

TRAINING REGULATIONS



RUBBER PROCESSING 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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RUBBER PROCESSING NC II

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TRAINING REGULATIONS FOR RUBBER PROCESSING NC II

Section 1 RUBBER PROCESSING QUALIFICATIONS

The **RUBBER PROCESSING NC II** Qualification consists of competencies that a person must achieve to receive latex and lumps, produce blanketed rubber sheet and perform rubber drying operation.

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:

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

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

Code	CORE COMPETENCIES
AGR612205	Receive latex and lumps
AGR612206	Produce blanketed rubber sheet
AGR612207	Perform rubber drying operation

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

- **Latex receiver**
- **Machine Operator**

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

RANGE OF VARIABLES

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

EVIDENCE GUIDE

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

UNIT OF COMPETENCY : WORK IN TEAM ENVIRONMENT

UNIT CODE : 500311106

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

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

RANGE OF VARIABLES

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

EVIDENCE GUIDE

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

UNIT OF COMPETENCY : PRACTICE CAREER PROFESSIONALISM

UNIT CODE : 500311107

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

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

RANGE OF VARIABLES

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

EVIDENCE GUIDE

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

UNIT OF COMPETENCY : PRACTICE OCCUPATIONAL HEALTH AND SAFETY PROCEDURES

UNIT CODE : 500311108

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

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

RANGE OF VARIABLES

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

EVIDENCE GUIDE

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

COMMON COMPETENCIES

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

UNIT CODE : **AGR321201**

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

ELEMENT	PERFORMANCE CRITERIA
	<i>Italicized</i> terms are elaborated in the Range of Variables
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	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

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

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

RANGE OF VARIABLES

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

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Correctly identified appropriate farm tools and equipment 1.2 Operated farm equipments according to manual specification 1.3 Performed preventive maintenance
<p>2. Required Knowledge and Attitudes</p>	<ul style="list-style-type: none"> 2.1 Safety Practices <ul style="list-style-type: none"> 2.1.1 Ideal good work habits to demonstrate to workers easy and safety standards during operation of farm equipment 2.2 Codes and Regulations <ul style="list-style-type: none"> 2.2.1 Environmental Compliance Certificate (ECG) 2.2.2 Effective work supervision in the operations of farm equipment 2.3 Tools & Equipment: Uses and Specification <ul style="list-style-type: none"> 2.3.1 Knowledge in calibrating and use of equipment 2.3.2 Safety keeping of equipments every after use 2.4 Maintenance <ul style="list-style-type: none"> 2.1.2 Regular upkeep of equipments 2.1.3 Preventive maintenance skills 2.5 Values 2.6 Positive outlook towards work 2.7 Possesses pre-emptive/anticipatory skills
<p>3. Required Skills</p>	<ul style="list-style-type: none"> 3.1 Ability to recognized defective farm equipment 3.2 Perform proper management practices of safety measures
<p>4. Method of Assessment</p>	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> 4.1 Direct observation 4.2 Practical demonstration 4.3 Third Party Report
<p>5. Resource Implications</p>	<ul style="list-style-type: none"> 5.1 Service/operational manual of farm tools and equipment <ul style="list-style-type: none"> 5.1.1 Tools and equipment 5.1.2 Farm implements
<p>6. Context of Assessment</p>	<ul style="list-style-type: none"> 6.1 Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision

UNIT TITLE : **PERFORM ESTIMATION AND BASIC CALCULATION**

UNIT CODE : **AGR321203**

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

ELEMENT	PERFORMANCE CRITERIA <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 Calculations to be made are identified according to job requirements 2.2 Correct method of calculation identified 2.3 System and units of measurement to be followed are ascertained 2.4 Calculation needed to complete work tasks are performed using the four basic process of addition, division, multiplication and subtraction 2.5 Calculate whole fraction, percentage and mixed when are used to complete the instructions 2.6 Number computed in self checked and completed for alignment

