safety</li> <li>2.7 Skills in using tools and equipment</li> <li>2.8 Record keeping</li> <li>2.9 Communicating ideas and information</li> </ul>
3 Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Demonstration with questioning</li> <li>3.2 Oral interviews</li> <li>3.3 Written examination</li> </ul>
5. Resource Implications	<ul style="list-style-type: none"> <li>5.1. All supplies, materials and farm implements needed during farm operations should be readily available at the farm site: <ul style="list-style-type: none"> <li>5.1.1 Pig pen</li> <li>5.1.2 Practice animals</li> <li>5.1.3 Tools, supplies and materials</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Weighing scale (500 kg. cap.) – for monitoring and marketing of hogs</li> <li>• Plastic Pail</li> <li>• Pencil papers</li> <li>• Plant materials</li> <li>• Bedding materials</li> <li>• Papers</li> <li>• Record books</li> <li>• Carpentry tools</li> <li>• Calculators</li> <li>• Feeding trough</li> <li>• Water container</li> <li>• Shovel</li> <li>• Bite/push nipples</li> <li>• Wheel borrow</li> <li>• Knapsack sprayer</li> <li>• Chopping board</li> <li>• Driving board</li> </ul> <p>5.2. Protective clothing equipment and materials. All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm</p> <p>5.3. Technical supervisors should have skills and ability in the successful implementation of work program activities</p>
6. Context of Assessment	6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers



**UNIT OF COMPETENCY : RAISE ORGANIC SMALL RUMINANTS**

**UNIT CODE : AGR612303**

**UNIT DESCRIPTOR :** This unit covers the ability to carry-out the knowledge, skills and attitude required in raising organic small ruminant.

<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b> <i>Italicized</i> terms are elaborated in the Range of Variables
1. Select healthy breeders and suitable cages	1.1. Bucks and rams are identified according to breed 1.2. Healthy bucks/rams are selected based on <b>industry acceptable indicator for healthy small ruminants</b> . 1.3. Suitable site for small ruminants are determined based on PNS recommendations. 1.4. Small ruminants cage design is prepared based on Good Animal Husbandry Practices (GAHP), DENR and zoning ordinances PNS recommendations. 1.5. <b>Cage equipment</b> installation design is prepared in line with PNS recommendation and actual farm conditions. 1.6. Cage equipment are set-up in line with housing equipment installation design. 1.7. Rice straws are placed as bedding materials based on PNS procedures.
2. Feed small ruminants	2.1. Suitable <b>feed materials</b> are selected based on availability in the locality, nutrient requirements and PNS standards. 2.2. Feed materials are prepared following PNS procedures. 2.3. <b>Maintenance of forage</b> area are administered in accordance with PNS procedures. 2.4. Animals are fed based on <b>feeding management program</b> of PNS. 2.5. Feeding is monitored following PNS procedures.
3. Manage breeding of small ruminants	3.1. <b>Signs of heat</b> are monitored among sexually mature does and ewes 3.2. Breeding systems are identified based on PNS guidelines. 3.3. Animal pregnancy is monitored and tended based on enterprise procedures. 3.4. <b>Unproductive buck/ram and doe/ewe</b> are culled based on enterprise procedures.
4. Manage does/ewes and their progenies	4.1 Signs of approaching kidding/lambing are monitored following established farm procedures. 4.2 Placenta and dead kids/lambs are disposed properly according to DENR law. 4.3 Assisted kids/lambs to suckle colostrums according to organic practices. 4.4 Lambs/kids are weaned properly at 3 months from birth based from established farm procedures. 4.5 Lactating goats and sheep are kept in clean and quiet environment, and are separated from the breeder males based from established farm procedures. 4.6 Forage grasses, supplements and adequate water supply are provided according to PNS recommendations.
5. Grow and harvest small ruminants	5.1 Growth rate is monitored based on enterprise procedures. 5.2 <b>Health care program</b> are implemented based on PNS and GAHP requirements. 5.3 <b>Sanitation and cleanliness program</b> are implemented based on GAHP requirements and PNS. 5.4 <b>Organic wastes</b> for fertilizer production are collected according to PNS. 5.5 Suitable small ruminants for harvest are selected based on PNS guidelines and market demand. 5.6 Production record is accomplished according to enterprise procedure

## RANGE OF VARIABLES

VARIABLE	SCOPE
1. Industry acceptable indicator for healthy piglets	1.1. Age : 8 months 1.2. Weight: 1.2.1. native-weight not less than 15 kg 1.2.2. crossbreeds- not less than 20 kg
2. Cage equipment	2.1 Feeding troughs 2.2 Waterers 2.3 Containers of concoction
3. Feed materials	3.1 Protein Sources (e.g. madre de agua; ipil-ipil; other leguminous plants) 3.2 Carbohydrate sources – rootcrops 3.3 Mineral sources – e.g. Calcium-eggshells, sea shells; potassium –tubers (banana)
4. Maintenance of forage area	4.1 Cutting 4.2 Application of organic fertilizer 4.3 Watering
5. Feeding management program	5.1 Restricted 5.2 Adlibitum 5.3 Combination
6. Signs of heat	6.1 Swelling of external genitalia 6.2 Constant urination 6.3 Tail wagging and bleating 6.4 Wants to be mounted 6.5 Capacious appetite 6.6 Decrease in milk yield of lactating does/ewes
7. Unproductive buck/ram and doe/ewe	7.1 Infertile/abnormal sperm from the buck 7.2 Diseases such as brucellosis, leptospirosis and vibriosis 7.3 Poor growth traits and reproductive efficacy 7.4 Irregularity of estrus cycle 7.5 Poor growth and reproductive traits 7.6 Susceptibility to diseases 7.7 Production of abnormal eggs/ova 7.8 Overfat condition
8. Health care program	8.1 Deworming 8.2 Vitamins/mineral supplementation using concoctions
9. Sanitation and cleanliness program	9.1 Cleaning of equipment (feeding trough, waterers) 9.2 Application of beneficial micro-organism 9.3 Collection manure
10. Organic waste	10.1 Animal manure 10.2 Feed refuse 10.3 Waste/Rotten vegetables and fruits

## EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Selected healthy breeders and suitable cages.</li> <li>1.2 Fed small ruminants.</li> <li>1.3 Managed breeding of small ruminants.</li> <li>1.4 Managed does/ewes and their progenies.</li> <li>1.5 Grew and harvested small ruminants.</li> </ul>
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> <li>2.1. Knowledge, Theory, Practices and Systems Operations <ul style="list-style-type: none"> <li>2.1.1. Different breeds of small ruminants (goats)</li> <li>2.1.2. Indicators/criteria of healthy small ruminants</li> <li>2.1.3. Characteristics of a suitable site</li> <li>2.1.4. Cage designs and housing equipment for small ruminants</li> <li>2.1.5. Characteristics of feed materials</li> <li>2.1.6. Preparation of feeds</li> <li>2.1.7. Advantage/disadvantages of different feeding management</li> <li>2.1.8. Knowledge on record-keeping</li> <li>2.1.9. Different forage species</li> <li>2.1.10. Signs of heat</li> <li>2.1.11. Organic-based health care products/materials</li> <li>2.1.12. Sanitation procedures using organic products</li> <li>2.1.13. Collection of organic wastes</li> <li>2.1.14. Characteristics of good finishers</li> <li>2.1.15. Practice 3Rs and 5S</li> <li>2.1.16. Parts and functions of specific tools and farm implements use in raising organic small ruminants</li> <li>2.1.17. Program of work activities are implemented as scheduled</li> <li>2.1.18. Selection of breeder and replacement stocks, general care and herd health management from small ruminants to marketable age and weight</li> </ul> </li> <li>2.2. Communication <ul style="list-style-type: none"> <li>2.2.1. Preparation of stock inventory, performance and health records, mortality and morbidity rates, financial transactions and indicators of production efficiency</li> <li>2.2.2. Record keeping</li> </ul> </li> <li>2.3. Safety Practices <ul style="list-style-type: none"> <li>2.3.1. Implementation of regulatory controls and policies relative to proper handling, use and disposal of permitted veterinary medications.</li> <li>2.3.2. Proper disposal of placenta, dead fetuses and other wastes</li> </ul> </li> <li>2.4. Mathematics and Mensuration <ul style="list-style-type: none"> <li>2.4.1. Computation of FCR productivity index, feed conversion efficiency, herbal medicine mixtures, parameters of reproductive efficiency and financial viability of the organic small ruminants enterprise</li> <li>2.4.2. Simple/basic calculations</li> </ul> </li> <li>2.5. Codes and Regulations <ul style="list-style-type: none"> <li>2.5.1. RA 10068: Organic Agriculture Act of 2010</li> <li>2.5.2. Code of Good Animal Husbandry Practices</li> <li>2.5.3. Animal Welfare Act of 1998</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>2.5.4. PNS-Livestock</li> <li>2.5.5. Local legislations</li> <li>2.5.6. Good Animal Husbandry Practices (GAHP)</li> <li>2.5.7. DENR, zoning ordinances</li> <li>2.6. Materials, Tools and Equipment: Uses and Specifications <ul style="list-style-type: none"> <li>2.6.1. Tools and Equipment <ul style="list-style-type: none"> <li>2.6.1.1. Weighing balance (500 kg cap.) – for monitoring and marketing of small ruminants</li> <li>2.6.1.2. Carpentry tools</li> <li>2.6.1.3. Calculators</li> <li>2.6.1.4. Feeding troughs</li> <li>2.6.1.5. Water containers</li> <li>2.6.1.6. Driving board</li> <li>2.6.1.7. Knapsack sprayer</li> </ul> </li> <li>2.6.2. Maintenance <ul style="list-style-type: none"> <li>2.6.2.1. Regular check-up and repair of tools and equipment</li> </ul> </li> <li>2.6.3. Materials: Uses and Specifications <ul style="list-style-type: none"> <li>2.6.3.1. Equipment and supplies for regular monitoring of production performance and economic viability of the small ruminants operation</li> </ul> </li> </ul> </li> <li>2.7. Values <ul style="list-style-type: none"> <li>2.7.1. Values on stewardship of farm resources that will promote ecologically sound, socially acceptable, economically viable, and technically feasible production of food</li> <li>2.7.2. Accuracy in medication and treatment of small ruminants diseases using permitted veterinary treatments and herbal medicines</li> <li>2.7.3. Refraining from the use of prohibited substances like chemical pesticides, and pharmaceuticals</li> <li>2.7.4. Competence and self-confidence towards selection of finishing stocks</li> <li>2.7.5. Honesty in marketing and financial transactions</li> <li>2.7.6. Perseverance and industriousness on care and management of the general heard</li> </ul> </li> </ul>
3. Required Skills	<ul style="list-style-type: none"> <li>3.1. Simple carpentry</li> <li>3.2. Skills in identifying breeds</li> <li>3.3. Ocular inspection</li> <li>3.4. Measuring and drawing skills</li> <li>3.5. Work safety</li> <li>3.6. Skills in using tools and equipment</li> <li>3.7. Monitoring</li> <li>3.8. Practice Occupational, Health and Safety Procedures</li> <li>3.9. Calculations</li> <li>3.10. Communicating ideas and information</li> </ul>
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> <li>4.1. Practical demonstration with questioning</li> <li>4.2. Oral interview</li> <li>4.3. Written examination</li> </ul>
5. Resource Implications	<ul style="list-style-type: none"> <li>5.1 All supplies, materials and farm implements needed during farm operations should be readily available at the farm site: <ul style="list-style-type: none"> <li>5.1.1 Small ruminants cage and house</li> <li>5.1.2 Practice animals</li> <li>5.1.3 Forage area</li> <li>5.1.4 Tools, supplies and materials</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>• Weighing balance (500 kg cap.) – for monitoring and marketing of small ruminants</li> <li>• Plastic Pail</li> <li>• Pencil papers</li> <li>• Plant materials</li> <li>• Bedding materials</li> <li>• Record books</li> <li>• Carpentry tools</li> <li>• Calculators</li> <li>• Feeding trough</li> <li>• Water container</li> <li>• Shovel</li> <li>• Bite/push nipples</li> <li>• Wheel borrow</li> <li>• Knapsack sprayer</li> <li>• Chopping board</li> <li>• Driving board</li> </ul> <p>5.2 Protective clothing equipment and materials. All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm</p> <p>5.3 Technical supervisors should have skills and ability in the successful implementation of work program activities</p>
6. Context of Assessment	6.1. Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers

## 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 **ORGANIC AGRICULTURE PRODUCTION NCII**.

### 3.1 CURRICULUM DESIGN

Course Title: **ORGANIC AGRICULTURE PRODUCTION** Level: **NC II**

Nominal Training Duration: 18 hrs - Basic Competencies  
 64 hrs- Common Competencies  
 96 hrs- Core Competencies  
 54 hrs- Elective Competencies  
 232 hrs- Total training duration

Course Description:

This course is designed to enhance the knowledge, desirable skills and attitudes of Organic Agriculture Production NCII in accordance with industry standards. It covers core competencies such as: raise organic chicken, produce organic vegetable, produced organic fertilizer and produce organic concoctions and extracts. It also has two (2) elective competencies: raise organic hogs and raise organic small ruminants.

