

TRAINING REGULATIONS

AGRICULTURAL CROPS PRODUCTION NC III

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AGRICULTURE AND FISHERY SECTOR

AGRICULTURAL CROPS PRODUCTION NC III

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TRAINING REGULATIONS FOR AGRICULTURAL CROPS PRODUCTION NC III

Section 1 : Agricultural Crops Production National Certificate III

The Agricultural Crops Production NC III consists of competencies that a person must achieve in managing small farm. Specifically it involves competencies in making decision and carrying out competencies in relation to establishment, maintenance and harvesting of agronomic crops such as ***coarse grains, grain legumes, coffee, coconuts, cotton, soya beans, peanuts and sugar cane***. Workers at this level would be working autonomously and likely to own a small enterprise or work within a cooperative structure.

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

These units of competency comprising this qualification include the following:

Code	BASIC COMPETENCIES
500311109	Lead workplace communication
500311110	Lead small teams
500311111	Develop and practice negotiation skills
500311112	Solve problems related to work activities
500311113	Use mathematical concepts and techniques
500311114	Use relevant technologies
Code	COMMON COMPETENCIES
AGR321201	Apply safety measures in farm operations
AGR321202	Use farm tools and equipment
AGR321203	Perform estimation and calculations
Code	CORE COMPETENCIES
AGR611310	Prepare land for agricultural crop production
AGR611311	Implement post-harvest program
AGR611312	Implement plant nutrition program
AGR611313	Control weeds
AGR611314	Prepare and apply chemicals
AGR611320	Establish agronomic crops
AGR611321	Undertake agronomic crop maintenance activities
AGR611322	Undertake agronomic crop harvesting activities
AGR611323	Save, prepare and store agricultural seed
AGR611324	Implement vertebrate pest control program

Code	ELECTIVE COMPETENCIES
AGR611325	Follow site quarantine procedures
AGR611326	Collect samples for a rural production or horticultural monitoring program
AGR611327	Handle bulk materials in storage area
AGR611328	Prepare grain storage
AGR611329	Comply with industry quality assurance requirements
AGR611330	Maintain and monitor environmental work practices
AGR611331	Keep records for farm business
AGR611332	Perform specialized machinery maintenance
AGR611333	Install irrigation systems

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

- **Independent Farmer (Owner / Operator in a smaller operation**
- **Leading hand**

SECTION 2 COMPETENCY STANDARDS

This section gives the details of the contents of the basic, common and core units of competency required in AGRICULTURAL CROPS PRODUCTION NC III

BASIC COMPETENCIES

UNIT OF COMPETENCY : LEAD WORKPLACE COMMUNICATION

UNIT CODE : 500311109

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required to lead in the dissemination and discussion of ideas, information and issues in the workplace.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Communicate information about workplace processes	1.1. Appropriate <i>communication method</i> is selected 1.2. Multiple operations involving several topics areas are communicated accordingly 1.3. Questions are used to gain extra information 1.4. Correct sources of information are identified 1.5. Information is selected and organized correctly 1.6. Verbal and written reporting is undertaken when required 1.7. Communication skills are maintained in all situations
2. Lead workplace discussions	2.1. Response to workplace issues are sought 2.2. Response to workplace issues are provided immediately 2.3. Constructive contributions are made to workplace discussions on such issues as production, quality and safety 2.4. Goals/objectives and action plan undertaken in the workplace are communicated

3. Identify and communicate issues arising in the workplace	3.1. Issues and problems are identified as they arise 3.2. Information regarding problems and issues are organized coherently to ensure clear and effective communication 3.3. Dialogue is initiated with appropriate personnel 3.4. Communication problems and issues are raised as they arise
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RANGE OF VARIABLES

VARIABLE	RANGE
1. Methods of communication	1.1. Non-verbal gestures 1.2. Verbal 1.3. Face to face 1.4. Two-way radio 1.5. Speaking to groups 1.6. Using telephone 1.7. Written 1.8. Internet