RANGE OF VARIABLES

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

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency</p>	<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
<p>2. Required Knowledge and Attitudes</p>	<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 2.1.5 Production cost 2.1.6 Sales 2.1.7 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
<p>3. Required Skills</p>	<ul style="list-style-type: none"> 3.1 Ability to perform basic calculation 3.2 Communicate effectively
<p>4. Method of Assessment</p>	<p>Competency in this unit must be assessed through:</p> <ul style="list-style-type: none"> 4.1 Practical demonstration 4.2 Written examination
<p>5. Resource Implications</p>	<ul style="list-style-type: none"> 5.1 Relevant tools and equipment for basic calculation 5.2 Recommended data
<p>6. Context of Assessment</p>	<ul style="list-style-type: none"> 6.1 Assessment may occur in the workplace or in a simulated workplace or as part of a team under limited supervision

CORE COMPETENCIES

This section gives the details of the contents of the core units of competency required in Rubber Processing NC II

UNIT OF COMPETENCY : **RECEIVE LATEX AND LUMPS**

UNIT CODE : **AGR612205**

UNIT DESCRIPTOR : This unit covers the knowledge and skills required to receive latex and receive lumps.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Receive Latex	1.1 Latex volume is determined and recorded according to industry procedure. 1.2 Latex quality is tested and recorded in accordance with company specifications. 1.3 Required water-latex ratio is determined in accordance with dilution standard 1.4 Coagulating operation is performed in accordance with enterprise procedure.
2. Receive lumps	2.1 Lumps are weighed in accordance to enterprise procedures. 2.2 Records are maintained in accordance with enterprises procedures.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Latex quality	This include the following but is not limited to: 1.1 PTR 5 1.2 PTR 20
2. Dilution standard	This may include: 2.1 Ribbed Smoke Sheet(RSS) 2.2 Pale Crepe Rubber(PCR) 2.3 Crumb Rubber

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency:</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Received latex</p> <p>1.2 Received lumps/cuplumps</p>
<p>2. Required Knowledge and Attitudes</p>	<p>2.1 Knowledge, Theory, Practices and Systems Operations</p> <p>2.1.1 Characteristics of good and poor quality latex</p> <p>2.1.2 Application of coagulants</p> <p>2.1.3 Identification of water contents and contaminants</p> <p>2.1.4 Handling latex and lumps techniques and safety procedures</p> <p>2.1.5 Personal hygiene practices</p> <p>2.1.6 Company standards, policies and procedures</p> <p>2.1.7 Practice of 3Rs and 5S</p> <p>2.1.8 Program of work activities are implemented as scheduled</p> <p>2.2 Communication</p> <p>2.2.1 Prepare and submit required reports</p> <p>2.2.2 Maintaining accurate records</p> <p>2.3 Mathematics and Mensuration</p> <p>2.3.1 Basic mathematical operations</p> <p>2.3.2 Production recording</p> <p>2.3.3 Percentages and rations</p> <p>2.4 Safety Practices</p> <p>2.4.1 Proper application of chemicals such as coagulants</p> <p>2.4.2 Proper use of tools, implements and equipment.</p> <p>2.4.3 Wear appropriate PPE</p> <ul style="list-style-type: none"> • rubber gloves • safety glass • apron • cover all • approved-type respirator <p>2.4.4 Safety procedures in handling and storage of chemicals</p> <p>2.4.5 Disposal of chemicals and containers</p> <p>2.5 Codes and Regulations</p> <p>2.5.1 Comply with DA, DENR, FPA Laws, Rules and Regulations</p> <p>2.6 Materials, Tools & 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 Honesty</p> <p>2.7.2 Work ethics/values</p> <p>2.7.3 Work harmoniously with others</p> <p>2.7.4 Positive attitudes towards tasks assignment</p> <p>2.7.5 Safety consciousness</p> <p>2.7.6 Cost consciousness</p>
3. Required Skills	<p>3.1 Receiving latex and lumps/cup-lumps</p> <p>3.2 Monitoring and recording data and writing reports</p> <p>3.3 Managing and controlling spillage</p> <p>3.4 Basic mathematical computation skills</p> <p>3.5 Using appropriate testing/measuring instruments</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 Direct observation</p> <p>4.3 Written</p> <p>4.4 Portfolio</p>
5. Resource Implications	<p>5.1 All supplies, materials and equipment needed during the operations should be readily available at site. These include:</p> <p>5.1.1 Latex and lumps/cuplumps</p> <p>5.1.2 Record books and calculator</p> <p>5.1.3 Weighing scales</p> <p>5.1.4 Coagulants</p> <p>5.1.5 Latex water content measuring device(i.e. Metrolax)</p> <p>5.1.6 PPE (Rubber boots, safety goggles/glass, mask-preferably N95, rubber glove-industrial type and cover all)</p> <p>5.1.7 Latex and lumps containers</p> <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	<p>6.1 Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers</p>