### 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"> <li>• Group discussion</li> <li>• Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Observation</li> <li>• Interviews/questioning</li> </ul>
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"> <li>• Discussion</li> <li>• Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Observation</li> <li>• Interviews/questioning</li> </ul>
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"> <li>• Discussion</li> <li>• Interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Observation</li> <li>• Interviews/questioning</li> </ul>
4. Practice occupational health and safety	4.1 Evaluate hazard and risks 4.2 Identify hazards and risks 4.3 Control hazards and risks 4.4 Maintain occupational health and safety awareness	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• Plant tour</li> <li>• Symposium</li> </ul>	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Interview</li> </ul>

## COMMON COMPETENCIES (64 hours)

<b>Unit of Competency</b>	<b>Learning Outcomes</b>	<b>Methodology</b>	<b>Assessment Approach</b>
1. Apply safety measures in farm operations	1.1 Determine areas of concern for safety measures 1.2 Apply appropriate safety measures 1.3 Safekeep/maintain/ dispose tools, materials and outfit.	<ul style="list-style-type: none"> <li>• Self-paced/modular</li> <li>• Lecture/Discussion</li> <li>• Interaction</li> <li>• Practical Demonstration</li> <li>• Visit/tour</li> </ul>	<ul style="list-style-type: none"> <li>• Oral/Written Interviews</li> <li>• Direct Observation</li> <li>• Practical Demonstration</li> </ul>
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"> <li>• Self-paced/modular</li> <li>• Lecture/Discussion</li> <li>• Interaction</li> <li>• Practical Demonstration</li> <li>• Visit/tour</li> </ul>	<ul style="list-style-type: none"> <li>• Oral/Written Interviews</li> <li>• Direct Observation</li> <li>• Practical Demonstration</li> </ul>
3. Perform estimation and basic calculation	3.1 Perform estimation 3.2 Perform basic workplace calculation	<ul style="list-style-type: none"> <li>• Self-paced/modular</li> <li>• Lecture/Discussion</li> <li>• Interaction</li> <li>• Practical Exercise</li> </ul>	<ul style="list-style-type: none"> <li>• Oral/Written examination</li> <li>• Practical exercise</li> </ul>
4. Perform records keeping	Carry out inventory activities  Maintain production record  Prepare financial records	<ul style="list-style-type: none"> <li>• Self-paced/modular</li> <li>• Lecture/discussion</li> <li>• Interaction</li> <li>• Practical exercise</li> <li>• Computation</li> </ul>	<ul style="list-style-type: none"> <li>• Oral/written examination</li> <li>• Practical exercise</li> <li>• Practical demonstration</li> </ul>
5. Develop and Update Industry Knowledge	Seek information on the industry  Update continuously relevant industry knowledge	<ul style="list-style-type: none"> <li>• Self paced/modular</li> <li>• Demonstration</li> <li>• Small group discussion</li> <li>• Distance education</li> </ul>	<ul style="list-style-type: none"> <li>• Written/oral examination</li> <li>• Practical demonstration</li> </ul>

## CORE COMPETENCIES ( 96 hours)

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1.Raise Organic Chicken	1.1 Select healthy stocks 1.2 Determine suitable chicken house requirements  1.3 Install cage (housing) equipment  1.4 Feed chicken (Provide feed and implement feeding practices)  1.5 Manage health and growth of chicken  1.6 Harvest chicken	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Hands-on</li> <li>• Demonstration</li> <li>• Video Presentation</li> <li>• Lecture</li> <li>• Lakbay Aral</li> <li>• Workshop</li> </ul>	<ul style="list-style-type: none"> <li>• Written examination</li> <li>• Demonstration of practical skills</li> <li>• Direct observation</li> <li>• Interview/ Questioning</li> </ul>
2.Produce Organic Vegetable	2.1 Establish nursery  2.2 Plant seedlings  2.3 Perform Plant Care Activities (and Management)  2.4 Perform Harvest and Post Harvest Activities	<ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Discussion</li> <li>• Oral questioning</li> <li>• Video presentation</li> <li>• Field demonstration</li> <li>• Film viewing</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation with oral questioning</li> <li>• Demonstration</li> <li>• Written exam</li> <li>• Interview</li> </ul>
3.Produce Organic Fertilizer	3.1 Prepare composting area  3.2 Prepare raw materials  3.3 Carry out composting process  3.4 Harvest compost	<ul style="list-style-type: none"> <li>• Observation</li> <li>• Demonstration</li> <li>• Lecture-Discussion</li> <li>• Film viewing</li> <li>• Video presentation</li> <li>• Field work/ farm visit</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation with oral questioning</li> <li>• Demonstration</li> <li>• Written exam</li> </ul>
4. Produce various concoctions	4.1 Prepare for the production of various concoctions  4.2 Process concoctions  4.3 Package concoctions	<ul style="list-style-type: none"> <li>• Participatory Lecture-Discussion</li> <li>• Lecture</li> <li>• Demonstration</li> <li>• Direct observation</li> </ul>	<ul style="list-style-type: none"> <li>• Written exam</li> <li>• Direct observation and oral questions</li> <li>• Interview</li> </ul>



**ELECTIVE COMPETENCIES**  
( 54 hours)

<b>Unit of Competency</b>	<b>Learning Outcomes</b>	<b>Methodology</b>	<b>Assessment Approach</b>
1. Raise Organic Hogs	1.1 Choose/Select healthy domestic hogs  1.2 Determine suitable hog house requirements  1.3 Feed hogs  1.4 Manage health and growth of hogs  1.5 Finish hogs	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration</li> <li>• Field demonstration</li> <li>• Workshop</li> <li>• Video presentation</li> <li>• Field work</li> <li>• Practical demonstration</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation</li> <li>• Oral questioning</li> <li>• Written examination</li> <li>• Interview</li> </ul>
2. Raise Organic Small Ruminants (Goat)	2.1 Choose/Select healthy breeders  2.2 Determine suitable small ruminant cage (housing) requirements  2.3 Install cage (housing) requirements  2.4 Feed small ruminants  2.5. Manage health, growth and breeding of small ruminants  2.6 Harvest (Finish) ruminants	<ul style="list-style-type: none"> <li>• Actual Demonstration</li> <li>• Lecture discussion</li> <li>• Video presentation</li> <li>• Field practicum</li> </ul>	<ul style="list-style-type: none"> <li>• Direct observation and questions</li> <li>• Written examinations</li> <li>• Demonstration Interview</li> </ul>

## 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 individualized and self-paced;
- 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 is based both on and off-the-job components;
- Allows for recognition of prior learning (RPL) or current competencies;
- Training allows for multiple entry and exit; and
- Approved training programs are nationally accredited.

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

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

### 3.3 TRAINEE ENTRY REQUIREMENTS

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

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

### 3.4 LIST OF TOOLS, EQUIPMENT AND MATERIALS

#### ORGANIC AGRICULTURE PRODUCTION– NC II

Recommended list of tools, equipment and materials for the training of 25 trainees for Organic Agriculture Production NC II. The list comes into two forms, by full qualification and by COC or Certificate of Competency.