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1. Dealt with a range of communication/information at one time 1.2. Made constructive contributions in workplace issues 1.3. Sought workplace issues effectively 1.4. Responded to workplace issues promptly 1.5. Presented information clearly and effectively written form 1.6. Used appropriate sources of information 1.7. Asked appropriate questions 1.8. Provided accurate information
2. Underpinning knowledge	<ul style="list-style-type: none"> 2.1. Organization requirements for written and electronic communication methods 2.2. Effective verbal communication methods
3. Underpinning Skills	<ul style="list-style-type: none"> 3.1. Organize information 3.2. Understand and convey intended meaning 3.3. Participate in variety of workplace discussions 3.4. Comply with organization requirements for the use of written and electronic communication methods
4. Resource Implications	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> 4.1. Variety of Information 4.2. Communication tools 4.3. Simulated workplace
5. Methods of Assessment	<p>Competency in this unit must be assessed through</p> <ul style="list-style-type: none"> 5.2. Direct Observation 5.3. Interview
6. Context for Assessment	<ul style="list-style-type: none"> 6.1. Competency may be assessed in the workplace or in simulated workplace environment 6.2. Assessment shall be observed while task are being undertaken whether individually or in-group

UNIT OF COMPETENCY : LEAD SMALL TEAMS

UNIT CODE : 500311110

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes to lead small teams including setting and maintaining team and individual performance standards.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Provide team leadership	1.1. Work requirements are identified and presented to team members 1.2. Reasons for instructions and requirements are communicated to team members 1.3. Team members' queries and concerns are recognized, discussed and dealt with
2. Assign responsibilities	2.1. Duties, and responsibilities are allocated having regard to the skills, knowledge and aptitude required to properly undertake the assigned task and according to company policy 2.2. Duties are allocated having regard to individual preference, domestic and personal considerations, whenever possible
3. Set performance expectations for team members	3.1. Performance expectations are established based on client needs and according to assignment requirements 3.2. Performance expectations are based on individual team members duties and area of responsibility 3.3. Performance expectations are discussed and disseminated to individual team members

<p>4. Supervised team performance</p>	<p>4.1. Monitoring of performance takes place against defined performance criteria and/or assignment instructions and corrective action taken if required</p> <p>4.2. Team members are provided with feedback, positive support and advice on strategies to overcome any deficiencies</p> <p>4.3. Performance issues which cannot be rectified or addressed within the team are referenced to appropriate personnel according to employer policy</p> <p>4.4. Team members are kept informed of any changes in the priority allocated to assignments or tasks which might impact on client/customer needs and satisfaction</p> <p>4.5. Team operations are monitored to ensure that employer/client needs and requirements are met</p> <p>4.6. Follow-up communication is provided on all issues affecting the team</p> <p>4.7. All relevant documentation is completed in accordance with company procedures</p>
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RANGE OF VARIABLES

VARIABLE	RANGE
1. Work requirements	1.1. Client Profile 1.2. Assignment instructions
2. Team member's concerns	2.1. Roster/shift details
3. Monitor performance	3.1. Formal process 3.2. Informal process
4. Feedback	4.1. Formal process 4.2. Informal process
5. Performance issues	5.1. Work output 5.2. Work quality 5.3. Team participation 5.4. Compliance with workplace protocols 5.5. Safety 5.6. Customer service