UNIT OF COMPETENCY : PRODUCE BLANKETED RUBBER SHEETS

UNIT CODE : AGR612206

UNIT DESCRIPTOR : This unit covers the knowledge, skills and attitude required to prepare roller machine for operation and produce blanketed rubber sheets.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Prepare machine for operation	1.1 <i>Machine is maintained</i> in accordance with standard procedures. 1.2 Roller distance is checked and adjusted in accordance with the manual.
2. Perform milling operation	2.1 Operate slab cutter machine in accordance with enterprise and occupational health and safety procedures 2.2 Operate pre-breaker machine in accordance with enterprise procedure and occupational health and safety procedures 2.3 Milling operation is performed in accordance with enterprise procedures and occupational health and safety procedures 2.4 Breakdown in operation are reported in line with enterprise policy 2.5 Production operation report is prepared in line with enterprise policy.

RANGE OF VARIABLES

VARIABLE	RANGE
1. Machine maintenance	May include but not limited to: 1.1 Slab cutter machine 1.1.1 Lubricate 1.1.2 Cleaning 1.1.3 Tightening of mechanical parts 1.2 Pre-breaker machine 1.2.1 Lubricate 1.2.2 Cleaning 1.2.3 Tightening of mechanical parts 1.3 Milling machine 1.3.1 Lubricate 1.3.2 Cleaning 1.3.3 Tightening of mechanical parts

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency:</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Prepared machine for operation</p> <p>1.2 Performed milling operation</p>
<p>2. Required Knowledge and Attitudes</p>	<p>2.1 Knowledge, Theory, Practices and Systems Operations</p> <p>2.1.1 Lubrication, cleaning, checking and adjusting rubber rollers</p> <p>2.1.2 Basic functions of the machine</p> <p>2.1.3 Quality/ characteristics of rubber to be blanketed</p> <p>2.1.4 Practice of 3Rs and 5S</p> <p>2.1.5 Program of work activities are implemented as scheduled</p> <p>2.2 Communication</p> <p>2.2.1 Prepare and submit required reports</p> <p>2.3 Safety Practices</p> <p>2.3.1 Proper application use of tools and roller machine</p> <p>2.3.2 Wear appropriate personal protective equipment (PPE)</p> <p>2.4 Codes and Regulations</p> <p>2.4.1 Comply with DA, DENR, FPA Laws, Rules and Regulations</p> <p>2.5 Materials, Tools & Equipment: Uses, Specifications and Maintenance</p> <p>2.5.1 Tools and Equipment</p> <p>2.5.1.1 Can understand and follow instructional manuals</p> <p>2.5.1.2 Safe keeping of equipments every after use</p> <p>2.5.2 Materials</p> <p>2.5.2.1 Where to source good quality supplies, materials and equipment needed in the operation of the farm</p> <p>2.5.3 Maintenance</p> <p>2.5.3.1 Regular upkeep of tools and roller machines</p> <p>2.5.3.2 Preventive maintenance skills</p> <p>2.6 Values</p> <p>2.6.1 Honesty</p> <p>2.6.2 Committed to work</p> <p>2.6.3 Positive attitudes towards tasks assignment'</p> <p>2.6.4 Good human relationships</p> <p>2.6.5 Work well with others</p>