#### RESOURCES:

EQUIPMENT TO BE UTILIZED IN ALL UNIT OF COMPETENCY					
Qty	Units	Description	Qty	Units	Description
5	sets	Desktop Computer	1	unit	LCD projector with Screen
1	unit	Printer	1	unit	Photo Copier

#### FOR EVERY COMPETENCY (CoC)

##### 1. RAISE ORGANIC CHICKEN

TOOLS:					
Qty	Units	Description	Qty	Units	Description
5	pcs.	Bolo	2	pcs.	Sprinklers, 5 liters
5	pcs.	Broomstick	1	units	Step ladder 6 ft.
5	pcs.	Plastic Pail (10 liter. capacity)	1	unit	Storage tools/cabinet
1	set	Carpentry tools	5	pcs.	Feeding trough
2	units	Knapsack sprayer	5	pcs.	Waterer/drinker, 1 liter capacity
5	pcs.	Storage Container with cap, 15 liter capacity	25	pcs.	Rain coat
3	units	Weighing scale, 2 kilos capacity (2); 25 kilos capacity (1)	5	pcs	Plastic cup, 1 liter capacity
5	pcs.	Shovel	3	pcs.	Waste cans/bag
5	pcs.	Knives			

<b>EQUIPMENT:</b>					
Qty	Units	Description	Qty	Units	Description
1	unit	Booth/temporary shed	1	unit	Cart
1	unit	Shredder	1	unit	Wheel barrow
1	unit	Fire Extinguisher			

<b>MATERIALS:</b>					
Qty	Units	Description	Qty	Units	Description
15	Kg.	Feeds: starter,	5	liters	Various Concoctions/Extracts
15	Kg.	Feeds: grower	15	Kg.	Feeds: finisher
25	pcs	21-day old chicks	25	pcs	60-day old chicken
8	Bags of 50kgs	Rice Hull	1	Bag of 50kg. Soil	Farm Soil
1	Bag of 50kg. Soil	Sand	50	pcs	Bamboo poles
50	meter	Net, #10 mesh size	2	Kg.	Monofilament Nylon#150
1	unit	First Aid Kit	1	pc.	Water Container Drum
15	pcs.	Apron	10	pcs.	Rags
5	pcs.	Chopping Board	10	pcs.	Waterer
10	pcs.	Feeding trough	1	unit	Feed Cart

## 2. PRODUCE ORGANIC VEGETABLES

<b>TOOLS:</b>					
Qty	Unit	Description	Qty	Unit	Description
5	pc.	Bolo	5	pcs.	Sprinklers, 5 liters
5	pc.	Digging Blade/Bar	1	units	Step ladder 6 ft.
5	pc.	Spading Fork	10	units	Holer, 4" diameter
2	set	Hoe	5	pcs.	Trimming knife
5	unit	Rake	1	set.	Carpentry tools
5	pc.	Shovel	5	pcs.	Knapsack sprayer
2	unit	Weighing scale, 2 kilos capacity (1); 25 kilos capacity (1)	5	pcs	Plastic cup, 1 liter capacity
3	pcs.	Measuring cup; 1 liter capacity	3	pcs.	Waste cans/bag
5	pcs.	Pruning Shear	2	set	Plow
5	pcs.	Petri Dish	1	Pc.	Calculator
2	units	Spike Tooth Horrow			

<b>EQUIPMENT:</b>					
Qty	Unit	Description	Qty	Unit	Description
1	unit	Booth/temporary shed	1	unit	Shredder
1	unit	Wheel barrow	1	unit	Cart
1	unit	Carbonizer	1	unit	Portable Soil Analyser Kit
1	pc.	Soil Thermometer	1	unit	PH meter
1	unit	Fire Extinguisher			

<b>MATERIALS:</b>					
Qty	Unit	Description	Qty	Unit	Description
5	Bag of 50 kg.	Basal Organic Fertilizer	5	Bags of 50 kg.	Carbonized Rice Hull
5	liter	Foliar Organic Fertilizer	5	liters	Various Concoctions/Extracts
6	pc	Seedling Tray, plastic	6	pcs	Seedling Tray, wooden
2	roll	Plastic twine	10	pcs	Bamboo poles
10	Pack	Assorted Vegetable Seedlings	1	pc.	Water Container Drum
1	unit	First Aid Kit	15	pcs.	Apron
10	pcs.	Rags	10	pcs.	Stone (weights) ½ kilos
5	pcs.	Strainer, Nylon Screen, fine mesh	10	pcs.	Sacks

### 3. MANUFACTURE (PRODUCE) ORGANIC FERTILIZER

<b>TOOLS:</b>					
Qty	Unit	Description	Qty	Unit	Description
5	pcs.	Spade	5	pcs.	Sprinklers, 5 liters
5	pcs.	Spading Fork	1	set.	Carpentry tools
2	sets	Hoe	5	units	Rake
5	pcs.	Shovel	5	pcs.	Knapsack sprayer
2	units	Weighing scale, 2 kilos capacity (1); 25 kilos capacity (1)	5	pcs	Plastic cup, 1 liter capacity
3	pcs	Measuring cup; 1 liter capacity	3	pcs.	Waste cans/bag

<b>EQUIPMENT:</b>					
Qty	Unit	Description	Qty	Unit	Description
1	unit	Booth/temporary shed	1	unit	Wheel barrow
1	unit	Shredder	1	unit	Cart
1	unit	Carbonizer	1	unit	Portable Soil Analyzer Kit
1	pc.	Moisture meter	1	unit	PH meter
1	pc.	Soil Thermometer	3	set	Vermitea aerator, 60 liters capacity, each
1	unit	Fire Extinguisher			

<b>MATERIALS:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
1	Bag of 50 kg.	Basal Organic Fertilizer, sample	1	Bags of 50 kg.	Carbonized Rice Hull, sample
2	liter	Foliar Organic Fertilizer, sample	10	liters	Various Concoctions/Extracts
100	liter	Molasses	50	kg	Rice straw
50	kg	Dry Leaves	50	kg	Chicken Dunk
50	kg	Pig Manure	50	kg	Cow manure
100	kg	Carbonized Rice Hull	50	kg	Rice Bran (D2)
20	meter	Plastic Sheet	10	pcs.	Used Tires
25	pcs.	Empty bags, 50 kg capacity	5	pcs.	Plastic Pail, 15 liters capacity
1	unit	First Aid Kit	1	pc.	Water Container Drum
15	pcs.	Apron	10	pcs.	Rags

#### 4. PRODUCE ORGANIC CONCOCTIONS/EXTRACTS

<b>TOOLS:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
10	pcs.	Measuring Cup (with calibration, 1 liter capacity)	2	set.	Carpentry tools
10	pcs.	Plastic Cup (1 liter capacity)	2	pcs.	Knapsack sprayer
5	pcs.	Syringe, Plastic, 30 ml capacity	10	pcs.	Bamboo/wooden ladle
25	pcs.	Bamboo Container/ Plastic container/wooden box for collecting microbes	5	pcs.	Plastic Basin, 10 liters capacity
25	pcs.	Slicing knife	25	pcs.	Chopping Board
5	pcs.	Pannel(imbudo)			