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ol style="list-style-type: none"> 1.1. Maintained or improved individuals and/or team performance given a variety of possible scenario 1.2. Assessed and monitored team and individual performance against set criteria 1.3. Represented concerns of a team and individual to next level of management or appropriate specialist and to negotiate on their behalf 1.4. Allocated duties and responsibilities, having regard to individual's knowledge, skills and aptitude and the needs of the tasks to be performed 1.5. Set and communicated performance expectations for a range of tasks and duties within the team and provided feedback to team members
2. Underpinning Knowledge	<ol style="list-style-type: none"> 2.1. Company policies and procedures 2.2. Relevant legal requirements 2.3. How performance expectations are set 2.4. Methods of Monitoring Performance 2.5. Client expectations 2.6. Team member's duties and responsibilities
3. Underpinning Skills	<ol style="list-style-type: none"> 3.1. Communication skills required for leading teams 3.2. Informal performance counseling skills 3.3. Team building skills 3.4. Negotiating skills
4. Resource Implications	<p>The following resources MUST be provided:</p> <ol style="list-style-type: none"> 4.1. Access to relevant workplace or appropriately simulated environment where assessment can take place 4.2. Materials relevant to the proposed activity or task

5. Methods of Assessment	<p>Competency may be assessed through:</p> <p>5.1. Direct observations of work activities of the individual member in relation to the work activities of the group</p> <p>5.2. Observation of simulation and/or role play involving the participation of individual member to the attainment of organizational goal</p> <p>5.3. Case studies and scenarios as a basis for discussion of issues and strategies in teamwork</p>
6. Context for Assessment	<p>6.1. Competency assessment may occur in workplace or any appropriately simulated environment</p> <p>6.2. Assessment shall be observed while task are being undertaken whether individually or in-group</p>

UNIT OF COMPETENCY: DEVELOP AND PRACTICE NEGOTIATION SKILLS

UNIT CODE : 500311111

UNIT DESCRIPTOR : This unit covers the skills, knowledge and attitudes required to collect information in order to negotiate to a desired outcome and participate in the negotiation.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Plan negotiations	<p>1.1 Information on <i>preparing for negotiation</i> is identified and included in the plan</p> <p>1.2 Information on creating <i>non verbal environments</i> for positive negotiating is identified and included in the plan</p> <p>1.3 Information on <i>active listening</i> is identified and included in the plan</p> <p>1.4 Information on different <i>questioning techniques</i> is identified and included in the plan</p> <p>1.4 Information is checked to ensure it is correct and up-to- date</p>
2. Participate in negotiations	<p>2.1 Criteria for successful outcome are agreed upon by all parties</p> <p>2.2 Desired outcome of all parties are considered</p> <p>2.3 Appropriate language is used throughout the negotiation</p> <p>2.4 A variety of questioning techniques are used</p> <p>2.5 The issues and processes are documented and agreed upon by all parties</p> <p>2.6 Possible solutions are discussed and their viability assessed</p> <p>2.6 Areas for agreement are confirmed and recorded</p> <p>2.7 Follow-up action is agreed upon by all parties</p>

RANGE OF VARIABLES

VARIABLE	RANGE
1. Preparing for negotiation	1.1 Background information on other parties to the negotiation 1.2 Good understanding of topic to be negotiated 1.3 Clear understanding of desired outcome/s 1.4 Personal attributes 1.4.1. self awareness 1.4.2. self esteem 1.4.3. objectivity 1.4.4. empathy 1.4.5. respect for others 1.5 Interpersonal skills 1.5.1. listening/reflecting 1.5.2. non verbal communication 1.5.3. assertiveness 1.5.4. behavior labeling 1.5.5. testing understanding 1.5.6. seeking information 1.5.7. self disclosing 1.6 Analytic skills 1.6.1. observing differences between content and process 1.6.2. identifying bargaining information 1.6.3. applying strategies to manage process 1.6.4. applying steps in negotiating process 1.6.5. strategies to manage conflict 1.6.6. steps in negotiating process 1.6.7. options within organization and externally for resolving conflict
2. Non verbal environments	2.1 Friendly reception 2.2 Warm and welcoming room 2.3 Refreshments offered 2.4 Lead in conversation before negotiation begins
3. Active listening	3.1 Attentive 3.2 Don't interrupt 3.3 Good posture 3.4 Maintain eye contact 3.5 Reflective listening
4. Questioning techniques	4.1 Direct 4.2 Indirect 4.3 Open-ended