3. Required Skills	3.1 Estimating the appropriate amount of lubricant 3.2 Using of tools in maintaining and repairing machine. 3.3 Operating the machine 3.4 Feeding the rubber into the roller 3.5 Blending the rubber 3.6 Determining thickness of the blanket sheets 3.7 Quantifying the number of passes.
4. Method of Assessment	Competency in this unit must be assessed through: 4.1 Demonstration with questioning 4.2 Observation with questioning
5. Resource Implications	5.1 All supplies, materials and equipment needed during processing operations should be readily available at the site 5.1.1 Slab-cutter 5.1.2 Pre-breaker machine 5.1.3 Roller machine 5.1.4 Milling machine 5.1.5 Tools used in maintenance of the machine 5.1.6 PPE 5.1.7 Lubricants 5.1.8 Raw materials 5.1.9 Water supplies 5.2 All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm 5.3 Technical supervisors should have skills and ability in the successful implementation of work program activities.
6. Context of Assessment	6.1 Assessment may occur in an appropriately simulated environment through TESDA accredited assessment centers

UNIT OF COMPETENCY : PERFORM DRYING OPERATION

UNIT CODE : AGR612207

UNIT DESCRIPTOR : This unit covers the knowledge and skills required to dry and pack rubber.

ELEMENTS	PERFORMANCE CRITERIA <i>Italicized</i> terms are elaborated in the Range of Variables
1. Dry rubber	1.1 Blanketed sheets are shred and cut according to the company standard 1.2 Shredded rubber (granulated rubber) is dried in accordance with the <i>temperature requirements of raw materials</i>
2. Pack rubber	2.1 Crumbed rubber is weighted in accordance with enterprise procedures. 2.2 Pressing machine operated in accordance with enterprise procedures 2.3 Wrapping and labeling of bales is performed in accordance with enterprise standard. 2.4 Production report is prepared in accordance with enterprise policy

RANGE OF VARIABLES

VARIABLE	RANGE
1. Temperature requirements of raw materials	May vary according to: 1.1 Type of raw material 1.2 Quality of raw materials 1.3 Age of raw materials 1.4 ISO standard

EVIDENCE GUIDE

<p>1. Critical Aspects of Competency:</p>	<p>Assessment requires evidence that the candidate:</p> <p>1.1 Performed drying operation of rubber</p> <p>1.2 Packed rubber</p>
<p>2. Required Knowledge and Attitudes</p>	<p>2.1 Knowledge, Theory, Practices and Systems Operations</p> <p>2.1.1 Shredding and cutting techniques for blanketed sheets</p> <p>2.1.2 ISO standards for drying shredded rubber</p> <p>2.1.3 Pressing techniques crumb rubber</p> <p>2.1.4 Packing techniques for rubber</p> <p>2.1.5 Practice of 3Rs and 5S</p> <p>2.1.6 Program of work activities are implemented as scheduled</p> <p>2.2 Communication</p> <p>2.2.1 Prepare and submit required reports on all activities</p> <p>2.3 Mathematics and Mensuration</p> <p>2.3.1 Basic mathematical operations</p> <p>2.4 Safety Practices</p> <p>2.4.1 Proper application of chemicals such as coagulants</p> <p>2.4.2 Proper use of tools, implements and equipment.</p> <p>2.4.3 Wear appropriate personal protective equipment (PPE)</p> <p>2.5 Codes and Regulations</p> <p>2.5.1 Comply with DA, DENR, FPA Laws, Rules and Regulations</p> <p>2.6 Materials, Tools & 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 Honest</p> <p>2.7.2 Committed</p> <p>2.7.3 Self-disciplined</p> <p>2.7.4 Positive attitudes towards tasks assignment</p> <p>2.7.5 Work well with others</p> <p>2.7.6 Industries (hardworking)</p>

3. Required Skills	3.1 Operating the machine 3.2 Handling weighing scale and recording 3.3 Handling pressing machines 3.4 Packing and labeling
4. Method of Assessment	Competency in this unit must be assessed through: 4.1 Demonstration with questions 4.2 Interview 4.3 Direct Observation
5. Resource Implications	5.1 All supplies, materials and farm implements needed during drying operations should be readily available at the site 5.1.1 Shredder 5.1.2 Cutter 5.1.3 Weighing scale 5.1.4 PPE 5.1.5 Plastic wrapper 5.1.6 Label 5.2 All workers involved in different activities must be fully oriented and cautioned on the different specific work activities of the farm 5.3 Technical supervisors should have skills and ability in the successful implementation of work program activities.
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 **RUBBER PROCESSING NC II**.

3.1 CURRICULUM DESIGN

Course Title: **RUBBER PROCESSING** Level: **NC II**

Nominal Training Duration:	18 hrs - Basic Competencies
	14 hrs - Common Competencies
	90 hrs - Core Competencies
	40 hrs - OJT
	<hr/>
	162 hrs - Total training duration

Course Description:

This course is designed to enhance the knowledge, desirable skills and attitudes of Rubber Processing NC II in accordance with industry standards. It covers core competencies such as: receive latex and lumps, produce blanketed rubber sheet and perform rubber drying operation.

BASIC COMPETENCIES (18 hrs)

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Participate in workplace communication	1.1 Obtain and convey workplace information. 1.2 Complete relevant work related documents. 1.3 Participate in workplace meeting and discussion.	<ul style="list-style-type: none"> Group discussion Interaction 	<ul style="list-style-type: none"> Demonstration Observation Interviews/questioning
2. Work in a team environment	2.1 Describe and identify team role and responsibility in a team. 2.2 Describe work as a team member.	<ul style="list-style-type: none"> Discussion Interaction 	<ul style="list-style-type: none"> Demonstration Observation Interviews/questioning
3. Practice career professionalism	3.1 Integrate personal objectives with organizational goals. 3.2 Set and meet work priorities. 3.3 Maintain professional growth and development.	<ul style="list-style-type: none"> Discussion Interaction 	<ul style="list-style-type: none"> Demonstration Observation Interviews/questioning

4. Practice occupational health and safety	4.1 Identify hazards and risks 4.2. Evaluate hazard and risks 4.3. Control hazards and risks 4.4. Maintain occupational health and safety awareness	<ul style="list-style-type: none"> • Discussion • Plant tour • Symposium 	<ul style="list-style-type: none"> • Observation • Interview
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COMMON COMPETENCIES
(14 hrs.)

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
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"> • Self-paced/modular • Lecture/Discussion • Interaction • Practical Demonstration • Visit/tour 	<ul style="list-style-type: none"> • Oral/Written Interviews • Direct Observation • Practical Demonstration
2. Use farm tools and equipment	2.1. Select and use farm tools 2.2. Select and operate farm equipment 2.3. Perform preventive maintenance procedures/practices	<ul style="list-style-type: none"> • Self-paced/modular • Lecture/Discussion • Interaction • Practical Demonstration • Visit/tour 	<ul style="list-style-type: none"> • Oral/Written Interviews • Direct Observation • Practical Demonstration
3. Perform estimation and basic calculation	3.1. Perform estimation 3.2. Perform basic workplace calculation 3.3. Apply corrective measures as necessary	<ul style="list-style-type: none"> • Self-paced/modular • Lecture/Discussion • Interaction • Practical Exercise 	<ul style="list-style-type: none"> • Oral/Written examination • Practical exercise

CORE COMPETENCIES

(130 hrs)

Unit of Competency	Learning Outcomes	Methodology	Assessment Approach
1. Receive latex and lumps	1.1. Receive latex 1.2. Receive lumps	<ul style="list-style-type: none">• Discussion• Lecture• Demonstration• Simulation	<ul style="list-style-type: none">• Demonstration and questioning• Direct observation with questioning• Written examination
2. Produce blanketed rubber sheet	2.1. Prepare for machine operation 2.2. Perform milling operation	<ul style="list-style-type: none">• Discussion• Lecture• Demonstration• Simulation• Hands on	<ul style="list-style-type: none">• Demonstration and questioning of related underpinning knowledge• Written Examination• Practical Performance
3. Perform rubber drying operation	3.1. Dry rubber 3.2. Pack rubber	<ul style="list-style-type: none">• Discussion• Lecture• Demonstration• Simulation• Hands on	<ul style="list-style-type: none">• Demonstration and questioning of related underpinning knowledge• Written examination• Practical performance

3.2 TRAINING DELIVERY

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

- The training is based on curriculum developed from the competency standards;
- Learning is modular in its structure;
- Training delivery is 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.

3.1 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
- Age 18 and above

3.4 LIST OF TOOLS, EQUIPMENT AND MATERIALS

RUBBER PROCESSING – NC II

Recommended list of tools, equipment and materials for the training of 25 trainees for Rubber Processing NC II

QTY	Tools:	QTY	Equipment
5	Adjustable wrench	2	Weighing scale
2	Pipe wrench (24in)	2	Calculator
2	Vise grip	1	Slab cutter machine
10	Long nose pliers	1	Pre-breaker machine
10	Flat nose Pliers	1	Drying machine
1 set	Screw driver (Flat)	1	Pressing machine
1 set	Screw driver (Philip)	1	Shredder
1	Grease applicator/ Grease gun	5	Roller machine
10	Pull-push (steel-tape) rule	1	Portable electric drill
10	Steel hook	1	Portable electric disc grinder
2	Oiler/Oiler can	1	Coagulating tank (1 ton)
4	Latex container/drum	25 sets	PPE,s <ul style="list-style-type: none"> • rubber boots • safety goggles/glass • mask or respirator or face shield • gloves • laboratory coat • cover all
1	Shovel	1	Cutter
1	Wheel barrow	QTY	Training Materials
2	Bolo	5 copies	Brochures
2	Sharpening stone	2 copies	Visual aids
5	Steel brush	5 copies	Reference manuals

5	Grinding disc	5 copies	Procedural manuals
5	Cut-off grinding disc	2 copies	Instructional supplies and materials (DVD, VCD, PPT, Prints, etc.)
	Latex water content measuring device(i.e. Metrolax)	2 copies	Reference materials/books
QTY	Materials		
100 kl	Lumps and cup lumps		
1 gal	Formic acid		
1 bundle	Plastic bags		
1 bag	Sodium metabisulfite		
1 gal	Oil		
1 gal	Multi-purpose grease		
1 gal	Hydraulic oil		
1 gal	Gear oil		
1 gal	Coagulants		
1 gal	Lubricants		
	Label		
1 pc	Record book		
5 k	Rags		
1 lot	Cleaning materials		
1 lot	Sand paper (assorted)		
10	Fastening tape (teflon)		

Based on the above list of materials, the following are the exposure controls and the PPE to be used*:

Sodium Metabulsulfite

Engineering controls (Training facilities)-use process enclosures and local exhaust ventilation

Personal Protection (PPE)- safety glasses, laboratory coat, gloves and approved-type dust respirators (preferably N95 mask).

Formic Acid

Engineering Controls- used local exhaust and/or general exhaust ventilation system.

Personal Protection-chemical safety, goggles, rubber or neoprene gloves, impervious boots, apron or coveralls, full face shield and supplied air full face respirator (if engineering controls are not are feasible)

Emergency Equipment – maintain emergency eye wash fountain or emergency, shower near work area where acid is used.

Lumps

Engineering Controls – used local exhaust or general exhaust ventilation to control process emission/dispersion.

Personal Protection –appropriate rubber gloves, safety glass, apron, cover all and approved-type respirator (preferably N95 mask)

All Purpose Grease

Engineering Controls- provide sufficient mechanical (general or local exhaust) ventilation

Personal Protection – chemical resistant gloves, chemical splash goggles and rubber gloves (for repeated/prolonged skin contact)

Respiratory Protection – usually not required.

Hydraulic Oil/Gear Oil

Engineering Controls – use in a well-ventilated area.

Eye/Face Protection- no special eye protection is normally required. Where splashing is possible, wear safety glasses with side shield.