<b>EQUIPMENT:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
1	unit	Booth/temporary shed	1	unit	Portable Soil Analyzer Kit
1	unit	Shredder	1	unit	PH meter
1	unit	Wheel barrow	3	set	Vermitea aerator, 60 liters capacity, each
1	unit	Cart	5	pcs.	Thermometer
1	unit	Carbonizer	1	pc.	Moisture meter
1	unit	Fire Extinguisher			
1	pcs.	Meat Grinder, small			

<b>MATERIALS:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
100	liter	Molasses	25	pcs.	Plastic Container, 15 liters capacity
8	liter	Various Concoctions/Extracts for at least 1 liter per sample	10	pcs.	Plastic Container, 60 liters capacity
150	pcs.	Weight (clean stone 100grams each)	5	meter	Plastic Hose, 5mm dia.
50	pcs.	Weight (empty plastic container 250 to 500 ml capacity)	3	pcs.	Waste cans/bag
25	pcs.	Plastic strainer, fine mesh, 1ft x 1ft square	10	meter	Plastic Sheet
25	pcs.	Plastic strainer, small mesh, 1ft x 1 ft square	25	pcs.	Manila Paper
50	pcs.	Empty Plastic Container, 1 liter capacity	5	box	Rubber Bond, Large
50	pcs.	Empty Plastic Container, 5 liter capacity	5	pcs.	Marking Pen
2	roll	Plastic Tie box	5	pcs.	Masking Tape, medium
1	unit	First Aid Kit	1	pc.	Water Container Drum
15	pcs.	Apron	10	pcs.	Rags

## 5. RAISE ORGANIC HOGS

<b>TOOLS:</b>					
<b>Qty</b>	<b>Units</b>	<b>Description</b>	<b>Qty</b>	<b>Units</b>	<b>Description</b>
5	pcs.	Bolo	2	pcs.	Sprinklers, 5 liters
5	pcs.	Broomstick	1	unit	Step ladder 6 ft.
5	pcs.	Plastic Pail (10 liter. capacity)	1	unit	Storage tools/cabinet
1	set	Carpentry tools	5	pc	Shovel
2	unit	Knapsack sprayer	5	pc	Digging Bar/Blade
5	pc.	Storage Container with cap, 15 liter capacity			
2	unit	Weighing scale, 10 kilos capacity (1); 150 kilos capacity (1)	5	pc	Plastic cup, 1 liter capacity
5	pcs.	Shovel	3	pc.	Waste cans/bag

<b>EQUIPMENT:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
1	unit	Booth/temporary shed	1	unit	Cart
1	unit	Shredder	1	unit	Wheel barrow
1	unit	Fire Extinguisher			

<b>MATERIALS:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
15	kg	Hog Feeds: starter	5	liter	Various Concoctions/Extracts
15	kg	Hog Feeds: grower	15	kg	Hog Feeds: finisher
5	head	45-day old piglet	5	head	80-day old pig
8	Bag of 50kgs	Rice Hull	1	Bag of 50 kgs Soil	Farm Soil
1	Bag of 50kgs	Sand	50	pc	Bamboo poles
10	liter	Molasses	2	kg	Monofilament Nylon#150
1	unit	First Aid Kit	1	pc.	Water Container Drum
15	pcs.	Apron	10	pcs.	Rags

## 6. RAISE ORGANIC RUMINANTS

<b>TOOLS:</b>					
<b>Qty</b>	<b>Units</b>	<b>Description</b>	<b>Qty</b>	<b>Units</b>	<b>Description</b>
5	pcs.	Bolo	2	pcs.	Sprinklers, 5 liters
5	pcs.	Broomstick	1	unit	Step ladder 6 ft.
5	pcs.	Plastic Pail (10 liter. capacity)	1	unit	Storage tools/cabinet
1	set	Carpentry tools	5	pc	Shovel
2	unit	Knapsack sprayer	5	pc	Digging Bar/Blade
5	pc.	Storage Container with liter capacity	5	pc	Plastic cup, 1 liter capacity
2	unit	Weighing scale, 10 kilos capacity (1); 100 kilos capacity (1)	3	pc.	Waste cans/bag
5	pc.	Shovel			

<b>EQUIPMENT:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
1	unit	Booth/temporary shed	1	unit	Cart
1	unit	Shredder	1	unit	Wheel barrow
1	unit	Fire Extinguisher			



<b>MATERIALS:</b>					
<b>Qty</b>	<b>Unit</b>	<b>Description</b>	<b>Qty</b>	<b>Unit</b>	<b>Description</b>
15	kg	Goat Feeds: starter, grower, finisher	5	liter	Various Concoctions/Extracts
15	kg	Goat Feeds: grower	15	kg	Goat Feeds: finisher
4	head	45-day old Goat	4	head	80-day old Goat
8	Bags of 50kgs	Rice Hull	1	Bag of 50 kgs Soil	Farm Soil
1	Bag of 50kgs Soil	Sand	50	pc	Bamboo poles
1	roll	Plastic sheet	2	kg	Monofilament Nylon#150
1	unit	First Aid Kit	1	pc.	Water Container Drum
15	pcs.	Apron	10	pcs.	Rags

#### **TRAINING MATERIALS:**

- Brochures
- Visual aids
- Reference manuals
- Procedural manuals
- Instructional supplies and materials
- Reference materials/books/VPM
- Data (result of soil analysis)
- Soil samples
- Reference materials-PNS (livestock)
  - animal welfare
  - GAHP

#### **PPE's:**

- Goggles
- Long Gloves/Arms Length
- Face Mask # 30
- Overall Suit
- Hair net
- Safety Shoes
- Rubber Boots
- Wide Brimmed Hats
- Long Sleeves
- Long Pants

### 3.5 TRAINING FACILITIES

#### ORGANIC AGRICULTURE PRODUCTION NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	TOTAL AREA IN SQ. METERS
<b>A. Building (permanent)</b>		
• Lecture Area		40
• Learning resource center		10
• Laboratory/Practice Area		40
• Washroom (Female)		4
• Washroom (Male)		4
• Stock Room		4
<b>B. Experimental Farm*</b>		<b>10,000.00 (1ha)</b>

\*The experimental farm should have the following areas for organic farm activities:

- Poultry House for 300 chicks with 100sq meters floor area
- Hog House for 20 pigs with 40 sq meters floor area
- Small Ruminants House for 5 animals with 20 sq meter floor area
- Garden Plots with a total land area 40 sq meters divided into 4 plots
- Concoction and Extraction Laboratory
- Organic Fertilizer Preparation House

### 3.6 TRAINER'S QUALIFICATIONS FOR AGRI-FISHERY SECTOR

Trainers who will deliver the training on ORGANIC AGRICULTURE PRODUCTION NC II should have the following :

- Must be a holder of National TVET Trainer Certificate I (TM I and NC)
- 1 year relevant industry experience
- 80 Hours teaching experience

### 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 NATIONAL ASSESSMENT AND CERTIFICATION ARRANGEMENTS**

- 4.1 To attain the National Qualification of Organic Agriculture Production NC II, the candidate must demonstrate competence in all units listed in Section 1. Successful candidates shall be awarded a National Certificate signed by the TESDA Director General.
- 4.2 The qualification of Organic Agriculture Production NC II may be attained through:
  - 4.2.1. Certificates of Competency (COCs) in the following areas:
    - 4.2.1.1. Raise organic chicken
    - 4.2.1.2. Produce organic vegetables
    - 4.2.1.3. Produce organic fertilizer
    - 4.2.1.4. Produce organic concoctions and extract
  - 4.2.2. The candidate can also choose one from these two (2) elective units of competencies, and obtain Certificates of Competency (COCs);
    - Raise organic hogs
    - Raise organic small ruminants
  - 4.2.3. Organic Agriculture Production NC II can be attained through accumulation of COCs of the four (4) Core Competencies and one (1) Elective Competencies.