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1. Demonstrated sufficient knowledge of the factors influencing negotiation to achieve agreed outcome 1.2. Participated in negotiation with at least one person to achieve an agreed outcome
2. Underpinning Knowledge and Attitude	<ul style="list-style-type: none"> 2.1. Codes of practice and guidelines for the organization 2.2. Organizations policy and procedures for negotiations 2.3. Decision making and conflict resolution strategies procedures 2.4. Problem solving strategies on how to deal with unexpected questions and attitudes during negotiation 2.5. Flexibility 2.6. Empathy
3. Underpinning Skills	<ul style="list-style-type: none"> 3.1. Interpersonal skills to develop rapport with other parties 3.2. Communication skills (verbal and listening) 3.3. Observation skills 3.4. Negotiation skills
4. Resource Implications	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> 4.1 Room with facilities necessary for the negotiation process 4.2 Human resources (negotiators)
5. Methods of Assessment	<p>Competency may be assessed through:</p> <ul style="list-style-type: none"> 5.1 Observation/demonstration and questioning 5.2 Portfolio assessment 5.3 Oral and written questioning 5.4 Third party report
6. Context for Assessment	<ul style="list-style-type: none"> 6.1 Competency to be assessed in real work environment or in a simulated workplace setting.

UNIT OF COMPETENCY : SOLVE PROBLEMS RELATED TO WORK ACTIVITIES

UNIT CODE : 500311112

UNIT DESCRIPTOR : This unit of covers the knowledge, skills and attitudes required to solve problems in the workplace including the application of problem solving techniques and to determine and resolve the root cause of problems.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Identify the problem	1.1. Variances are identified from normal operating parameters; and product quality 1.2. Extent, cause and nature are of the problem are defined through observation, investigation and <i>analytical techniques</i> 1.3. <i>Problems</i> are clearly stated and specified
2. Determine fundamental causes of the problem	2.1. Possible causes are identified based on experience and the use of problem solving tools / analytical techniques. 2.2. Possible cause statements are developed based on findings 2.3. Fundamental causes are identified per results of investigation conducted
3. Determine corrective action	3.1. All possible options are considered for resolution of the problem 3.2. Strengths and weaknesses of possible options are considered 3.3. Corrective actions are determined to resolve the problem and possible future causes 3.4. <i>Action plans</i> are developed identifying measurable objectives, resource needs and timelines in accordance with safety and operating procedures
4. Provide recommendation/s to manager	4.1. Report on recommendations are prepared 4.2. Recommendations are presented to appropriate personnel. 4.3. Recommendations are followed-up, if required

RANGE OF VARIABLES

VARIABLE	RANGE
1. Analytical techniques	1.1. Brainstorming 1.2. Intuitions/Logic 1.3. Cause and effect diagrams 1.4. Pareto analysis 1.5. SWOT analysis 1.6. Gant chart, Pert CPM and graphs 1.7. Scattergrams
2. Problem	2.1. Non – routine process and quality problems 2.2. Equipment selection, availability and failure 2.3. Teamwork and work allocation problem 2.4. Safety and emergency situations and incidents
3. Action plans	3.1. Priority requirements 3.2. Measurable objectives 3.3. Resource requirements 3.4. Timelines 3.5. Co-ordination and feedback requirements 3.6. Safety requirements 3.7. Risk assessment 3.8. Environmental requirements