Skin Protection – no special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations (suggested protective gloves- nitrile, rubber, Viton, Silver shield/4H/PVA)

Respiratory Protection – no respiratory protection is normally required. If operations generate oil mists, wear approved-type air purifying respirator (cartridge-type particulate respirator)

All other dust-generating process

Engineering Controls- use local exhaust ventilation of contaminant dispersion is constant and the generation is high, otherwise provide general exhaust ventilation in the process area.

Personal Protection –efficient and approved-type respirators (usually N95 mask)

* as recommended by the OSHC, DOLE

3.5 TRAINING FACILITIES

RUBBER PROCESSING NC II

Based on a class size of 25 students/trainees

SPACE REQUIREMENT	SIZE IN METERS	TOTAL AREA IN SQ. METERS
A. Building (permanent)**		144.30
• Lecture Room/Workshop		80.00
• Learning Resource Center	3.00 x 5.00	15.00
• Facilities/Equipment/ Circulation Area (30% of teaching accommodation)		33.3

• Store Room	4.00 x 4.00	16.00
B. Experimental Processing Plant/ Access to Experimental Processing Plant **		100.00

****Note the relevant above-listed recommendations of the OSHC, DOLE with regard to engineering controls, personal protection and emergency equipment.**

3.6 TRAINER'S QUALIFICATIONS FOR AGRI-FISHERY SECTOR

Trainers who will deliver the training on RUBBER PROCESSING NC II should be holders of National TVET Trainer Certificate Level I (NTTC I). The following are the requirements for NTTC I:

- Must be a holder of Rubber Processing NC II or its equivalent
 - Must be a holder of Trainers Methodology Certificate Level I (TMC I)
 - Must be physically and mentally fit
 - *Must have at least 2 years job/industry experience
- * Optional. Only when required by the hiring institution.

Reference: TESDA Board Resolution No. 2010-05
TESDA Circular No. 135, 2011

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 Rubber Processing 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 Rubber Processing NC II may be attained through:
- 4.2.1 Accumulation of Certificates of Competency (COCs) in the following areas:
- 4.2.1.1 Receive latex and lump
- 4.2.1.2 Produce dried rubber
- Produce blanketed rubber sheet
 - Perform rubber drying operation
- Successful candidates shall be awarded Certificates of Competency (COCs) bearing the signature of the Regional Director and Chair of the recognized local industry body.
- 4.2.2 Demonstration of competence through project-type assessment covering all required units of qualification
- 4.3 Assessment shall focus on the core units of competency. The tool and common units shall be integrated or assessed concurrently with the core units.
- 4.4 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.
- 4.5 The following are qualified to apply for assessment and certification:
- 4.5.1 Graduates of formal, non – formal and informal including enterprise – based training programs
- 4.5.2 Experienced workers (wage employed or self – employed)
- 4.6 The guidelines on assessment and certification are discussed in detail in the Procedures Manual on Assessment and Certification and Guidelines on the Implementation of the Philippine TVET Qualification and Certification System (PTQCS).

**Supermarket of Competencies
AGRI-FISHERY Sector**

**CORE
COMPETENCIES**

- Receive latex and lumps
- Produce blanketed rubber sheet
- Perform rubber drying operation

**COMMON
COMPETENCIES**

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

**BASIC
COMPETENCIES**

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

DEFINITION OF TERMS

For the purpose of this standard, the word

- **Blanketing (rubber)**- process of flattening the rubber slabs through miller machine.
- **Drying** is a mass transfer process consisting of the removal of water or another solvent by evaporation from a solid, semi-solid or liquid. This process is often used as a final production step before selling or packaging products.
- **Latex**- as found in nature is a milky fluid found in 10% of all flowering plants (angiosperms). It is a complex emulsion consisting of proteins, alkaloids, starches, sugars, oils, tannins, resins, and gums that coagulates on exposure to air. It is usually exuded after tissue injury. In most plants, latex is white, but some have yellow, orange, or scarlet latex.
- **Milling- process of** breaking a solid material into smaller pieces
- **Standard** – the set of criteria and specifications of quality determining the grades, described as product characteristics such as maturity, color, cleanliness, shape, free from decay and blemishes and uniformity of size.
- **Shredding**- cutting off into smaller pieces

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