Successful candidates shall be awarded Certificates of Competency (COCs) bearing the signature of the Regional Director and Chair of the recognized local industry body.
  - 4.2.4. Demonstration of competence through project-type assessment covering all required units of qualification
- 4.2. Assessment shall focus on the core units of competency. The tool and common units shall be integrated or assessed concurrently with the core units.
- 4.3. Candidates can be assessed on individual units of competency and be issued Certificates of Competency if found competent. Certificates of Competency shall bear the signature of the Regional Director and Chair of the recognized local industry body.
- 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)
- 4.9. The guidelines on assessment and certification are discussed in detail in the *Procedures Manual on Assessment and Certification and Guidelines on the Implementation of the Philippine TVET Qualification and Certification System (PTQCS)*.

**Supermarket of Competencies  
AGRI-FISHERY Sector**

**BASIC  
COMPETENCIES**

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

**COMMON  
COMPETENCIES**

- Apply Safely Measures in farm operations
- Use Farm Tools and Equipment
- Perform Estimation and Basic Calculation
- Develop and update industry knowledge
- Perform record

**CORE  
COMPETENCIES**

- Raise organic chicken
- Produce organic vegetable
- Produce organic fertilizer
- Produce organic concoctions and extracts

**ELECTIVE  
COMPETENCIES**

- Raise organic hogs
- Raise organic small ruminants

## DEFINITION OF TERMS

<b>Ad libitum feeding</b>	refers to the "free-feeding" weight of an animal, as opposed, for example, to the weight after a restricted diet or pair feeding.
<b>Agricultural inputs</b>	are all substances or materials used in the production or handling of organic agricultural products.
<b>Agricultural products</b>	are any agricultural commodity or product, whether raw or processed, including any commodity or product derived from the livestock for human or livestock consumption.
<b>Basal fertilizers</b>	are fertilizer which is apply near the base of the stems.
<b>Bedding materials</b>	are materials used to provide a bed for animals.
<b>Beneficial microorganisms</b>	are also known as harmless microorganisms. These are the microorganisms which are involved in the production of oxygen, biomass control and 'cleaning' the Earth of remnants of dead organisms.
<b>Biodynamics</b>	is a farming that combines organic methods, including crop rotation and composting with special plant, animal, and mineral preparations and the rhythmic influences of the sun, moon, planets, and stars.
<b>Bio-security measures</b>	is a set of preventive measures designed to reduce the risk of transmission of infectious diseases, quarantined pests, invasive alien species, living modified organisms.
<b>Boar</b>	is an uncastrated male swine usually kept for breeding.
<b>Breeder stock</b>	is a female livestock whose offspring may be incorporated for organic operation at the time of their birth.
<b>Breeds</b>	specific group of domestic animals or plants with a homogeneous appearance, behavior, and other characteristics that distinguish it from other animals or plants of the same species, and arrived at through selective breeding.
<b>Breeding</b>	is a selection of plants or animals to reproduce and/or further develop desired characteristics in succeeding generations.
<b>Broiler</b>	is any commercial meat type chicken usually raised up to six weeks of age.
<b>Brooder</b>	is an area used for raising young fowl that provides sufficient light and protection.

<b>Brooding</b>	is a management practice where chicks are given extra heat and proper care and management.
<b>Brucellosis</b>	is also called as Bang's disease, Crimean fever, Gibraltar fever, Malta fever, Maltese fever, Mediterranean fever, rock fever, or undulant fever; it is a highly contagious zoonosis caused by ingestion of unsterilized milk or meat from infected animals or close contact with their secretions.
<b>Buck</b>	is the adult male of some animals, such as the deer, goat, antelope, or rabbit. It is an intact (still has testicals) male goat.
<b>Buffer zone</b>	is a clearly defined identifiable boundary are bordering any organic production site that is established to limit application or contact with prohibited substances.
<b>Cage Housing</b>	is a type or system of poultry housing where layers could be kept alone, by two or in big groups in cage.
<b>Colostrum</b>	is the first milk from a female animal after giving birth.
<b>Composting</b>	is the breaking down organic waste into humus that is reused as a beneficial nutrient can be done in several ways: vermicomposting, which is most beneficial for composting food waste; aerobic composting (with air); and anaerobic composting (without air).
<b>Compost</b>	is composed of organic matter that is recycled back into the earth. Organic matter may include lawn clippings, vegetable scraps from the kitchen, and untreated papers. These materials are combined and become a nutrient-rich mixture that enriches the soil.
<b>Concoctions</b>	is a combination of various ingredients, usually herbs, spices, condiments, powdery substances or minerals, mixed up together, minced, dissolved or macerated into a liquid so as they can be ingested or drunk. The term "concoction" is sometimes loosely used metaphorically in order to describe a cocktail or a motley assemblage of things, persons or ideas.
<b>Contamination</b>	is the pollution of organic product or land , in contact with any material that would render the product impure.
<b>Conventional agriculture</b>	is farming systems dependent on the input of artificial fertilizers and/or pesticides, or failing to conform to the Basic Standards in any other way.
<b>Conversion</b>	is the process of changing an agricultural system from conventional to organic. This covers of what is sometimes

	known as transition.
<b>Crop rotation</b>	is the practice of alternating the species or families of annual and/or biennial crops grown on a specific field in a planned pattern or sequence so as to break weeds, pest and disease cycles and to improve soil fertility and organic matter content.
<b>Crossbreed</b>	is a group of animals produced by mating two or more different breeds or strains of animals.
<b>Cover cropping</b>	is a crop that provides temporary protection for delicate seedlings and/or provides a canopy for seasonal soil protection and improvement between normal crop-production periods. Except in orchards where permanent vegetative cover is maintained, cover crops are usually grown for one year or less. When plowed under and incorporated into the soil, cover crops are also referred to as green manure crops.
<b>Culling</b>	is the removal of undesirable or inferior animals in the herd based on important economic traits and overall performance.
<b>Depreciation cost</b>	is a term used to account for the loss of value in an item over time.
<b>Deworming</b>	(sometimes known as worming or drenching) is the giving of an anthelmintic drug (a wormer, dewormer, or drench) to an animal to rid it of intestinal parasites, such as roundworm and tapeworm.
<b>Disinfect</b>	is to reduce by physical or chemical means, the number of microorganism in the environment, to a level that does not compromise food safety or suitability.
<b>Doe</b>	is the adult female of some animals, such as the deer, goat, antelope, or rabbit use for breeding purposes.
<b>Dung</b>	is the organic material that is used to fertilize land, usually consisting of the faeces and urine of domestic livestock, with or without litter such as straw, hay, or bedding.
<b>Dry sow</b>	is a sow whose litter has been weaned but which has not yet been bred or is not pregnant.
<b>Estrus</b>	is a period of time when the female will accept male. Also known as heat period.
<b>Ewe</b>	is the adult female sheep.
<b>Enzymes</b>	are biological molecules that catalyze (i.e., increase the rates of) chemical reactions. In enzymatic reactions, the molecules at the beginning of the process, called substrates, are