EVIDENCE GUIDE

<p>1. Critical aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1. Identified the problem 1.2. Determined the fundamental causes of the problem 1.3. Determined the correct / preventive action 1.4. Provided recommendation to manager <p>These aspects may be best assessed using a range of scenarios / case studies / what ifs as a stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and improbable situations that may have happened.</p>
<p>2. Underpinning Knowledge</p>	<ul style="list-style-type: none"> 2.1. Competence includes a thorough knowledge and understanding of the process, normal operating parameters, and product quality to recognize non-standard situations 2.2. Competence to include the ability to apply and explain, sufficient for the identification of fundamental cause, determining the corrective action and provision of recommendations <ul style="list-style-type: none"> 2.2.1. Relevant equipment and operational processes 2.2.2. Enterprise goals, targets and measures 2.2.3. Enterprise quality, OHS and environmental requirement 2.2.4. Principles of decision making strategies and techniques 2.2.5. Enterprise information systems and data collation 2.2.6. Industry codes and standards
<p>3. Underpinning Skills</p>	<ul style="list-style-type: none"> 3.1. Using range of formal problem solving techniques 3.2. Identifying and clarifying the nature of the problem 3.3. Devising the best solution 3.4. Evaluating the solution 3.5. Implementation of a developed plan to rectify the problem

4. Resource Implications	4.1. Assessment will require access to an operating plant over an extended period of time, or a suitable method of gathering evidence of operating ability over a range of situations. A bank of scenarios / case studies / what ifs will be required as well as bank of questions which will be used to probe the reason behind the observable action.
5. Methods of Assessment	<p>Competency may be assessed through:</p> <p>5.1. Case studies on solving problems in the workplace</p> <p>5.2. Observation</p> <p>The unit will be assessed in a holistic manner as is practical and may be integrated with the assessment of other relevant units of competency. Assessment will occur over a range of situations, which will include disruptions to normal, smooth operation. Simulation may be required to allow for timely assessment of parts of this unit of competency. Simulation should be based on the actual workplace and will include walk through of the relevant competency components.</p>
6. Context for Assessment	6.1. In all workplace, it may be appropriate to assess this unit concurrently with relevant teamwork or operation units.

UNIT OF COMPETENCY: USE MATHEMATICAL CONCEPTS AND TECHNIQUES

UNIT CODE : 500311113

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitudes required in the application of mathematical concepts and techniques.

ELEMENT	Performance Criteria <i>Italicized</i> terms are elaborated in the Range of Variables
1. Identify mathematical tools and techniques to solve problem	1.1 Problem areas are identified based on given condition 1.2 Mathematical techniques are selected based on the given problem
2. Apply mathematical procedure/solution	2.1 Mathematical techniques are applied based on the problem identified 2.2 Mathematical computations are performed to the level of accuracy required for the problem 2.3 Results of mathematical computation is determined and verified based on job requirements
3. Analyze results	3.1 Result of application is reviewed based on expected and required specifications and outcome 3.2 Appropriate action is applied in case of error

RANGE OF VARIABLES

VARIABLE	RANGE
1. Mathematical techniques	May include but are not limited to: 1.1. Four fundamental operations Measurements 1.2. Use/Conversion of units of measurements 1.3. Use of standard formulas
2. Appropriate action	2.1 Review in the use of mathematical techniques (e.g. recalculation, re-modeling) 2.2 Report error to immediate superior for proper action

EVIDENCE GUIDE

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Identified, applied and reviewed the use of mathematical concepts and techniques to workplace problems
2. Underpinning Knowledge	2.1 Fundamental operation (addition, subtraction, division, multiplication) 2.2 Measurement system 2.3 Precision and accuracy 2.4 Basic measuring tools/devices
3. Underpinning Skills	3.1 Applying mathematical computations 3.2 Using calculator 3.3. Using different measuring tools
4. Resource Implications	The following resources MUST be provided: 4.1 Calculator 4.2 Basic measuring tools 4.3 Case Problems
5. Methods of Assessment	Competency may be assessed through: 5.1 Authenticated portfolio 5.2 Written Test 5.3. Interview/Oral Questioning 5.4. Demonstration
6. Context for Assessment	6.1. Competency may be assessed in the work place or in a simulated work place setting

UNIT OF COMPETENCY: USE RELEVANT TECHNOLOGIES**UNIT CODE : 500311114****UNIT DESCRIPTOR :** This unit of competency covers the knowledge, skills, and attitude required in selecting, sourcing and applying appropriate and affordable technologies in the workplace.