<b>Feed materials</b>	converted into different molecules, called products. is the straight feeding stuffs intended for feeding as such to animals and also feed ingredients intended for use in the manufacture of compound feeds.
<b>Fermentation</b>	in food processing typically is the conversion of carbohydrates to alcohols and carbon dioxide or organic acids using yeasts, bacteria, or a combination thereof, under anaerobic conditions. In simple terms, it is the chemical conversion of sugars into ethanol.
<b>Food additives</b>	is the enrichment, supplement or any other optional components added to a product, which affects it's keeping quality, consistency, color, smell, taste or other organoleptic properties.
<b>Food grade quality</b>	refers to the minimum standard for substances to qualify as fit for human consumption or permitted to come in contact with food.
<b>Farrowing</b>	is the act of giving birth in pigs or swine.
<b>Feeds</b>	is any non-injurious edible material having nutrient value to animals. May be harvest or pasture forage, range, grain or other processed feed for livestock or game animals.
<b>Fertilizer</b>	is any organic or inorganic material of natural or synthetic origin (other than liming materials) that is added to a soil to supply one or more plant nutrients essential to the growth of plants.
<b>Forage</b>	is a vegetative material in a fresh, dried, or ensiled state (pasture, hay or silage) that is fed to livestock.
<b>Free range</b>	is of, relating to, or produced by animals, especially poultry, that have access to outside spaces and are permitted to graze or forage and range freely for food rather than being confined in an enclosure or feedlot as with free-range chickens. Sometimes, referred to as free-roaming. Conditions for the animals are also typically less crowded.
<b>Gait</b>	is a manner of walking or moving of foot.
<b>Germination test</b>	is a test that determines the maximum germination potential, or viability of the seed.
<b>Gestation Period</b>	refers to the period of carrying the young in the womb.
<b>Gilt</b>	is a young female hog that has not given birth yet.



<b>Green manure</b>	is a crop that is incorporated into the soil for the purpose of soil improvement.
<b>Growth rate</b>	is a measure of the increase in size, mass or number of crops over a period of time.
<b>Habitat</b>	is the area over which a plant or animal species naturally exist, the area where a species occurs. e.g. seashore, riverbank, woodland, grassland, etc.
<b>Harrowing</b>	is breaking up and smoothing out the surface of the soil.
<b>Harvest</b>	is the process of gathering mature crops from the fields.
<b>Herbal medicine</b>	is actually products which is derived from a plant or plant part which are used for its scent, flavor or therapeutic properties. Also, herbal medicine products are dietary supplements that people take to improve their health.
<b>Inbreeding</b>	is the mating of closely related animals in a herd.
<b>Inter cropping</b>	is the growing two or more crops as a mixture in the same field at the same time. Intercropping can be one way of adding diversity to a crop system.
<b>Incubation</b>	refers to the development of the birds from the fertilized eggs to fully formed chicks.
<b>Ingredient</b>	is any substance, including a food additive, used in the manufacture or preparation of a food or present in the final product, although in a modified form.
<b>Irrigation</b>	is the artificial application of water to the land or soil. It is used to assist in the growing of agricultural crops, maintenance of landscapes, and revegetation of disturbed soils in dry areas and during periods of inadequate rainfall.
<b>Kidding/lambing</b>	is the act of a pregnant doe giving birth.
<b>Fish Amino Acid (FAA)</b>	is a liquid made from fish waste. FAA is of great value to both plants and microorganisms in their growth, because it contains an abundant amount of nutrients and various types of amino acids.
<b>Labeling</b>	is any written, printed or graphic presentation that is present on the label of a product accompanies the product or displayed near the product.
<b>Land preparation</b>	is a farm activity typically involves plowing, harrowing, and leveling the field to make it suitable for crop establishment.

<b>Lactating</b>	describes the secretion of milk from the mammary glands and the period of time that a mother lactates to feed her young.
<b>Leptospirosis</b>	is a rare and severe bacterial infection that occurs when people are exposed to certain environment.
<b>Livestock</b>	refers to domestic animals kept for use on a farm and raised for sale and profit.
<b>Litter</b>	is the offsprings at one birth of a multiparous or animal like swine.
<b>Litter Size</b>	refers to the aggregate number of piglets per farrowing.
<b>Natural Calcium Phosphate Micro Nutrients (CALPHOS)</b>	buffered calcium phosphate solution for foliar application used to improve the quality, shelf life and storability of horticultural crops.
<b>Nutrients</b>	are food elements or substance found in the feeds such as protein, carbohydrates, fats and others.
<b>Microbe</b>	is a minute, often disease-causing organism.
<b>Mulching</b>	A protective covering, usually of organic matter such as leaves, straw, or peat, placed around plants to prevent the evaporation of moisture, the freezing of roots, and the growth of weeds.
<b>Organic</b>	in this text the word refers to the particular farming and processing systems described in these standards and not in the classical Chemical sense (the latter shall be clearly marked with a † for ease of identification). The term Organic is nearly synonymous in other languages to “biological” or “ecological.”
<b>Organic farming</b>	is more than agricultural production without the use of synthetic chemicals or genetically modified organisms, growth regulators, and livestock feed additives. Organic farming emphasizes on a holistic farm management approach, where rotations and animals play an integral role to the system.
<b>Organic farmer</b>	any farmer who uses organic farming methods.
<b>Organic feed</b>	animal feed produced organically. It should be produced on farm, but it may also be imported. The recommended objective to produce feed on farm remains a challenge in organic livestock and aquaculture production.
<b>Organic waste</b>	is anything that comes from plants or animals that is biodegradable.

<b>Organic agriculture</b>	as an ecological production management system that promotes and enhances biodiversity, biological cycles, and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain, or enhance ecological harmony.
<b>Organoleptic</b>	refers to any sensory properties of a food or other products, including taste, colour, odour and texture.
<b>Pasture</b>	land use for livestock grazing that is managed to provide feed value and maintain or improve soil, water and vegetative resources.
<b>Permaculture</b>	(permanent+agriculture) is the conscious design and maintenance of agriculturally productive ecosystems which have the diversity, stability, and resilience of natural ecosystems. It is a land use and community building movement which strives for the harmonious integration of human dwellings, microclimate, annual and perennial plants, animals, soils, and water into stable, productive communities. The focus is not on these elements themselves, but rather on the relationships created among them by the way we place them in the landscape.
<b>Integrated Pest management</b>	is a broad based approach that integrates a range of practices for economic control of pests.
<b>Predators</b>	organism which hunts and eats other organisms. These include both carnivores, which eat animals, and herbivores, which eat plants.
<b>Plowing</b>	in farming for initial cultivation of soil in preparation for sowing seed or planting.
<b>Post-harvesting</b>	is the stage of crop production immediately following harvest, including cooling, cleaning, sorting and packing. The instant a crop is removed from the ground, or separated from its parent plant, it begins to deteriorate. Post-harvest treatment largely determines final quality, whether a crop is sold for fresh consumption, or used as an ingredient in a processed food product.
<b>Potting media</b>	is a medium in which to grow plants, herbs and vegetables in a pot or other durable container.
<b>Poultry</b>	a collective term for birds used either for breeding, egg production, meat production and recreation.
<b>Production</b>	means the operations undertaken to supply agricultural

	products in the state in which they occur on the farm, including initial packaging and labelling of the product.
<b>Production cost</b>	combined costs of raw material and labor incurred in producing goods.
<b>Purebreeding</b>	is the mating of the unrelated individuals in the same breed.
<b>Putrification process</b>	is also known as decomposition, which is the breakdown or decay of organic materials.
<b>Ram</b>	is an intact (still has testicals) male sheep, used for breeding.
<b>Rapid composting method</b>	is composting method which apply new, different procedures and materials to speed up the process.
<b>Ration</b>	the total amount of feeds taken in by an animal during a 24 hour period.
<b>Raw materials</b>	all ingredients other than additives.
<b>Rooster</b>	a matured male poultry used for breeding.
<b>Rotavator</b>	a type of machine with rotating blades that break up soil.
<b>Ruminants</b>	refers to animals with complex digestive system e.g. cattle, carabao, goats and sheep.
<b>Seedbed</b>	or seedling bed is the local soil environment in which seeds are planted. Often it comprises not only the soil but also a specially prepared cold frame, hotbed or raised bed used to grow the seedlings in a controlled environment into larger young plants before transplanting them into a garden or field. A seedling bed is used to increase the number of seeds that germinate.
<b>Seedlings</b>	is a young plant sporophyte developing out of a plant embryo from a seed. Seedling development starts with germination of the seed. A typical young seedling consists of three main parts: the radicle (embryonic root), the hypocotyl (embryonic shoot), and the cotyledons (seed leaves).
<b>Selection</b>	refers to the process of choosing males and females with desirable characteristics either for breeding or replacement stocks.
<b>Simple stomach/non-ruminant animals</b>	animals that possess simple digestive system e.g. poultry, horse and pigs.
<b>Sow</b>	a mature female hog that had given birth.

<b>Stag</b>	a male swine castrated after sexual maturity.
<b>Standards</b>	are norms ,sets of guidelines, requirements and principles that are used as in organic agriculture and processing. The term “standards” as used here refers to Philippine National Standards relevant to local agroecosystems production.
<b>Surface irrigation system</b>	is defined as the group of application techniques where water is applied and distributed over the soil surface by gravity. It is by far the most common form of irrigation throughout the world and has been practiced in many areas virtually unchanged for thousands of years.
<b>Swine</b>	a collective term for hogs.
<b>Tail wagging</b>	is a behavior that may function as both attractivity and proceptivity. It is one of the signs of estrus exhibited by females; high rates of tail wagging would arouse males, increasing sexual performance.
<b>Waterer</b>	equipment used in providing water to animals.
<b>Weaning</b>	refers to a young animal of either sex which has been separated from the mother at the end of the lactation period.
<b>Weeding</b>	to clear or remove weeds.
<b>Vermicomposting</b>	the process of using earthworms to breakdown kitchen and garden waste, to create a faster than normal composting; to be précised the product is called vermicompost (or worm compost).
<b>Vibriosis</b>	in cattle is an infectious bacterial ( <i>Campylobacter fetus</i> ) disease of the genital tract causing infertility and occasional abortions. It is a venereal disease spread by infected bulls when they mate susceptible cows and heifers. It is considered to be the most important cause of infertility in cattle.

## ACKNOWLEDGEMENTS

The Technical Education and Skills Development Authority (TESDA) wishes to extend gratitude and appreciation to the many representatives of business, industry, academe and government agencies who donated their time and expertise to the development and validation of these Training Regulations.

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Farmer Owner/Brgy. Kagawad  
Poblacion Badiangan, Iloilo

**MS. MA. BERNALYN B. HORLADOR**

Farm worker  
Sariri, Badiangan, Iloilo

**MS. SUSAN BUYCO**

Farm laborer  
Sariri, Badiangan, Iloilo

**MS. MILAGROS C. BUSCAR**

Sugar ane planter/Brgy. Kagawad  
Poblacion Badiangan, Iloilo

**MR. ADAN PORRAS**

Farmer  
Poblacion Badiangan, Iloilo

**MR. JOSE FELINO P. RESOL, JR.**

Community Organizer  
St. Joseph Parish Organic Farmers  
Program-Forum for Community  
Alternative, Inc.  
Brgy. Pototan, Iloilo

## **MINDANAO AREA**

### **MR. MARCOS M. DISTO**

Farm Owner/Brgy. Captain  
LGU-Makilala, New Bulatukan  
Cotobato

### **MS. LEONEDA F. OCACION**

Farmer  
Bry 75-A, Zamzoma  
Davao City

### **MR. COMMUNSITE B. CASUS**

Vegetable Farmer  
Bry 75-A  
Dumalay I, Davao City

### **MR. ALAN C. CEQUIÑA**

Farm Owner  
Ursula Subd., Tagum City  
Davao del Norte

### **MR. ROMEO V. ARDECO**

Farmer/Brgy. Kagawad  
Matina Aplaya, Davao City

### **MR. JIMMY D. POLIQUIT**

Backyard Farmer  
Matina Aplaya, Davao City

### **MS. ANABELLE D. POLINAR**

Farm worker  
ACES Farm  
Peda St. , Panabo City, Davao del Norte

### **MS. AMIE E. CAJERA**

Farm Owner/Brgy. Kagawad  
Farm Malabog  
Malabog, Davao City

### **MR. BENEDICTO M. PIONGYE**

Farm worker  
ACES Farm  
Peda St. , Panabo City, Davao del Norte

### **MR. GERVIE D. EMNACE**

Farm worker  
ACES Farm  
Peda St. , Panabo City, Davao del Norte

### **MR. MIGUEL V. CENABRE**

Farmer/Brgy. Kagawad  
Makilala, Cotobato

## **The Management and Staff of the TESDA Secretariat**

- Qualification and Standards Office
- Competency Assessment and Certification Office