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms are elaborated in the Range of Variables</i>
1. Study/select appropriate technology	1.1. Usage of different technologies is determined based on job requirements 1.2. Appropriate technology is selected as per work specification
2. Apply relevant technology	2.1. Relevant technology is effectively used in carrying out function 2.2. Applicable software and hardware are used as per task requirement 2.3. Management concepts are observed and practiced as per established industry practices
3. Maintain/enhance of relevant technology	3.1. Maintenance of technology is applied in accordance with the industry standard operating procedure, manufacturer's operating guidelines and occupational health and safety procedure to ensure its operative ability 3.2. Updating of technology is maintained through continuing education or training in accordance with job requirement 3.3 Technology failure/ defect is immediately reported to the concern/responsible person or section for appropriate action

RANGE OF VARIABLES

VARIABLE	RANGE
1. Technology	May include but are not limited to: 1.1. Office technology 1.2. Industrial technology 1.3. System technology 1.4. Information technology 1.5. Training technology
2. Management concepts	May include but not limited to: 2.1 Real Time Management 2.2 KAIZEN or continuous improvement 2.3 5s 2.4. Total Quality Management 2.5. Other management/productivity tools
3. Industry standard operating procedure	3.1. Written guidelines relative to the usage of office technology/equipment 3.2. Verbal advise/instruction from the co-worker
4. Manufacturer's operating guidelines/ instructions	4.1 Written instruction/manuals of specific Technology/ equipment 4.2 General instruction manual 4.3 Verbal advise from manufacturer relative to the operation of equipment
5. Occupational health and safety procedure	5.1 Relevant statutes on OHS 5.2 Company guidelines in using technology/equipment
6. Appropriate action	6.1 Implementing preventive maintenance schedule 6.2 Coordinating with manufacturer's technician

EVIDENCE GUIDE

1. Critical aspects of Competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Studied and selected appropriate technology consistent with work requirements 1.2 Applied relevant technology 1.3 Maintained and enhanced operative ability of relevant technology
2. Underpinning Knowledge	<ul style="list-style-type: none"> 2.1 Awareness on technology and its function 2.2 Repair and maintenance procedure 2.3 Operating instructions 2.4 Applicable software 2.5 Communication techniques 2.6 Health and safety procedure 2.7 Company policy in relation to relevant technology 2.8 Different management concepts 2.9 Technology adaptability
3. Underpinning Skills	<ul style="list-style-type: none"> 3.1 Relevant technology application/implementation 3.2 Basic communication skills 3.3 Software applications skills 3.4 Basic troubleshooting skills
4. Resource Implications	<p>The following resources MUST be provided:</p> <ul style="list-style-type: none"> 4.1 Relevant technology 4.2 Interview and demonstration questionnaires 4.3 Assessment packages
5. Methods of Assessment	<p>Competency must be assessed through:</p> <ul style="list-style-type: none"> 5.1 Interview 5.2 Actual demonstration 5.3 Authenticated portfolio (related certificates of training/seminar)
6. Context for Assessment	<ul style="list-style-type: none"> 6.1 Competency may be assessed in actual workplace or simulated environment

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

RANGE OF VARIABLES

VARIABLE	RANGE
1. Work tasks	Work task may be selected from any of the 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 4.1.1 Wrenches 4.1.2 Screw driver 4.1.3 Pliers 4.2 Materials 4.2.1 Bottles 4.2.2 Plastic 4.2.3 Bags 4.2.4 Syringe 4.3 Outfit 4.3.1 Masks 4.3.2 Gloves 4.3.3 Boots 4.3.4 Overall coats 4.3.5 Hat 4.3.6 Eye goggles

5. Emergency procedures	5.1 Location of first aid kit 5.2 Evacuation 5.3 Agencies contract 5.4 Farm emergency procedures
6. Waste materials	6.1 Animal manure 6.2 Waste water 6.3 Syringes 6.4 Unused farm chemicals e.g. pesticides, chemicals, fertilizers 6.5 Expired reagents 6.6 Dead animals
7. Hazards	7.1 Chemical 7.2 Electrical 7.3 Falls

EVIDENCE GUIDE

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

UNIT OF COMPETENCY : USE FARM TOOLS AND EQUIPMENT

UNIT CODE : AGR321202

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

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms are elaborated in the Range of Variables</i>
1. Select and use farm tools	<ul style="list-style-type: none">1.1 Identified appropriate farm tools according to requirement/use1.2 Farm tools are checked for faults and defective tools reported in accordance with farm procedures1.3 Appropriate tools and equipment are safely used according to job requirements and manufacturers conditions
2. Select and operate farm equipment	<ul style="list-style-type: none">2.1 Identify appropriate <i>farm equipment</i>2.2 Instructional manual of the farm tools and equipment are carefully read prior to operation2.3 <i>Pre-operation check-up</i> is conducted in line with manufacturers manual2.4 Faults in farm equipment are identified and reported in line with farm procedures2.5 Farm equipment used according to its function2.6 Followed safety procedures
3. Perform preventive maintenance	<ul style="list-style-type: none">3.1 Tools and equipment are cleaned immediately after use in line with farm procedures3.2 Routine check-up and maintenance are performed3.3 Tools and equipment are stored in designated areas in line with farm procedures

RANGE OF VARIABLES

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

EVIDENCE GUIDE

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

UNIT OF COMPETENCY : PERFORM ESTIMATION AND BASIC CALCULATION

UNIT CODE : AGR321203

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

ELEMENT	PERFORMANCE CRITERIA <i>Italicized terms are elaborated in the Range of Variables</i>
1. Perform estimation	<ul style="list-style-type: none">1.1 Job requirements are identified from written or oral communications1.2 Quantities of materials and resources required to complete a work task are estimated1.3 The time needed to complete a work activity is estimated1.4 Accurate estimate for work completion are made1.5 Estimate of materials and resources are reported to appropriate person
2. Perform basic workplace calculation	<ul style="list-style-type: none">2.1 <i>Calculations</i> to be made are identified according to job requirements2.2 Correct <i>method of calculation</i> identified2.3 <i>System and units of measurement</i> to be followed are ascertained2.4 Calculation needed to complete work tasks are performed using the four basic process of addition, division, multiplication and subtraction2.5 Calculate whole fraction, percentage and mixed when are used to complete the instructions2.6 Number computed in self checked and completed for alignment

RANGE OF VARIABLES

VARIABLE	RANGE
1. Calculation	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"> 1.1 Performed estimation 1.2 Performed basic workplace calculation 1.3 Applied corrective measures as maybe necessary
2. Underpinning Knowledge and Attitudes	<ul style="list-style-type: none"> 2.1 Mathematics <ul style="list-style-type: none"> 2.1.1 Basic mathematical operations 2.1.2 Percentage and ratios 2.1.3 Unit Conversion 2.1.4 Basic accounting principles and procedures <ul style="list-style-type: none"> 2.1.4.1 Production cost 2.1.4.2 Sales 2.1.4.3 Accounts receivables/payables 2.2 Systems, Processes and Operations <ul style="list-style-type: none"> 2.2.1 Knowledge in different management practices and operational procedures 2.3 Values <ul style="list-style-type: none"> 2.3.1 Safety consciousness 2.3.2 Time consciousness and management 2.3.3 Cost consciousness 2.3.4 Precision
3. Underpinning Skills	<ul style="list-style-type: none"> 3.1 Ability to perform basic calculation 3.2 Communicate effectively
4. Method of Assessment	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> 4.1 Practical demonstration 4.2 Written examination
5. Resource Implications	<ul style="list-style-type: none"> 5.1 Relevant tools and equipment for basic calculation 5.2 Recommended data
6. Context of Assessment	<ul style="list-style-type: none"> 6.1 Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision