

CROP PRODUCTION AND MARKETING MANAGEMENT

Level-IV

Curriculum



Based on March 2018, Version 1 Occupational standards

September, 2021

Adama, Ethiopia

Preface

The reformed TVET-System is an outcome-based system. It utilizes the needs of the labor market and occupational requirements from the world of work as the benchmark and standard for TVET delivery. The requirements from the world of work are analyzed and documented – considering international benchmarking – as occupational standards (OS).

In the reformed TVET-System, curricula and curriculum development play an important role with regard to quality driven TVET-Delivery. Curricula help to facilitate the learning process in a way, that trainees acquire the set of occupational competences (skills, knowledge, and attitude) required at the working place and defined in the occupational standards (OS). Responsibility for Curriculum Development will be given to the Regional TVET-Authorities and TVET-Providers.

This curriculum has been developed by a group of experts from different Regional TVET-Authorities based on the occupational standard for It has the character of a model curriculum and is an example on how to transform the occupational requirements as defined in the respective occupational standard into an adequate curriculum.

The curriculum development process has been actively supported and facilitated by the Ministry of Education – in line with one of its mandates to provide technical support to the regions – and by the TVET-Reform Component of the Engineering Capacity Building Program.

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TVET-Program Design

1.1. TVET-Program Title: Crops Production and Marketing Management Level-iv

1.2. TVET-Program Description

1.1The Program is designed to develop the necessary knowledge, skills and attitude of the learners to the standard required by the occupation. The contents of this program are in line with the occupational standard. Learners who successfully completed the Program will be qualified to work as a Crops Production and marketing Management with competencies elaborated in the respective OS. Graduates of the program will have the required qualification to work in the Industry Sector in the field of Crops Production and marketing Management Level-IV

The prime objective of this training program is to equip the learners with the identified competences specified in the OS. Graduates are therefore expected to Participate to Develop a Soil Use Map for a Property, Apply and Develop a Soil Health and Plant Nutrition Program, Plan Composting Production Plan. Improve and Manage Soils for Organic Production, Monitor Crop Establishment and Maintenance, Promote and Plan Plant Propagation Program, Perform Field Surveillance for a Specific Emergency Plant Disease, Implement Pest Management Action Plans, Plan and Implement Chemical Use Program, Inspect and Supervise Agricultural Crop Harvest, Maintain Grain Quality in Storage, Interpret and Document Crop Production Data, Coordinate Crop Product Marketing, Build Relationships with Customers, Plan and Organize work, Migrate to New Technology, Establish Quality Standards, Utilize Specialized Communication skills, Develop Individuals and Team, Manage Micro, Small and Medium Enterprises (MSMEs), Apply Problem Solving Techniques and Tools, in accordance with the performance criteria described in the OS.

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1.1. TVET-Program Learning Outcomes

The expected outputs of this program are the acquisition and implementation of the following units of competence :

- AGR CPM4 01 0318** Participate to Develop a Soil Use Map for a Property
- AGR CPM4 02 0318** Apply and Develop a Soil Health and Plant Nutrition Program
- AGR CPM4 03 0318** Plan Composting Production Plan
- AGR CPM4 04 0318** Improve and Manage Soils for Organic Production
- AGR CPM4 05 0318** Monitor Crop Establishment and Maintenance
- AGR CPM4 06 0318** Promote and Plan Plant Propagation Program
- AGR CPM4 07 0318** Perform Field Surveillance for a Specific Emergency Plant Disease
- AGR CPM4 08 0318** Implement Pest Management Action Plans
- AGR CPM4 09 0318** Plan and Implement Chemical Use Program
- AGR CPM4 10 0318** Inspect and Supervise Agricultural Crop Harvest
- AGR CPM4 11 0318** Maintain Grain Quality in Storage
- AGR CPM4 12 0318** Interpret and Document Crop Production Data
- AGR CPM4 13 0318** Coordinate Crop Product Marketing
- AGR CPM4 14 0318** Build Relationships with Customers
- AGR CPM4 15 0318** Plan and Organize work
- AGR CPM4 16 0318** Migrate to New Technology
- AGR CPM4 17 0318** Establish Quality Standards
- AGR CPM4 18 0318** Utilize Specialized Communication skills
- AGR CPM4 19 0318** Develop Individuals and Team
- AGR CPM4 20 0318** Manage Micro, Small and Medium Enterprises (MSMEs)
- AGR CPM4 21 0318** Apply Problem Solving Techniques and Tools

1.2. Duration of the TVET-Program

The Program will have duration of **766 hours** including the on-the-job practice or cooperative training time and Civic Education et al.

No	Unit Competency	On School Training		Cooperative Training	Total Hours	Remarks
		Theory	Practical			
1	Participate to Develop a Soil Use Map for a Property	10	16	8	34	
2	Apply and Develop a Soil Health and Plant Nutrition Program	10	14	11	36	
3	Plan Composting Production Plan	10	14	8	32	
4	Improve and Manage Soils for Organic Production	12	18	10	40	
5	Monitor Crop Establishment and Maintenance	15	25	10	50	
6	Promote and Plan Plant Propagation Program	12	20	8	40	
7	Perform Field Surveillance for a Specific Emergency Plant Disease	10	12	10	32	
8	Implement Pest Management Action Plans	10	12	8	30	
9	Plan and Implement Chemical Use Program	12	20	8	40	
10	Inspect and Supervise Agricultural Crop Harvest	10	12	10	32	
11	Maintain Grain Quality in Storage	12	12	10	32	
12.	Interpret and Document Crop Production Data	12	20	8	40	
13	Coordinate Crop Product Marketing	11	12	11	34	
14	Build Relationships with Customers	12	20	8	40	
15	Plan and Organize work	12	20	8	40	
16	Migrate to New Technology	10	20	10	40	
17	Establish Quality Standards	14	10	6	30	

18	Utilize Specialized Communication skills	20	10	6	36	
19	Develop Individuals and Team	10	12	8	32	
20	Manage Micro, Small and Medium Enterprises (MSMEs)	10	16	10	36	
21	Apply Problem Solving Techniques and Tools	12	20	8	40	

1.3. Qualification Level and Certification

Based on the descriptors elaborated on the Ethiopian National TVET Qualification Framework (NTQF) the qualification of this specific TVET Program is Level -IV.

The learner can exit after successfully completing the Modules in one level and will be awarded the equivalent institutional certificate on the level completed. The learner can also exit after completing any one learning module. However, only certificate of attainment or attendance (this is institutional discretion) will be awarded.

1.4. Target Groups

Any citizen **with or without disability** who meets the entry requirements under items and capable of participating in the learning activities is entitled to take part in the Program.

1.5 Entry Requirements

The prospective participants of this program are required to possess the requirements or directive of the Federal TVET Agency.

1.6 Mode of Delivery

This TVET-Program is characterized as a formal Program on middle level technical skills. The mode of delivery is co-operative training. The TVET-institution and identified companies have forged an agreement to co-operate with regard to implementation of this program. The time spent by the trainees in the industry will give them enough exposure to the actual world of work and enable them to get hands-on experience.

The co-operative approach will be supported with school-based lecture-discussion, simulation and actual practice. These modalities will be utilized before the trainees are exposed to the industry environment.

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1.7 TVET-Program Structure

The time duration (Hours) indicated for the module should include all activities in and out of the TVET institution

Unit of competence	Module Code & Title	Learning Outcomes	Duration (hours)
<p><u>AGR CPM4 15 0318</u> Plan and Organize work</p>	<p><u>AGR CPM4 01 09 21</u> Planning and Organizing Work</p>	<ul style="list-style-type: none"> • Set objectives • Plan and schedule work activities • Implement work plans • Monitor work activities • Review and evaluate work plans and activities 	40
<p><u>AGR CPM4 18 0318</u> Utilize Specialized Communication skills</p>	<p>AGR CPM4 02 09 21 Utilizing Specialized Communication Skills</p>	<ul style="list-style-type: none"> • Meet common and specific communication needs of clients and colleagues • Contribute to the development of communication strategies • Represent the organization • Facilitate group discussion • Conduct interview 	36

<p><u>AGR CPM4 14 0318</u> Build Relationships with Customers</p>	<p><u>AGR CPM4 03 09 21</u> Building Relationships with Customers</p>	<ul style="list-style-type: none"> • Establish rapport with customers • Apply expert knowledge • Provide post-sales support • Plan sales presentations • Implement <i>sales presentation</i> • Maintain and utilize a customer data base • Deal with difficult customers 	<p>40</p>
<p><u>AGR CPM4 19 0318</u> Develop Individuals and</p>	<p>AGR CPM4 M04 09 21 Developing Individuals and Team</p>	<ul style="list-style-type: none"> • Provide team leadership • Foster individual and organizational growth • Monitor and evaluate workplace learning • Develop team commitment and cooperation • Facilitate accomplishment of organizational goals 	<p>32</p>
		<ul style="list-style-type: none"> • Develop and communicate 	<p>36</p>

<p><u>AGR CPM4 20 0318</u> Manage Micro, Small and Medium Enterprises (MSMEs)</p>	<p>AGR CPM4 M 05 09 21 Managing Micro, Small and Medium Enterprises (MSMEs)</p>	<p>Strategic work plan</p> <ul style="list-style-type: none"> • Identify daily work requirements and Develop effective work habits • Manage Marketing of MSMEs • Manage Human Resources • Manage production and Operation • Maintain financial records and use for decision making • Monitor, Manage and Evaluate work performance 	
<p><u>AGR CPM4 16 0318</u> Migrate to New Technology</p>	<p>AGR CPM4 M06 09 21 Migrating to new technology</p>	<ul style="list-style-type: none"> • Apply existing knowledge and techniques to technology and transfer • Apply functions of technology to assist in solving organizational problems • Evaluate new or upgraded technology performance 	<p>40</p>

<u>AGR CPM4 03 0318</u> Plan Composting Production Plan	AGR CPM4 M07 09 21 Planning Composting Production Plan	<ul style="list-style-type: none"> • Establish production requirements • Schedule production to meet requirements 	32
<u>AGR CPM4 06 0318</u> Promote and Plan Plant Propagation Program	AGR CPM4 M08 09 21 Promoting and Planning Plant Propagation Program	<ul style="list-style-type: none"> • Carry out preliminary planning activities for a plant propagation program • Develop the propagation plan • Monitor success of propagation activities 	40
<u>AGR CPM4 04 0318</u> Improve and Manage Soils for Organic Production	AGR CPM4 M09 09 21 Improving and Managing soils for organic production	<ul style="list-style-type: none"> • Monitor indicators of soil fertility. • Assess soil-related factors for selected plants. • Select and implement allowable techniques and inputs to optimize soil fertility 	40
<u>AGR CPM4 05 0318</u> Monitor Crop Establishment and	AGR CPM4 M10 09 21 Monitoring crop establishment and maintenance	<ul style="list-style-type: none"> • Gathering information for input planning • Prepare planting plan 	50

Maintenance		<ul style="list-style-type: none"> • Determine scheduling and key responsibilities • Monitor and adjust the planting plan • Determine condition of agricultural crops • Determine pest and disease control • Manage crop health 	
<u>AGR CPM4 09 0318</u> Plan and Implement Chemical Use Program	AGR CPM4 M11 09 21 Planning and Implementing Chemical Use Program	<ul style="list-style-type: none"> • Identify the requirements of chemical use Monitor the implementation of safety requirements • Plan and implement a maintenance program for chemical use equipment • Determine the suitability of a chemical for use in a control program • Ensure the correct selection and application of the chemical 	40

		<ul style="list-style-type: none"> • Ensure personnel are adequately trained in chemical use • Implement recording systems for chemical storage and use 	
<u>AGR CPM4 08 0318</u> Implement Pest Management Action Plans	AGR CPM4 M12 09 21 Implementing Pest Management action Plans	<ul style="list-style-type: none"> • Schedule pest management activities • Estimate resources required to complete the required activities • Brief employees or contracted personnel regarding the pest management activities • Assist supervision of farmers, employees or contracted personnel • Coordinate contingency management activities • Report progress in relation to pest management action plan 	30
<u>AGR CPM4 02 0318</u> Apply and	AGR CPM4 M13 09 21	<ul style="list-style-type: none"> • Determine relevant site 	36

Develop a Soil Health and Plant Nutrition Program	Applying and developing a soil health and Plant nutrition Program	<p>characteristics</p> <ul style="list-style-type: none"> • Determine the requirements for plant production • Document the soil health and plant nutrition program and specifications • Monitor production and evaluate the program. 	
AGR CPM4 M1 03 18 Participate to develop a Soil Use Map for a Property	AGR CPM4 M14 09 21 Participating to develop a Soil Use Map for a Property	<ul style="list-style-type: none"> • Collect information for soil mapping Participate to analyse soil information • Participate to plot topography and soil • survey data on property map 	34
<u>AGR CPM4 07 0318</u> Perform Field Surveillance for a Specific Emergency Plant Disease	AGR CPM4 M15 09 21 Performing field Surveillance for Specific emergency Plant Disease	<ul style="list-style-type: none"> • Look for signs or symptoms • Organize and respond to an emergency disease or plant pest 	32
<u>AGR CPM4 10 0318</u> Inspect and	AGR CPM4 M16 09 21	<ul style="list-style-type: none"> • Prepare for harvesting 	32

Supervise Agricultural Crop Harvest	Inspecting and supervising agricultural Crop Harvest	<ul style="list-style-type: none"> • Determine harvest strategy • Co-ordinate the harvest strategy • Complete harvest operations 	
<u>AGR CPM4 11 0318</u> Maintain Grain Quality in Storage	AGR CPM4 M17 09 21 Maintaining Grain Quality in Storage	<ul style="list-style-type: none"> • Maintain hygiene in storage areas • Monitor grain from arrival to dispatch • Monitor and maintain grain condition in storage • Control pests in storage area 	32
<u>AGR CPM4 12 0318</u> Interpret and Document Crop Production Data	AGR CPM4 M18 09 21 Interpreting and documenting crop Production data	<ul style="list-style-type: none"> • Collect and organize production data • Analyse, interpret and document data • Present data 	40
<u>AGR CPM4 19 0318</u> Develop Crop Product Marketing	AGR CPM4 M19 09 21 Coordinating crop product marketing	<ul style="list-style-type: none"> • Analyse market information • Identify marketing requirements • Develop a marketing plan • Implement marketing activities 	34

		<ul style="list-style-type: none"> Evaluate marketing performance 	
<u>AGR CPM4 21 0318</u> Apply Problem Solving Techniques and Tools	AGR CPM4 M20 09 21 Applying Problem Solving Techniques and Tools	<ul style="list-style-type: none"> Identify and select theme/problem Grasp current status and set goal Establish activity plan Analyze causes of a problem Examine countermeasures and their implementation Assess effectiveness of the solution Standardize and sustain operation 	40
<u>AGR CPM4 17 0318</u> Establish Quality Standards	AGR CPM4 M21 09 21 Establishing Quality Standards	<ul style="list-style-type: none"> Establish quality specifications for product Identify hazards and critical control points Assist in planning of quality assurance procedures Implement quality assurance procedures Monitor quality of work outcome 	30

		<ul style="list-style-type: none"> • Participate in maintaining and improving quality at work • Report problems that affect quality 	
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1.8 Institutional Assessment

Two types of evaluation will be used in determining the extent to which learning outcomes are achieved. The specific learning outcomes are stated in the modules. In assessing them, verifiable and observable indicators and standards shall be used. The **formative assessment** is incorporated in the learning modules and form part of the learning process. Formative evaluation provides the trainee with feedback regarding success or failure in attaining learning outcomes. It identifies the specific learning errors that need to be corrected, and provides reinforcement for successful performance as well. For the teacher, formative evaluation provides information for making instruction and remedial work more effective.

Summative Evaluation the other form of evaluation is given when all the modules in the program have been accomplished. It determines the extent to which competence have been achieved. And, the result of this assessment decision shall be expressed in the term 'competent or not yet competent'.

Techniques or tools for obtaining information about trainees' achievement include oral or written test, demonstration and on-site observation.

1.9 TVET Teachers Profile

The teachers conducting this particular TVET Program are **B-Level** and have satisfactory practical experiences or equivalent qualifications.

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LEARNING MODULE-01



**TVET-PROGRAMME TITLE: Crops Production and Marketing management
Level-IV**

MODULE TITLE: Planning and Organizing Work

MODULE CODE: AGR CPM4 01 09 21

NOMINAL DURATION: 40hours

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required in planning and organizing work activities in a production application. It may be applied to a small independent operation or to a section of a large organization

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO1.**Set objectives
- LO2.**Plan and schedule work activities
- LO3.**Implement work plans
- LO4.** Monitor work activities
- LO5.** Review and evaluate work plans and activities

MODULE CONTENTS:

LO1.Set objectives

- 1.1. Planning objectives and linking to work activities.
- 1.2. Stating objectives
- 1.3. Reflecting support and commitment of team members.
- 1.4. Identifying realistic and attainable objectives

LO2.Plan and schedule work activities

- 2.1. Identifying and prioritizing tasks/work activities
- 2.2. Breaking down tasks/work activities
- 2.3. Assigning task/work activities to team/person
- 2.4. Allocating resources
- 2.5. Coordinating schedule of work activities

LO3.Implement work plans

- 3.1 Identifying work methods and practices
- 3.2. Implementing work plans in time frames, resources and standards

LO4. Monitor work activities

- 4.1. . Monitoring and comparing work activities
- 4.2. Monitoring work performance
- 4.3. Reporting deviations from work activities
- 4.4 Coordinating recommendations
- 4.5. Complying reporting requirements
- 4.6. Observing timeliness of report
- 4.7. Establishing and maintaining files

LO5. Review and evaluate work plans and activities

- 5.1 . Reviewing work plans, strategies and implementation
- 5.2. Doing review on comprehensive consultation
- 5.3. Providing results of review to concerned parties
- 5.4 Conducting performance appraisal
- 5.5. Preparing and documenting performance appraisal report
- 5.6. Preparing and presenting recommendations
- 5.7. Implementing feedback mechanisms

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was 	<ul style="list-style-type: none"> • Speak loudly • Using sign language 	<ul style="list-style-type: none"> • Use written response as an option for the

		<p>conducted with the trainee through the service of the sign language interpreter</p> <ul style="list-style-type: none"> • Use short and clear questioning • Time extension 	<p>interpreter if necessary</p>	<p>trainees having speech challenges</p>
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

ASSESSMENT CRITERIA

LO1. Set objectives

- Objectives are planned consistent with and linked to work activities in accordance with organizational aims.
- Objectives are stated as measurable targets with clear time frames.
- Support and commitment of team members are reflected in the objectives.
- Realistic and attainable objectives are identified.

LO2. Plan and schedule work activities

- Tasks/work activities to be completed are identified and prioritized as directed.
- Tasks/work activities are broken down into steps in accordance with set time frames and achievable components.
- Task/work activities are assigned to appropriate team or individuals in accordance with agreed functions.
- Resources are allocated as per requirements of the activity.
- Schedule of work activities is coordinated with personnel concerned.

LO3. Implement work plans

- Work methods and practices are identified in consultation with personnel concerned.
- Work plans are implemented in accordance with set time frames, resources and standards

LO4. Monitor work activities

- Work activities are monitored and compared with set objectives.
- Work performance is monitored.
- Deviations from work activities are reported and recommendations are coordinated with appropriate personnel and in accordance with set standards.

- Reporting requirements are complied with in accordance with recommended format.
- Timeliness of report is observed.
- Files are established and maintained in accordance with standard operating procedures.

LO5. Review and evaluate work plans and activities

- Work plans, strategies and implementation are reviewed based on accurate, relevant and current information.
- Review is done based on comprehensive consultation with appropriate personnel on outcomes of work plans and reliable feedback.
- Results of review are provided to concerned parties and formed as the basis for adjustments/simplifications to be made to policies, processes and activities.
- Performance appraisal is conducted in accordance with organization rules and regulations.
- Performance appraisal report is prepared and documented regularly as per organization requirements.
- Recommendations are prepared and presented to appropriate personnel/authorities.
- Feedback mechanisms are implemented in line with organization policies

Annex: Resource Requirements

AGR CPM4 01 09 21 Planning and Organizing Work				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	Learning Materials			
1	TTLM.	Prepared by the trainer	30	1:1
2	Textbook		30	1:1
3	Reference book			
B.	Learning Facilities & Infrastructure			
1	Lecture room / work shop	5m*5m	1	1:30
2	Library	10m*10m	1	1:30
C.	Consumable Materials			
1	Copy paper	A4 size	5 rim	1:6
D.	Tools and Equipments			

LEARNING MODULE 02



TVET-PROGRAMME TITLE: Crop Production and Marketing Management
Level IV

MODULE TITLE: Utilizing Specialized Communication Skills

MODULE CODE **AGR CPM4 02 09 21**

NOMINAL DURATION: 36Hours

MODULE DESCRIPTION: This module covers the knowledge, skills and attitudes required to use specialized communication skills to meet specific needs of internal and external clients, conduct interviews, facilitate group discussions, and contribute to the development of communication strategies.

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO1.** Meet common and specific communication needs of clients and colleagues
- LO2.** Contribute to the development of communication strategies
- LO3.** Represent the organization
- LO4.** Facilitate group discussion
- LO5.** Conduct interview

MODULE CONTENTS:

LO1. Meet common and specific communication needs of clients and Colleagues

- 1.1. Identifying and meeting specific communication needs
- 1.2. Using different approaches
- 1.3. Addressing conflict promptly

LO2. Contribute to the development of communication strategies

- 2.1. Developing, promoting, implementing and reviewing strategies
- 2.2. Establishing and reviewing channels of communication
- 2.3. Providing coaching in effective communication
- 2.4. Maintaining work related network and relationship

2.5. Using negotiation and conflict resolution strategies

2.6. Making communication with clients and colleagues.

LO3. Represent the organization

3.1. Researching and appropriate promotion of organization

3.2. Making and delivering clear and sequential presentation

3.3. Utilizing appropriate media

3.4. Respecting differences in views

3.5. Making written communication

3.6. Responding inquiries

LO4. Facilitate group discussion

4.1. Defining and implementing mechanisms group interaction

4.2. Using group encouraging strategies

4.3. Setting and following objectives and agenda

4.4. Providing relevant information

4.5. undertaking evaluation of group communication strategies

4.6 . Identifying and addressing specific communication needs of individuals

LO5. Conduct interview

5.1 . Employing appropriate communication strategies

5.2. Conducting different types of interviews

5.3. Making and maintaining records of interviews

5.4. Using techniques of questioning, listening and nonverbal communication

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

		<ul style="list-style-type: none"> Summarize main points 		
Demonstration	<ul style="list-style-type: none"> Conduct close follow up Use verbal description Provide special attention in the process of guidance facilitate the support of peer trainees Prepare & use simulation 	<ul style="list-style-type: none"> use Sign language interpreter Use video recorded material Ensure attention of the trainees Provide structured training Show clear and short method Use gesture Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Illustrate in clear & short method Use Video recorded material Ensure the attention of the trainees provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines Assign peer trainees to assist Conduct close follow up provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members <ul style="list-style-type: none"> Conduct close follow up Introduce the trainees with other group member Brief the thematic issues of the work 	<ul style="list-style-type: none"> Use sign language interpreters Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member 	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members <ul style="list-style-type: none"> Conduct close follow up Introduce the trainees with other group member Inform the group members to speak loudly 	<ul style="list-style-type: none"> Introduce the trainees with their peers

ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up

		<ul style="list-style-type: none"> • Time extension 	<ul style="list-style-type: none"> • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Time extension
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Assessment criteria

LO1. Meet common and specific communication needs of clients and Colleagues

- Specific communication needs of clients and colleagues are identified and met.
- Different approaches are used to meet communication needs of clients and colleagues.
- Conflict is addressed promptly and in a timely way and in a manner which does not compromise the standing of the organization

LO2. Contribute to the development of communication strategies

- Strategies for internal and external dissemination of information are developed, promoted, implemented and reviewed as required.
- Channels of communication are established and reviewed regularly.
- Coaching in effective communication is provided.
- Work related network and relationship are maintained as necessary.
- Negotiation and conflict resolution strategies are used where required.
- Communication with clients and colleagues is appropriate to individual needs and organizational objectives.

LO3. Represent the organization

- When participating in internal or external fora, presentation is relevant, appropriately researched and presented in a manner to promote the organization.
- Presentation is made clear and sequential and delivered within a predetermined time.
- Appropriate media is utilized to enhance presentation.
- Differences in views are respected.

- Written communication is made consistent with organizational standards.
- Inquiries are responded in a manner consistent with organizational standard

LO4. Facilitate group discussion

- Mechanisms which enhance effective group interaction are defined and implemented.
- Strategies which encourage all group members to participate are used routinely.
- Objectives and agenda are routinely set and followed for meetings and discussions.
- Relevant information is provided to group to facilitate outcomes.
- Evaluation of group communication strategies is undertaken to promote participation of all parties.
- Specific communication needs of individuals are identified and addressed

LO5. Conduct interview

- A range of appropriate communication strategies are employed in interview situations.
- Different types of interview are conducted in accordance with the organizational procedures.
- Records of interviews are made and maintained in accordance with organizational procedures.
- Effective questioning, listening and nonverbal communication techniques are used to ensure that required message is communicated.

Annex: Resource Requirements

AGR CPM4 02 09 21 Utilizing Specialized Communication Skills				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	Learning Materials			
1	TTLM.	Prepared by the trainer	30	1:1
2	Textbook		30	1:1
3	Reference book			
B.	Learning Facilities & Infrastructure			
1	Lecture room / work shop	5m*5m	1	1:30
2	Library	10m*10m	1	1:30
C.	Consumable Materials			
1	Copy paper	A4 size	5 rim	1:6
D.	Tools and Equipments			

LEARNING MODULE -03		Logo of TVET Provider
TVET-PROGRAMME TITLE	Crop Production and Marketing Management L-IV	
MODULE TITLE	Building Relationships with Customers	
MODULE CODE	<u>AGR CPM4 03 09 21</u>	
NOMINAL DURATION	40 hours	
MODULE DESCRIPTION:	This module cover skill and knowledge to involves the use of advanced sales techniques in building relationships with customers and interacting with customers	
<p>LEARNING OUTCOMES</p> <p>At the end of the module the learner will be able to:</p> <p>LO-1 Establish rapport with customers</p> <p>LO-2 Apply expert knowledge</p> <p>LO-3 Provide post sales support</p> <p>LO-4 Plan sales presentations</p> <p>LO-5 Implement <i>sales presentation</i></p> <p>LO-6 Maintain and utilize a customer data base</p> <p>LO-7 Deal with difficult customers</p>		
<p>MODULE CONTENTS:</p> <p>LO-1 Establish rapport with customers</p> <p>1.1 Establishing relationship with customer</p> <p>1.2 Maintaining Professional ethics</p> <p>1.3 Clarifying customer needs and preferences</p> <p>1.4 Maximizing sales opportunities</p> <p>1.5 . Giving customer space and time</p> <p>1.6 Demonstrating effective methods of closing sales</p>		

LO-2 Apply expert knowledge

- 2.1. Providing customer with accurate information
- 2.2. Providing supplier and/or manufacturer information
- 2.3. Demonstrating product/stock range
- 2.4. Maximizing Customer interest
- 2.5. Calculating Prices and/or discounts

LO-3 Provide post sales support

- 3.1. Providing evidence of ongoing support
- 3.2. Explaining back up service
- 3.3. Providing customer with store/salesperson's contact details
- 3.4. Entering customer and/or transaction details

LO-4 Plan sales presentations

- 4.1. Planning presentation
- 4.2. Selecting client group
- 4.3. Accessing and distributing promotional materials
- 4.4. Selecting and preparing range of products/services

LO-5 Implement sales presentation

- 5.1 Briefing numbers of support staff
- 5.2 Applying communication skills
- 5.3, Demonstrating Products/services
- 5.4 Measuring results of sales presentation

LO-6 Maintain and utilize a customer data base

- 6.1 Maintaining customer confidentiality
- 6.2 Developing, maintaining and storing Customer records
- 6.3, Identifying and following regular customers
- 6.4 Utilizing Customer records
- 6.5. Implementing Customer clubs and reward schemes

LO-7 Deal with difficult customers

- 7.1. Acknowledging and supporting Customer complaints/problems

- 7.2. Encouraging Customer Verbalizing issue and active listening
- 7.3. Developing Customer's confidence
- 7.4. Establishing Mutually acceptable resolution of complaint

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was 	<ul style="list-style-type: none"> • Speak loudly • Using sign language 	<ul style="list-style-type: none"> • Use written response as an option for the

		<p>conducted with the trainee through the service of the sign language interpreter</p> <ul style="list-style-type: none"> • Use short and clear questioning • Time extension 	<p>interpreter if necessary</p>	<p>trainees having speech challenges</p>
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

ASSESSMENT CRITERIA:

LO-1 Establish rapport with customers

- Rapport/relationship with customer established and a genuine interest in customer needs/requirements expressed to enhance customer commitment, trust and credibility of store and to build return customer base.
- Professional ethics maintained with the customer to promote store image and credibility.
- Customer needs and preferences accurately clarified to maximize sales opportunities.
- Sales opportunities maximized by use of add on and complementary sales techniques.
- **Customer** given space and time to evaluate purchase decision, while time is used to maximum advantage for customer and store.
- Effective methods of closing sales demonstrated

LO-2 Apply expert knowledge

- Customer provided with accurate information regarding product and service appraisals, correct statements and warranties according to legal requirements
- Detailed knowledge of supplier and/or manufacturer information provided according to customer needs and within guidelines of commercial confidentiality.
- Product/stock range evaluated, features and benefits of products/services accurately demonstrated where appropriate and recommendations made to the customer to maximize sales potential.
- Customer interest in product/service maximized through price negotiation where applicable and payment/credit options offered according to store policy.
- Prices and/or discounts accurately calculated according to pricing determinants and store policy

LO-3 Provide post sales support

- Evidence of ongoing support accurately provided as sale is concluded.
- Back up service accurately explained and customer reassured according to legal requirements and store policy.
- Customer provided with store/salesperson's contact details to provide line of contact and customer followed up according to store policy.
- Customer and/or transaction details accurately entered to customer database.

LO-4 Plan sales presentations

- Presentation planned to complement product characteristics.
- Client group selected according to product characteristics and store merchandising policy.
- Promotional materials accessed where required and distributed to client group.
- Range of products/services selected and prepared for presentation to reflect store image, demographics and merchandising plan

LO-5. Implement *sales presentation*

- Numbers of support staff, where required, sufficient and adequately briefed for presentation.
- Communication skills applied to effectively create interest, focus attention, encourage customer interaction with individuals and/or groups.
- Products/services demonstrated to create a buying environment.
- Results of sales presentation measured according to predetermined criteria, overall performance reviewed, and results applied to future sales presentations according to store sales policy

LO-6 .Maintain and utilize a customer data base

- Customer confidentiality maintained as required by store policy and legal requirements.
- Customer records accurately developed, regularly maintained and securely stored according to store policies and procedures.
- Regular customers accurately identified and followed up according to store

marketing policy.

- Customer records accurately utilized to advise customers on products and services of possible interest.
- Customer clubs and reward schemes implemented where required according to store promotional activities

LO-7 Deal with difficult customers

- Customer complaints/problems acknowledged and customer supported reassuringly to produce positive outcome.
- Customer encouraged verbalizing issue and active listening used to minimize customer frustration.
- Customer's confidence in the sales assistant and product/service developed to promote long term commitment and trust to store.
- Mutually acceptable resolution of complaint established

Annex: Resource Requirements

AGR CPM4 03 09 21 Building Relationships with Customers				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Containing: information sheet, operation sheet and LAP Test	5	1:5
2.	Reference books			
B. Learning Facilities & Infrastructure				
1.	Lecture Room	Area- 5*5m ²	1	1:25
2.	Library	Area-15*15m ²	1	1:25
C. Consumable Materials				
1.	Paper	A4	5packs	1:5
2.	Packaging material	Polypropylene	50pcs	2:1
		Cartoon	5	1:5
D. Tools and Equip.				
1.	inspection machine,	<ul style="list-style-type: none"> • Roll weight: 100 kg • Max roll diameter: 600 mm • Min roll diameter: 100 mm 	1	1:25
2.	Stamping or labeling machine	Standard	1	1:25
3.	Packaging machine	Standard	1	1:25
4.	Cart	Standard	1	1:25



LEARNING MODULE O4	
TVET-PROGRAMME TITLE: Crop Production and Marketing Management Level IV	
MODULE TITLE: Developing Individuals and Team	
MODULE CODE: AGR CPM4 M04 09 21	
NOMINAL DURATION: <u>32Hours</u>	
MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to determine individual and team development needs and facilitate the development of the workgroup.	
LEARNING OUTCOMES At the end of the module the learner will be able to: <ul style="list-style-type: none">LO1. Provide team leadershipLO2. Foster individual and organizational growthLO3. Monitor and evaluate workplace learningLO4. Develop team commitment and cooperationLO5. Facilitate accomplishment of organizational goals	
MODULE CONTENTS:	
LO1. Provide team leadership <ul style="list-style-type: none">1.1 Identifying and implementing learning and development needs1.2 Developing and implementing learning plan1.3 Encouraging Individuals for self-evaluate performance1.4 Collecting feedback on performance of team members	
LO2. Foster individual and organizational growth <ul style="list-style-type: none">2.1. identifying learning and development program goals2.2.Making Learning delivery methods2.3.Providing Workplace learning opportunities and coaching2.4.Identifying and approving resources and timelines	
LO3. Monitor and evaluate workplace learning <ul style="list-style-type: none">3.1.Using feedback from individuals or teams3.2.Assessing and recording outcomes and performance3.3.Negotiating modifications for learning plans3.4. Maintaining records and reports of competence	

LO4. Develop team commitment and cooperation

4.1.Obtaining open communication processes

4.2.Reaching decisions by the team

4.3.Developing mutual concern and camaraderie

LO5. Facilitate accomplishment of organizational goals

5.1.Participating team members activities and communication processes.

5.2.Developing Individual and joint responsibility by team's members

5.3.Sustaining collaborative efforts for organizational goals.

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop
Demonstration	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines • Assign peer trainees to assist • Conduct close follow up • Provide tutorial support (if necessary)

Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> • Provide briefing /orientation on the assignment • Provide visual recorded material 	
ASSESSMENT METHODS:			
Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or confirm whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges

Written test	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension ❖

ASSESSMENT CRITERIA:**LO1. Provide team leadership**

- Learning and development needs are systematically identified and implemented in line with organizational requirements.
- Learning plan to meet individual and group training and developmental needs is collaboratively developed and implemented.
- Individuals are encouraged to self-evaluate performance and identify areas for improvement.
- Feedback on performance of team members is collected from relevant sources and compared with established team learning process.

LO2. Foster individual and organizational growth

- Learning and development program goals and objectives are identified to match the specific knowledge and skills requirements of Competence standards.
- Learning delivery methods are made appropriate to the learning goals, the learning style of participants and availability of equipment and resources.
- Workplace learning opportunities and coaching/ mentoring assistance are provided to facilitate individual and team achievement of competencies.
- Resources and timelines required for learning activities are identified and approved in accordance with organizational requirements.

LO3. Monitor and evaluate workplace learning

- Feedback from individuals or teams is used to identify and implement improvements in future learning arrangements.
- Outcomes and performance of individuals/teams are assessed and recorded to determine the effectiveness of development programs and the extent of additional support.
- Modifications to learning plans are negotiated to improve the efficiency and effectiveness of learning.
- Records and reports of competence are maintained within organizational requirement.

LO4. Develop team commitment and cooperation

- Open communication processes to obtain and share information is used by team.
- Decisions are reached by the team in accordance with its agreed roles and

responsibilities.

- Mutual concern and camaraderie are developed in the team.

LO5. Facilitate accomplishment of organizational goals

- Team members are actively participated in team activities and communication processes.
- Individual and joint responsibility is developed by team's members for their actions.

Collaborative efforts are sustained to attain organizational goals

Annex: Resource Requirements

AGR CPM4 M04 09 21: Crop Production and Marketing Management Level IV				
Item No.	Category /Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Developing Individuals and Team	25	1:1
2.	Text Books			
3.	Reference Books	Developing work teams	5	1:5
B. Learning Facilities & Infrastructure				
1.	Lecture Room	6*8m	1	1:25
2.	Library	12*10m	1	1:25
3	Internet	WIF		
4	Vehicle	Coaster	1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.	Flip chart	23"	1	1:25
3	Marker	Art line	25	1:1
4	Broom		5	1:5
5	Cleaning Plastic Spade	Plastic Made	5	1:5
6	Baskets		1	1:25

LEARNING MODULE-05



TVET-PROGRAMME TITLE: Crop Production and Marketing Management
Level IV

Unit Title :Managing micro, small and medium enterprises (MSMEs)

MODULE CODE AGR CPM4 05 09 21

NOMINAL DURATION: 36hours

MODULE DESCRIPTION: This module covers the operation of day-to-day business activities in a micro or small business. The strategies involve developing, monitoring and managing work activities and financial information, developing effective work habits, and adjusting work schedules as needed

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO1. Develop and communicate Strategic work plan
- LO2. Identify daily work requirements and Develop effective work habits
- LO3. Manage Marketing of MSMEs
- LO4. Manage Human Resources
- LO5. Manage production and Operation
- LO6. Maintain financial records and use for decision making
- LO7. Monitor, Manage and Evaluate work performance

MODULE CONTENTS:

LO1. Develop and communicate Strategic work plan

- 1.1 Sensitizing importance of planning
- 1.2 Communicating basics of planning and goal setting
- 1.3 Addressing measurable and realistic short-term business objective
- 1.4. Discussing realistic activities plans and schedule
- 1.5. Introducing and understanding major components of work plan
- 1.6. Understanding Importance of constantly reviewing plans

LO2. Identify daily work requirements and Develop effective work habits

- 2.1. Discussing and understanding basic concept of working culture
- 2.2. Developing and understanding different approaches
- 2.3. Identifying work requirements.
- 2.4. Prioritizing work activities
- 2.5. Allocating appropriate work
- 2.6. Identifying work and personal priorities
- 2.7. Seeking input
- 2.8. Responding business or inquiries.
- 2.9. Presenting information in a format appropriate**

LO3. Manage Marketing of MSMEs

- 3.1. Analyzing Information on market and business needs
- 3.2. Identifying market opportunities.
- 3.3. Evaluating marketing mix and components.
- 3.4. Determining marketing mix for specific target market.
- 3.5. Monitoring marketing mix and adjusting continually.

LO4. Manage Human Resources

- 4.1. Identifying and determining human resource rules, regulations law and procedures.
- 4.2. Auditing and identifying human resource gaps.
- 4.3. Conducting recruitment and selection.
- 4.4. Orienting and placing candidates
- 4.5. Conducting appraisal of employees' performance
- 4.6. Using appraisal results for training, promotion, disciplinary measures
- 4.7. Maintaining employee relations.

LO5. Manage production and Operation

- 5.1. Developing and implementing production /operation plan
- 5.2. Purchasing inputs and maintaining adequate inventories.
- 5.3. Checking and controlling production /operation process.

5.4. Applying and maintaining quality control

LO6. Maintain financial records and use for decision making

6.1 Discussing and understanding objective and benefits

6.2 Identifying and recording asset, liabilities and capital.

6.3 Discussing balance sheet and different journals

6.4. Discussing ,analyzing , classifying and recording business transactions

6.5. Maintaining daily financial records.

6.6. Preparing and distributing Invoices and payments.

6.7. Collecting or following-up Outstanding accounts.

6.8. Identifying and discussing revenue, expense and costs.

6.9. Discussing and maintaining different ledgers and subsidiary ledgers.

6.10. Preparing profit and loss report

6.11. Conducting financial interpretation

6.12. Preparing financial manual.

LO7. Monitor, Manage and Evaluate work performance

7.1. Coordinating people, resources and/or equipment

7.2. Communicating Staff, clients and/or contractors

7.3. Applying problem solving techniques.

7.4. Monitoring Opportunities for improvements.

7.5. Adjusting work schedules

7.6. Communicating and recording proposed changes.

7.7. Using relevant codes of practice.

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was 	<ul style="list-style-type: none"> • Speak loudly • Using sign language 	<ul style="list-style-type: none"> • Use written response as an option for the

		<p>conducted with the trainee through the service of the sign language interpreter</p> <ul style="list-style-type: none"> • Use short and clear questioning • Time extension 	<p>interpreter if necessary</p>	<p>trainees having speech challenges</p>
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

Assessment criteria

LO1. Identify daily work requirements

- Work requirements are identified for a given time period by taking into consideration resources and constraints.
- Work activities are prioritized based on business needs, requirements and deadlines.
- If appropriate, work is allocated to relevant staff or contractors to optimize efficiency

LO2 Monitor and manage work

- People, resources and/or equipment are coordinated to provide optimum results.
- Staff, clients and/or contractors are communicated within a clear and regular manner, to monitor work in relation to business goals or timelines.
- Problem solving techniques are applied to work situations to overcome difficulties and achieve positive outcomes

LO3. Develop effective work habits

- Work and personal priorities are identified and a balance is achieved between competing priorities using appropriate time management strategies.
- Input from internal and external sources is sought and used to develop and refine new ideas and approaches.
- Business or inquiries is/are responded to promptly and effectively.
- Information is presented in a format appropriate to the industry and audience.

LO4. Interpret financial information

- Relevant documents and reports are identified.
- Documents and reports are read and understood and any implications discussed with appropriate persons.
- Data and numerical calculations are analyzed, checked, evaluated,

organized and reconciled.

- Daily financial records and cash flow are maintained correctly and in accordance with legal and accounting requirements.
- Invoices and payments are prepared and distributed in a timely manner and in accordance with legal requirements.
- Outstanding accounts are collected or followed-up on.

LO5. Evaluate work performance

- Opportunities for improvements are monitored according to business demands.
- Work schedules are adjusted to incorporate necessary modifications to existing work and routines or changing needs and requirements.
- Proposed changes are clearly communicated and recorded to aid in future planning and evaluation.
- Relevant codes of practice are used to guide an ethical approach to workplace practices and decisions

Annex: Resource Requirements

AGR CPM4 05 09 21 Managing and Maintaining Small/Medium Business Operations				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	Learning Materials			
1	TTLM.	Prepared by the trainer	30	1:1
2	Textbook		30	1:1
3	Reference book			
B.	Learning Facilities & Infrastructure			
1	Lecture room / work shop	5m*5m	1	1:30
2	Library	10m*10m	1	1:30
C.	Consumable Materials			
1	Copy paper	A4 size	5 rim	1:6
D.	Tools and Equipments			

LEARNING MODULE 06



**TVET-PROGRAMME TITLE: Crop Production and Marketing Management
Level IV**

MODULE TITLE : Migrating to new technology

MODULE CODE : AGR CPM4 06 09 21

NOMINAL DURATION : 32hours

MODULE DESCRIPTION: This module defines the competence required to apply skills and knowledge in using new or upgraded technology. The rationale behind this unit emphasizes the importance of constantly reviewing work processes, skills and techniques in order to ensure that the quality of the entire business process is maintained at the highest level possible through the appropriate application of new technology. To this end, the person is typically engaged in on-going review and research in order to discover and apply new technology or techniques to improve aspects of the organization's activities

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO1. Apply existing knowledge and techniques to technology and transfer
- LO2. Apply functions of technology to assist in solving organizational problems
- LO3. Evaluate new or upgraded technology performance

MODULE CONTENTS:

LO1. Apply existing knowledge and techniques to technology and transfer

- 1.1. Identifying situations for existing knowledge
- 1.2. Reacquiring and using new or upgraded technology skills
- 1.3. Identifying, classifying and using new or upgraded equipment

LO2. Apply functions of technology to assist in solving organizational problems

- 2.1. Conducting testing of new or upgraded equipment
- 2.2. Applying features of new or upgraded equipment

2.3. Using features and functions of new or upgraded equipment

2.4. Accessing and using sources of information

LO3 Evaluate new or upgraded technology performance

3.1. Evaluating new or upgraded equipment

3.2. Determining environmental considerations

3.3. Seeking feedback

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in Brail format ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

		<p>video format</p> <ul style="list-style-type: none"> Summarize main points 		
Demonstration	<ul style="list-style-type: none"> Conduct close follow up Use verbal description Provide special attention in the process of guidance facilitate the support of peer trainees Prepare & use simulation 	<ul style="list-style-type: none"> use Sign language interpreter Use video recorded material Ensure attention of the trainees Provide structured training Show clear and short method Use gesture Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Illustrate in clear & short method Use Video recorded material Ensure the attention of the trainees Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines Assign peer trainees to assist Conduct close follow up Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member Brief the thematic issues of the work 	<ul style="list-style-type: none"> Use sign language interpreters Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member 	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member Inform the group members to speak 	<ul style="list-style-type: none"> Introduce the trainees with their peers

			loudly	
Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary

<p>Individual assignment</p>	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	
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Assessment criteria

LO1. Apply existing knowledge and techniques to technology and transfer

- Situations are identified where existing knowledge can be used as the basis for developing new skills.
- New or upgraded technology skills reacquired and used to enhance learning.
- New or upgraded equipment are identified, classified and used where appropriate, for the benefit of the organization

LO2. Apply functions of technology to assist in solving organizational problems

- Testing of new or upgraded equipment is conducted according to the specification manual.
- Features of new or upgraded equipment are applied within the organization
- Features and functions of new or upgraded equipment are used for solving organizational problems
- Sources of information relating to new or upgraded equipment are accessed and used

LO3. Evaluate new or upgraded technology performance

- New or upgraded equipment is evaluated for performance, usability and against OHS standards.
- Environmental considerations are determined from new or upgraded equipment.
- Feedback is sought from users where appropriate.
- New or upgraded equipment is evaluated for performance, usability and against OHS standards.
- Environmental considerations are determined from new or upgraded equipment.
- Feedback is sought from users where appropriate

Annex: Resource Requirements

AGR CPM4 06 09 21 Migrating to New Technology				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	Learning Materials			
1	TTLM.	Prepared by the trainer	25	1:1
2	Textbook		25	1:1
3	Reference book			
B.	Learning Facilities & Infrastructure			
1	Lecture room / work shop	5m*5m	1	1:25
2	Library	10m*10m	1	1:25
C.	Consumable Materials			
1	Copy paper	A4 size	5 rim	1:5
D.	Tools and Equipments			

LEARNING MODULE-07



TVET-PROGRAMME TITLE	Crop Production and Marketing Management L-IV
MODULE TITLE	Planning Composting Production Plan
MODULE CODE	<u>AGR CPM4 07 09 21</u>
NOMINAL DURATION	32HOURS
MODULE DESCRIPTION <p>This unit specifies the knowledge, skills and attitude required to plan and schedule composting production to meet production requirements. The unit involves applying a broad knowledge base to identify and apply solutions to a range of unpredictable problems, and taking responsibility for production outputs in relation to specified quality standards. Composting is used as a general expression for the processing of organic materials; with this unit being relevant for both aerobic composting and vermin-culture technologies.</p> <p>It applies to people working at a Commercial-scale composting facility.</p>	
LEARNING OUTCOMES <p>At the end of the module the learner will be able to:</p> <p>LO-1. Establish production requirements</p> <p>LO-2. Schedule production to meet requirements.</p>	
MODULE CONTENTS: LO-1. Establish production requirements <ul style="list-style-type: none">1.1.Reviewing raw material supply contracts and receivable data,1.2.Identifying Conditions that may affect production requirements.1.3.Estimating Production requirements across product portfolio.1.4 Monitoring environmental and occupational health and safety (OHS) impacts1.5.Documenting and submitting production plan 1.6 .Confirming facilities, personnel, machinery and equipment1.7.Developing and documenting contingency plan LO-2. Schedule production to meet requirements. <ul style="list-style-type: none">2.1 Calculating batch types and volumes of compost-based products2.2.Obtaining laboratory and field test data of compost	

2.3 Monitoring and adjusting Production schedule.

2.4 Making requiring product available .

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in Brail format ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers

Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	

ASSESSMENT CRITERIA:

LO-1. Establish production requirements


- **Raw material** supply contracts and receival data, sales and market trend information, and corporate marketing plan and strategy are reviewed to quantify production requirements.
- Conditions that may affect production requirements are identified in consultation with executive management and designated sales and marketing personnel.
- Production requirements across product portfolio to meet customer requirements and site and equipment capacity are estimated in consultation with executive management and designated sales and marketing personnel.
- **Environmental** and occupational health and safety (**OHS**) impacts are monitored for compliance with enterprise plan and licence conditions.
- **Production plan** is documented and submitted for executive management approval.
- Facilities, personnel, machinery and equipment required for compost production are confirmed as being available.
- Contingency plan to address potential oversupply or undersupply of raw material or product is developed and documented

LO-2. Schedule production to meet requirements.

- Batch types and volumes of compost-based products to be produced are calculated.
- Laboratory and field test data of compost materials during and post-production is obtained.
- Production schedule is monitored and adjusted according to field and laboratory test results.
- Product is made available to customer in required quantities, to required quality and at required time.

Annex: Resource Requirements

AGR CPM4 07 09 21 Plan Composting Production Plan				
	Category/Item	Description/ Specifications	Qty.	Recommended Ratio (Item: trainees)
A. Learning Materials				
1.	TTLM	Information Sheet ,LAP TEST, Operation sheet	30	1:1
1.	Text books		6	1:5
B. Learning Facilities and Infrastructure				
1.	Lecture Room	5mx6m	1	1:30
2.	Demonstration field	1omx1om	1	1:30
C. Consumable Materials				
1.	Paper	A4	1dusta	1:30
2.	Compost materials	compostable organic materials		
3.	Plastic			
4.	Bamboo			
D. Tools and Equipment				
1.	Water cane	10lit watering hause	5	1:6
2.	Grinders	Standard	1	1:30
3.	Vehicles			1:30
4.	Wheel barrow	Metal	1	1:30
5.	Peg	Wood/metal	10	1:3
6.	Shovel	Metal	10	1:3

LEARNING MODULE 08	
TVET PROGRAM TITLE: Crops Production and Marketing Management Level IV	
Unit Title: Promoting and Planning Plant Propagation Program	
MODULE CODE : <u>AGR CPM4 08 09 21</u>	
NOMINAL DURATION : 40 Hours	
<p>MODULE DESCRIPTION:</p> <p>This module covers the knowledge, skills and attitude of promoting & planning a propagation program. Promoting and Planning propagation program requires consideration of management and marketing requirements, selection of appropriate propagation techniques and environmental controls, OHS hazards and hygiene standards. Responsibility for and limited organization of the work of others may be necessary. It also to promoting, planning and propagation processes, such as propagation techniques, plant varieties and cultivars, weed, pest and disease recognition and control, and plant health requirements..</p>	
<p>LEARNING OUTCOMES</p> <p>At The end of this module the learners will be able to:</p> <p>LO1. Carry out preliminary planning activities for a plant propagation program</p> <p>LO2. Develop the propagation plan</p> <p>LO3. Monitor success of propagation activities</p>	
<p>MODULE CONTENTS:</p> <p>LO1. LO1. Carry out preliminary planning activities for a plant propagation program</p> <p>1.1 Confirming and understanding management and marketing requirements</p> <p>1.2 Evaluating space requirements for propagation program</p> <p>1.3 Determining propagation techniques</p> <p>1.4 Determining environmental parameters</p> <p>1.5 Negotiating budget for the propagation program</p> <p>1.6 Identifying OHS hazards</p> <p>1.7 Assessing risks and implementing controls</p> <p>LO2. Develop the propagation plan</p>	

- 2.1. Identifying labour, materials, equipment and machinery needs
- 2.2. Determining propagation media requirements
- 2.3. Determining strategies
- 2.4. Identifying type of plant and propagation method
- 2.5. Identifying selection criteria for propagation material
- 2.6. Determining selection criteria for the propagation material
- 2.7. Determining hygiene requirements
- 2.8. Communicating propagation plan and schedule of activities

LO3. Prepare propagating media

- 3.1. Identifying and recording variances
- 3.2. Assessing propagated plants
- 3.3. planning remedial procedures

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group 	<ul style="list-style-type: none"> • Introduce the trainees with their peers

			members to speak loudly	
Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	

ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the 	<ul style="list-style-type: none"> • Provide activity based assessment 	<ul style="list-style-type: none"> • Provide activity based assessment

	<ul style="list-style-type: none"> • Time extension 	<p>exam</p> <ul style="list-style-type: none"> • Provide activity-based/practical assessment method • Time extension 	<ul style="list-style-type: none"> • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Conduct close follow up • Time extension
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ASSESSMENT CRITERIA

LO1. Carry out preliminary planning activities for a plant propagation program

- Management and marketing requirements are confirmed and understood.
- Space requirements for propagation program are evaluated.
- Propagation techniques are determined according to species and sound horticultural practice.
- Environmental parameters that impact on propagation are determined.
- Budget for the propagation program is negotiated with management.
- OHS hazards associated with the propagation program are identified, risks assessed and controls implemented

LO2. Develop the propagation plan

- Labour, materials, equipment and machinery needs are identified.
- Propagation media requirements are determined according to the propagation method and needs of the plant.
- Strategies to modify environmental conditions are determined according to the type of plant and propagation method used.
- Selection criteria for the propagation material is determined according to the type of plant and propagation method.
- Hygiene requirements for propagation activities are determined.
- Propagation plan and schedule of activities are communicated clearly to staff.

LO3. Monitor success of propagation activities

- Variances from plan and scheduled activities are identified and recorded.
- Propagated plants are assessed for health, quality and viability according to enterprise quality standards.

Remedial procedures are planned to meet marketing objectives and business imperatives

Annex: Resource Requirements

AGR CPM4 08 09 21 Promoting and Planning Plant Propagation Program (Level IV)					
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)	Requirements (e.g. Maintenance)
A. Learning Materials					
1	TTLM		30	1:1	Revised
2	Reference books		5	1:5	
3	Handouts		30	1:1	
4	Manuals		5	1:5	
5	video		1	1:30	
B. Learning Facilities & Infrastructure					
1	Well Equipped Lecture room with tables, chairs and whiteboard	8 x 5 sqm	1	1:30	
2	Well equipped Audio-Visual Center with projector	50 sqm	1	1:30	
3	Computer Room	50 sqm	1	1:3	
4	Library (Provided with reference books, handouts, manuals, etc...)	100 sqm	1		
C. Consumable Materials					
1	Duplication paper	Desta	10	1:3	
2	Printing paper	Desta	10	1:3	
3	Photocopy paper	Desta	10	1:3	
4	Pen	Ball point Bic	60	2:1	
5	Pencil	BH	30	1:1	
6	Stencil	Ambassador	2	2:1	
7	CD RW		60	2:1	
8	CD R		60	2:1	
9	Toner	4250	2	2:30	
10	Stencil ink	pkts	2	2:30	
11	Marker	(art-line 90)	60	2:1	
12	Graph paper	Roll	10	1:3	
13	Philip char paper	Roll	1	1:30	
14	Scotch tape	Pcs	10	1:3	
15	UHU		30	1:1	

16	Fastener	Pkts	1	1:30	
17	Small stapler	Pcs	6	1:5	
18	Large Stapler	Pcs	6	1:5	
19	Medium Stapler	Pcs	6	1:5	
20	Paper basket	Pcs	2	2:25	
21	Paper tray	Pcs	6	1:5	
22	Staple remover	Pcs	6	1:5	
23	Spills	pkts	10	1:3	
24	Classer	pcs	100	5:1	
25	File Box	With ring	30	1:1	
26	File Box	With string	30	1:1	
27	Bag	Brief case	1	1:30	
28	Calculator	Scientific	30	1:1	
29	Ruler	Plastic (30, 50, 100 cm)	30	1:1	
30	T-Square		30	1:1	
31	Writing pad	Small	30	1:1	
32	Writing pad	Medium	30	1:1	
D.	Tools and Equipments				
1	First Aid Kits	To be Provided by the college		1:30	
2	Spirit Levels		5	1:6	
3	Survey Pegs		5	1:6	
4	Batter Pegs/Boards		30	1:30	
5	String And Line Level		5	1:6	
6	Hammers		5	1:6	
7	Laser Levels		5	1:6	
8	String Lines	100m	5roll	1:6	
9	Automatic Levels		5	1:6	
10	Leveling Staffs		5	1:6	
11	Chalk Line	Dozon	5	1:6	
12	Profile Board		5	1:6	
13	Inclinometers		5	1:6	
14	Optical Square		5	1:6	
15	Plumb Bobs		5	1:6	
16	Ranging Pole		300	30:1	
17	Tape Measure		5	1:6	
18	Knives		5	1:6	
19	Sharpening Stone		5	1:6	
20	Linear Measure		5	1:6	
21	Grafting Machine		5	1:6	
22	Plastic Containers		5	1:6	
23	Scalpel		5	1:6	
24	Autoclave		1	1:30	
25	Vermiculite Boxes		5	1:6	
26	Wheelbarrow,		5	1:6	

27	Trolley		3	1:10	
28	Shovel,		30	1:30	
29	Water Spray Container,		30	1:30	
30	Dibblers		5	1:6	
31	Rubbish Bins		5	1:6	
32	Setting Temperatures Controls		3	1:10	
33	Setting Wind Machines,		1	1:30	
34	Setting Humidity Levels.		3	1:10	
35	Heaters		1	1:30	
36	Coolers		3	1:10	
37	Fans		5	1:6	
38	Vents		5	1:6	
39	Fogging/Misting Systems		1	1:30	
40	Screens		1	1:30	

LEARNING MODULE 09**Occupational Standard: Crop Production and Marketing Management Level IV****Unit Title: Improving and Managing soils for organic production**MODULE CODE : **AGR CPM4 09 09 21**

NOMINAL DURATION : 40 Hours

This module specifies the knowledge, skills and attitude required to improve and manage soils for organic production. The module involves taking samples of soil and plant tissue and analysing results. It also requires improving soil fertility in response to sample testing by modifying cultivation practices. It requires knowledge of the processes of soil formation and interactions between the soil, plants and animals. It includes people working on a farm that is managed according to the principles of organic agriculture.

LEARNING OUTCOMES

At The end of this module the learners will be able to:

LO1. Monitor indicators of soil fertility.

LO2. Assess soil-related factors for selected plants.

LO3. Select and implement allowable techniques and inputs to optimize soil fertility.

MODULE CONTENTS:**LO1. Monitor indicators of soil fertility**

- 1.1 Undertaking work in appropriate environment
- 1.2 Conducting soil testing
- 1.3 Assessing soil pH
- 1.4 Assessing mineral balances and organic matter levels
- 1.5 Assessing soil texture and structure
- 1.6 Assessing salinity and sodicity
- 1.7 Analyzing results

LO2. Assess soil-related factors for selected plants.

- 2.1 Identifying nutritional requirements
- 2.2 Selecting soil analyses and suitable testing facilities

- 2.3 Conducting soil and plant tissue sample collection
- 2.4 Analyzing results of soil and tissue testing
- 2.5 Assessing soil condition
- 2.6 Assessing soil biological activity
- 2.7 Assessing soil health

LO3. Select and implement allowable techniques and inputs to optimize soil fertility.

- 3.1 Identifying range of allowable inputs
- 3.2 Identifying and evaluating suitable nutrient cycling techniques
- 3.3 Calculating appropriate inputs
- 3.4 Selecting and managing cover crop and pasture systems
- 3.5 Applying and monitoring mulching and composting systems
- 3.6 Designing and implementing crop rotations
- 3.7 Selecting and implementing cultural practices

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak 	<ul style="list-style-type: none"> • Introduce the trainees with their peers

			loudly	
Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Makeavailable recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	

ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> • Use sign language interpreter <ul style="list-style-type: none"> • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the 	<ul style="list-style-type: none"> • Provide activity based assessment 	<ul style="list-style-type: none"> • Provide activity based assessment

ation	<ul style="list-style-type: none"> • Time extension 	exam <ul style="list-style-type: none"> • Provide activity-based/practical assessment method • Time extension 	<ul style="list-style-type: none"> • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Conduct close follow up • Time extension
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ASSEMENT CRITERIA

LO1 Monitor indicators of soil fertility.

- Work is undertaken in an environmentally appropriate manner and according to workplace information, principles of organic agriculture, occupational health and safety requirements and enterprise guidelines.
- Soil testing is conducted at reference sites according to enterprise procedures and organic industry standards.
- Soil acidity or alkalinity (pH), mineral balances and organic matter levels are assessed and recorded.
- Soil texture, structure, salinity and sodicity are assessed and recorded
- Results are analyzed to identify trends and areas for improvement.

LO2 Assess soil-related factors for selected plants.

- Nutritional requirements of selected plant species are identified.
- Soil analyses to be conducted and suitable testing facilities are selected.
- Soil and plant tissue sample collection is conducted according to enterprise procedures and requirements of testing facility.
- Results of soil and tissue testing are analysed in relation to requirements of the farming system.
- Soil condition is assessed for drainage, compaction, aeration and water infiltration in relation to requirements for desired plant growth for selected species.
- Soil biological activity is assessed by identifying and evaluating presence of organisms.
- Soil health is assessed by identifying and evaluating plant species present.

LO3 Select and implement allowable techniques and inputs to optimize soil fertility.

- Range of allowable inputs is identified according to requirements of the National Standard for Organic and Biodynamic Produce.
- Suitable nutrient cycling techniques are identified and evaluated

- Appropriate inputs are calculated, based on soil/plant analyses, crop removal and plant/animal observations.
- Cover crop and pasture systems are selected and managed.
- Mulching and composting systems are developed, applied and monitored.
- Rotations to optimize soil fertility are designed and implemented
- Cultural practices to enhance soil fertility are selected and implemented

Annex: Resource Requirements

AGR CPM4 09 09 21 Improving and Managing Soils for Organic Production					
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)	Requirements (e.g. Maintenance)
A.	Learning Materials				
1.	TTLM	Prepared by trainer			
2	Reference	Nutrient Management practice in crops & cropping systems.	5	1:6	
		Fertilizers & Crop And Production	5		
		Hand Book of Soil Science	5		
		Hand Book of Soil Fertilizer and Manure	5		
		Soil sampling & Method of Analysis	5		
		Soil & Water Management practical manual	5		
		Principles & Practice of Agronomy	5		
			1	1:30	
3	Charts		1	1:30	Updated
4	Pictures		30	1:1	Updated
5	Video and audio				Updated
B.	Learning Facilities & Infrastructure				
1	Demonstration farm/ Practical Site	1 Hectare	1	100 m ² : 1	Well prepared
2	Laboratory	5 x 8 m	1	1:30	Fully equipped
3	Class rooms	5 x 8 m	1	1:30	Fully equipped
4	Agricultural Factories	Vegetable Nursery			
5	Library	5 x 8 m	1	1:30	Resent reference books
6	Internet	On 25 computer	1	1:1	
7	Students Dormitory				
8	Students dining room				
9	Vehicles	Costar	1	1:1	
C.	Consumable Materials				

1	Stationary				
2	Seeds				
3	Fertilizers				
4	Chemicals				
D. Tools and equipment					
1	Projector	LCD	1	1:30	Maintenance
2	Computer	Desk Top Flat screen, 17" DELL	30	1:1	Maintenance
3	Computer	Lab top (Toshiba)	1	1:30	Maintenance
4	Camera	Digital	1	1:30	Maintenance
5	Video Camera	Digital	1	1:30	Maintenance
6	Photocopier	Hp laser Jet	1	1:30	Maintenance
7	Printer Color	Hp laser Jet	1	1:30	Maintenance
8	Printer Normal	Hp laser Jet	1	1:30	Maintenance
9	Scanner	Hp	1	1:30	Maintenance
10	Seeds	Different types	10 kg	10:30	
11	Fertilizers	Organic	120 kg	4:1	
12	Chemicals	Different (liters)	6	1:5	
13	Sickles	Pcs	30	1:1	Maintenance
14	Rake	Pcs	30	1:1	Maintenance
15	Spade	Pcs	30	1:1	Maintenance
16	Shovel	Pcs	30	1:1	Maintenance
17	Machete	Pcs	30	1:1	Maintenance
18	Mattock/pick axe	Pcs	30	1:1	Maintenance
19	Hoe (small)	Pcs	30	1:1	Maintenance
20	Hoe (large)	Pcs	30	1:1	Maintenance
21	Forked hoe	Pcs	30	1:1	Maintenance
22	Watering can	Pcs	30	1:1	Maintenance
23	Rope	(in meter-string or plastic)	600 0m	200:1	
24	Measuring tape	50 and 100 m	30	1:1	
25	Wheel barrow	Pcs	30	1:1	
26	Sacks	(50 and 100 kg capacity)	120	4:1	
27	Graduated cylinder	50 and 100 ml	30	1:1	
28	Pegs	1m length	300 0	100:1	
29	Mesh Wire	Set will be prepared	6	1:5	
30	Nails	From 5 to 12 cm	60	2:1	
31	Stake	For Shade purpose	600	20:1	
32	Hand fork	Pcs	30	1:1	Maintenance
33	Buckets	Pcs	30	1:1	Maintenance
34	Cutlass	Pcs	30	1:1	Maintenance
35	Hand sprayer	Pcs	30	1:1	Maintenance

36	Litmus paper	Pcs			
37	Saws	Pcs	30	1:1	Maintenance
38	Hammer	Pcs	30	1:1	Maintenance
39	Soil laboratory kit	Set	6	1:5	
40	Soil organic matter	Well decomposed (truck)	1		
41	pH meter	Pcs	10	10:30	
42	Beam balance	Pcs	10	10:30	
43	spoons	Pcs	30	1:1	
44	Fore-ceps	Pcs	30	1:1	
45	Shears	Pcs	30	1:1	Maintenance
46	Tractors and trailers	Pcs	1	1:30	Maintenance
47	Plows	Pcs	1	1:30	Maintenance
48	Harrows	Pcs	1	1:30	Maintenance
49	Thatch grass	Bundles	10	10:30	
50	Altimeter	Pcs	10	10:30	Maintenance
51	thermometer	Soil	10	10:30	Maintenance
52	Auger		30	1:1	
53	EC meter		30	1:1	
54	sample bags		30	1:1	
55	plastic overlays		30	1:1	

LEARNING MODULE 10**TVET-PROGRAMME TITLE: Crop Production and Marketing Management Level IV****MODULE TITLE: Monitoring Crop Establishment and Maintenance****MODULE CODE: AGR CPM4 M10 09 21****NOMINAL DURATION:50 Hours**

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude involved in monitoring the establishment and the functions required to promote and maintain the health of agricultural crops. It includes sourcing information for input to the plan, as well as preparing the plan itself, communicating it to the people who will grow the crop, and monitoring the planting operations as they happen. It requires monitoring the application of technical packages of skills and knowledge to adjust the plan in response to changing situations, to subsequently evaluate, report on the outcomes of the planting operation, manage the production of crops in an environment with optimal nutrient availability, with minimum damage from pests, weeds and disease.

LEARNING OUTCOMES

At the end of the module, the trainee / learner will be able to:

- LO1. Gathering information for input planning
- LO2. Prepare planting plan
- LO3. Determine scheduling and key responsibilities
- LO4. Monitor and adjust the planting plan
- LO5. Determine condition of agricultural crops
- LO6. Determine pest and disease control
- LO7. Manage crop health

MODULE CONTENTS:

LO1: Gathering information for input planning

- 1.1. Identifying and obtaining documents of the crop production plan
- 1.2. Gathering Information similar time activities to planting
- 1.3. Identifying the specific target area, or paddock, for planting
- 1.4. Gathering information regarding the trash levels and seedbed conditions

LO2: Prepare planting plan

- 2.1. Determining the agricultural crop and methods of planting
- 2.2. Assessing and calculating the resources
- 2.3. Setting the target dates for planting
- 2.4. Selecting and organizing the chemical applications
- 2.5. Preparing plan for environmental impacts
- 2.6. Identifying and assessing OHS hazards
- 2.7. Identifying and obtaining approvals
- 2.8. Determining measurable indicators, specifications and targets

LO3 Determine scheduling and key responsibilities

- 3.1. Determining scheduling for planting
- 3.2. Determining Key responsibilities for specific preparatory processes
- 3.3. Determining Key responsibilities for specific implementation processes
- 3.4. Determining record keeping requirements and procedures
- 3.5. Documenting the plan
- 3.6. Requiring the plan

LO4 Monitor and adjust the planting plan

- 4.1. Adhering Monitoring points outlined in the implementation plan
- 4.2. Observing and following checks for the OHS requirements
- 4.3. Observing and following checks for environmental requirement
- 4.4. Communicating with operational staff and any contractors
- 4.5. Making follow up for documentation
- 4.6. Initiating and taking corrective action

LO5 Determine condition of agricultural crops

- 5.1. Undertaking measurement and assessment of soil moisture

5.2. Calculating water requirements

5.3. Assessing nutrient requirements and identifying deficiencies.

5.4. Identifying factors affecting crop production potential

5.5. Implementing sustainable land management

LO 6 Determine pest and disease control

6.1. Assessing evidence of pests and disease and determining effective control measures

6.2. Availing chemicals, spraying equipment's and Safety measures

6.3. Locating areas of weed infestation and identifying species

6.4. Selecting pests and weeds control methods

6.5. Scheduling control methods

6.6. Maintaining severity of infestations and records of treatments

LO7 Manage crop health

7.1. Planning and monitoring cropping

7.2. Monitoring weed and pest levels

7.3. Performing crop cultivating practices

7.4. Assessing benefits from fertilization methods and documenting

7.5. Monitoring cropping programs and documenting.

7.6. Documenting relevant data

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> Assign sign language interpreter Arrange the class room seating to be conducive for eye to eye contact Make sure the luminosity of the light of class room is kept Introduce new and relevant vocabularies Use short and clear sentences Give emphasis on visual lecture and ensure the attention of the trainees Avoid movement during lecture time Present the lecture in video format Summarize main points 	<ul style="list-style-type: none"> Organize the class room seating arrangement to be accessible to trainees Speak loudly Ensure the attention of the trainees Present the lecture in video format Ensure the attention of the trainees 	<ul style="list-style-type: none"> Organize the class room seating arrangement to be accessible for wheelchairs users. Facilitate and support the trainees who have severe impairments on their upper limbs to take note Provide Orientation on the physical feature of the work shop
Demonstration	<ul style="list-style-type: none"> use Sign language interpreter Use video recorded material Ensure attention of the trainees Provide structured training Show clear and short method Use gesture Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Illustrate in clear & short method Use Video recorded material Ensure the attention of the trainees Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Facilitate and support the trainees having severe upper limbs impairment to operate equipment/machines Assign peer trainees to assist Conduct close follow up Provide tutorial support (if necessary)

Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> • Provide briefing /orientation on the assignment • Provide visual recorded material 	

ASSESSMENT METHODS:

Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having

			severe upper limb impairment
Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension ❖

ASSESSMENT CRITERIA:

LO1: Gathering information for input planning

- Documents within the organization that detail the requirements of the crop production plan are identified and obtained
- Information regarding activities that will be occurring at a similar time to planting is gathered through discussion with colleagues and management, and by reading the production/management plan
- The specific target area, or paddock, for planting is identified from the production/management plan
- Information regarding the trash levels and seedbed conditions is gathered by viewing the site and through discussion with colleagues

LO2: Prepare planting plan

- The agricultural crop and methods of planting to be used are determined from the organizations production /management plan and availability of the seed
- The resources required for the planting operations are assessed and calculated from the area to be cultivated, the method of planting to be used, and the appropriate timelines
- The target dates are set for planting, including the sequencing for planting each paddock, in line with the overall production/management planning for the organization
- The chemical applications that are required prior to and post planting are selected and organized to occur at an appropriate time
- The plan is prepared to ensure that any potential detrimental environmental impacts are minimized or eliminated, including the proper disposal of containers, drums and other wastes
- OHS hazards are identified, assessed, and the planting plan provides for responsible actions by the operators and management
- Any approvals that are required for the planting operations are identified, sought and obtained
- Measurable indicators, specifications and targets are determined based on the production/management plan and the method, resources, and seed to be used

LO3 Determine scheduling and key responsibilities

- Scheduling for planting is determined taking the range of geographic and resourcing factors into consideration, as well as operations that will be occurring at the same time as the planting

- Key responsibilities for specific preparatory processes that are required before planting are determined
- Key responsibilities for specific implementation processes are determined
- Recordkeeping requirements are determined and procedures are put in place to ensure compliance with the range of applicable regulations
- The plan, including scheduling and key responsibilities, are clearly documented
- The plan includes the type, format, frequency and detail of any reporting are required by both managers and operators

LO4 Monitor and adjust the planting plan

- Monitoring points outlined in the implementation plan are adhered to
- Checks are made to ensure that the OHS requirements are being observed and followed
- Checks are made to ensure that the site environmental requirements are being observed and followed
- Operational staff and any contractors are communicated with regularly to ensure smooth operation and progress
- Follow up are made to ensure that the documentation required by the organization, or other regulating bodies, is completed clearly and accurately during the progress of the planting process
- Where any corrective action or amendment to the planting plan is required, the action is initiated and taken

LO5 Determine condition of agricultural crops

- Measurement and assessment of soil moisture are undertaken to calculate soil water percentage.
- Water requirements are calculated according to soil analysis data, standing crop, and forecast weather conditions.
- Nutrient requirements for crops are assessed and deficiencies identified.
- Factors affecting crop production potential are identified.
- Sustainable land management is implemented according to enterprise requirements and environmental standards.

LO6 Determine pest and disease control

- Evidence of pests and disease is assessed and effective control measures appropriate to type and species of infestation are determined.
- The required chemicals, spraying equipments and Safety measures are availed

- Areas of weed infestation, which may be reduced or eradicated, are located and species identified.
- Control methods are selected to control pests and weeds without building up a resistance to chemicals.
- Control methods are scheduled at the optimum time with minimal damage to the crop and environmental pollution.
- Severity of infestations and records of treatments are maintained to provide essential data for future management programs.

LO7 Manage crop health

- Cropping is planned and monitored to maintain water and nutritional requirements for optimal production.
- Weed and pest levels are monitored and the control program modified as required.
- Crop cultivating practices are performed
- Benefits from fertilization methods are assessed and documented for analysis in future management programs.
- Cropping programs are monitored for efficiency and effectiveness, and documented for future best practice.
- Relevant data is documented for continual analysis and effective crop management.

Annex: Resource Requirements

AGR CPM4 10 09 21 Monitor Crop Establishment and Maintenance				
Item No.	Category/Item	Description/ Specifications	Qty.	Recommended Ratio (Item: trainees)
A. Learning Materials				
1.	TTLM	Information Sheet, LAP TEST, Operation sheet	30	1:1
2.	Text books		5	1:6
1.	Demonstration field	hectar	1	1:30
B. Learning Facilities and Infrastructure				
1.	Lecture Room	5mx6m	1	1:30
2.	Library	15mX15 m	1	1:30
3.	Laboratory		1	1:30
C. Consumable Materials				
1.	Paper	A4	1dusta	1:3
2.	Chemicals	Liquid	10L	1:3
3.	Seeds	Legumes ,cereals oil seeds ,pastures	10kg	1:3
D. Tools and Equipment				
1.	Cleaning equipment	Sweeping broom with rod	5	1:6
2.	Hand tools	Standard	5	1:6
3.	Pallet truck	Driven manually	1	1:30
4.	Tractor	Horse power	1	1:30
5.	Shovel	metal	10	1:3
6.	Peg	Wood/metal made	60	2:1
7.	Rake	Metal	10	1:3
8.	Rope	plastic		
9.	Meter tap	Steel/plastic 100meter	2	1:15
10.	Water cane	Plastic 10 lit/20lit	5	1:6

LEARNING MODULE-11**TVET-PROGRAMME TITLE:**

Crop Production And Marketing Management L-IV

MODULE TITLE:

Planning and Implementing Chemical Use Program

MODULE CODE:**AGR CPM4 11 09 21****NOMINAL DURATION:****40 HOURS**

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude of planning and implementing a program for the use of chemicals in a workplace. It involves using chemicals as well as supervising others in the use of chemicals concerned, and the ability to modify application requirements as needed. It involves decision making in regards to the risk control measures to be applied when using chemicals in different situations, monitoring safety procedures, and ensuring that others are trained sufficiently in the use of the chemical concerned. It involves the selection and management of chemical application systems.

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO-1.** Identify the requirements of chemical use
- LO-2.** Monitor the implementation of safety requirements
- LO-3.** Plan and implement a maintenance program for chemical use equipment
- LO-4.** Determine the suitability of a chemical for use in a control program
- LO-5.** Ensure the correct selection and application of the chemical
- LO-6.** Ensure personnel are adequately trained in chemical use
- LO-7** Implement recording systems for chemical storage and use

MODULE CONTENTS:

- LO1.** Identifying the requirements of chemical use
 - 1.1 Accessing Chemical use

- 1.2 Accessing legalization and safety
- 1.3 Using and Providing Personal protective equipment
- 1.4 Identifying Industry standards for chemical use
- 1.5 Confirming Appropriate insurance policy cover

LO-2. Monitor the implementation of safety requirements

- 2.1. Monitoring implementation of safety practices and rules.
- 2.2. Safety incidents directions, standards and legislative requirements.
- 2.3. Identifying Safety hazards in the transport, storage and application of the chemicals
- 2.4 Identifying risk control measures
- 2.5 implementing measures for controlling residue in the environment and produce

LO-3. Plan and implement a maintenance program for chemical use equipment

- 3.1 Establishing plan for maintenance of application and personal protective equipment
- 3.2 Supervising implementation of maintenance plan
- 3.3 Identifying Faulty or damaged equipment to repair/replace

LO-4. Determine the suitability of a chemical for use in a control program

- 4.1 planning Integrated Pest Management (IPM)
- 4.2 Selecting Chemicals included in the IPM
- 4.3 Applying alternatives to chemical treatments are according to IPM

LO-5. Ensuring the correct selection and application of the chemical

- 5.1. Identifying chemicals suitable for situation and risk control.
- 5.2.** Selecting Application equipment
- 5.3.** Implementing calibration of equipment
- 5.4.** Implementing Pre-operative checks and maintenance procedures
- 5.5. Assessing Meteorological conditions appropriate to during chemical application.
- 5.6. Chemical application is conducted safely in accordance with hazards associated with the chemicals concerned.

5.7. Dealing Chemical spills or accidents to procedures

LO-6. Ensure personnel are adequately trained in chemical use

6.1 Providing Training to who are handling or using chemicals

6.2 Organizing External training and assessment opportunities

LO-7 Implement recording systems for chemical storage and use

7.1 Records comply with legislation and regulations.

7.2 Recording Risk assessment and control strategies

7.3 Implementing clean up procedure.

LEARNING METHODS				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in Brail format ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

		<ul style="list-style-type: none"> Summarize main points 		
Demonstration	<ul style="list-style-type: none"> Conduct close follow up Use verbal description Provide special attention in the process of guidance facilitate the support of peer trainees Prepare & use simulation 	<ul style="list-style-type: none"> use Sign language interpreter Use video recorded material Ensure attention of the trainees Provide structured training Show clear and short method Use gesture Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Illustrate in clear & short method Use Video recorded material Ensure the attention of the trainees Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines Assign peer trainees to assist Conduct close follow up Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member Brief the thematic issues of the work 	<ul style="list-style-type: none"> Use sign language interpreters Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member 	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member Inform the group members to speak loudly 	<ul style="list-style-type: none"> Introduce the trainees with their peers

ASSESSMENT METHODS:

Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or confirm whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up

		assessment method <ul style="list-style-type: none"> • Time extension 	<ul style="list-style-type: none"> • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Time extension
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ASSESSMENT CRITERIA:

LO-1. Identify the requirements of chemical use

- ❖ Chemical use requirements relevant to the workplace are accessed and interpreted.
- ❖ Legalisation and safety procedures surrounding the use of chemicals are accessed and interpreted.
- ❖ Personal protective equipment is used and provided to others for transport, storage and application of chemicals.
- ❖ Industry standards for chemical use are identified.
- ❖ Appropriate insurance policy cover is confirmed or arranged.

LO-2. Monitor the implementation of safety requirements

- ❖ Implementation of safety practices and rules by others is monitored.
- ❖ Safety incidents are investigated and reported in accordance with **directions, standards** and legislative requirements.
- ❖ Safety **hazards** in the transport, storage and application of the chemicals are identified.
- ❖ **Risk control measures** to minimize risk involved in chemical use.
- ❖ Measures for controlling residue in the environment and produce are implemented

LO-3. Plan and implement a maintenance program for chemical use equipment

- ❖ Plan for maintenance of application and personal protective equipment is established according to manufacturer's instructions.
- ❖ Implementation of maintenance plan is supervised.
- ❖ Faulty or damaged equipment is identified and repaired or replaced.

LO-4. Determine the suitability of a chemical for use in a control program

- ❖ Integrated Pest Management (IPM) or Animal Health Strategy (AHS) is planned.
- ❖ Chemicals included in the IPM or AHS are selected according to situation.

- ❖ Alternatives to chemical treatments are considered and applied according to IPM or AHS

LO-5. Ensure the correct selection and application of the chemical

- ❖ Chemicals suitable for **situation** are identified, and procedures for preparation, application and **risk control** are read and interpreted.
- ❖ **Application equipment** is selected in accordance with procedures.
- ❖ Ensure calibration of equipment is implemented according to directions and standards.
- ❖ Pre-operative checks and maintenance procedures are implemented.
- ❖ **Meteorological conditions** are assessed as appropriate to application prior to and during chemical application.
- ❖ Chemical application is conducted safely in accordance with hazards associated with the chemicals concerned.
- ❖ Chemical spills or accidents are dealt with according to procedures

LO-6. Ensure personnel are adequately trained in chemical use


- ❖ Training is provided to personnel who are handling or using chemicals
- ❖ **External training and assessment** opportunities are organised for staff involved in using chemicals.

LO-7 Implement recording systems for chemical storage and use

- ❖ Records comply with legislation and regulations surrounding chemical use.
- ❖ Risk assessment and control strategies are recorded in accordance with requirements.
- ❖ Clean up procedures are implemented following chemical applications.

Resource requirements

<u>AGR CPM4 11 0921</u> Plan and Implement Chemical Use Program				
	Category/Item	Description/ Specifications	Qty.	Recommended Ratio (Item: Trainees)
A. Learning Materials				
1.	TTLM	Information Sheet, LAP TEST, Operation sheet	30	1:1
2	Text books		6	1:5
3	Manuals	Pictures and text type	30	1:1
B. Learning Facilities and Infrastructure				
1.	Lecture Room	5mx10m	1	1:30
2	Library	10mx15m	1	1:30
3.	laboratory	standard	1	1:30
4.	Demonstration field	Heactar	1	1:30
C. Consumable Materials				
1.	Paper	A4	1dusta	1:30
2.	boots,	Plastic	30	1:1
3.	overalls,	Polyesters	30	1:1
4.	chemical resistant gloves	Plastic	30	1:1
5.	Respirators	Plastic	30	1:1
6.	face shields	Plastic	30	1:1
7.	Hat	Plastic	30	1:1
D. Tools and Equipment				
1	hand held knapsacks	Standard	5	1:6
2	drench guns	Standard	5	1:6
3	Boomsprays	Standard	5	1:6
4	air blast sprayer	Standard	6	1:5
5	jetting race	Standard	6	1:5

LEARNING MODULE -12		
TVET PROGRAM TITLE	Crop Production and Marketing Management L-IV	
MODULE TITLE	Implementing Pest Management Action Plans	
MODULE CODE	<u>AGR CPM4 12 09 21</u>	
NOMINAL DURATION	30 HOURS	
MODULE DESCRIPTION	<p>This module covers the knowledge, skills and attitude of implementing of pest management action plans at the local level. It requires an ability to schedule activities, estimate resources required to complete the work, brief and assist in supervision of farmers, employees or contractors (where necessary), consult stakeholders, coordinate contingency management activities, and report progress in relation to the pest management action plan. Implementing pest management action plans at a local level requires knowledge of pest biology, vectors, plant survey, ecological systems and production systems.</p>	
LEARNING OUT COME		
At the end of the training the trainees will able to:		
LO-1 Schedule pest management activities		
LO-2. Estimate resources required to complete the required activities		
LO-3. Brief employees or contracted personnel regarding the pest management activities		
LO-4. Assist supervision of farmers, employees or contracted personnel		
LO-5 Coordinate contingency management activities		
LO-6 Report progress in relation to pest management action plan		
MODULE CONTENTS		
LO-1 Schedule pest management activities		

.LO -1 Schedule pest management activities

- 1.1. Identifying activities in the action plan and scheduling daily work plans.
- 1.2 Allocating Work time
- 1.3. Allocating employees with relevant skills and competency
- 1.4. Procuring Plant, machinery, equipment and materials
- 1.5. Consulting relevant stakeholders.
- 1.6. Applying relevant OHS standards
- 1.7. Aligning Milestones to critical control points
- 1.8. Determining measurable performance criteria
- 1.9. Proposing deadline activities.
- 1.10 Selecting and scheduling activities
- 1.11 . Selecting and scheduling monitoring and measurement activities

LO-2. Estimate resources required to complete the required activities

- 2.1 Estimating personnel.
- 2.2 Estimating plant and machinery.
- 2.3. Estimating .materials required
- 2.4 Sourcing and coasting personnel, plant, machinery and materials

LO-3. Brief employees or contracted personnel regarding the pest management activities

- 3.1. Informing employees of the pest management plan and action plan.
- 3.2. Informing employees or contracted personnel of land owner/manager expectations and reporting and recording requirements.
- 3.3. Advising employees or contracted personnel

LO-4. Assist supervision of farmers, employees or contracted personnel

- 4.1 Checking plant, machinery and equipment for serviceability
- 4.2. Checking materials.
- 4.3 Checking Personal protective equipment and clothing
- 4.4 Monitoring Procedures and skills applied by employees.
- 4.5 Providing feedback, advice and coaching

LO-5 Coordinate contingency management activities

5.1 Initiating and coordinating first aid procedures

5.2. Notifying and arranging relevant authorities.

5.3 Rescheduling activities.

LO-6. Report progress in relation to pest management action plan

6.1 .Receiving and assessing reports and records

6.2 Compiling and documenting reports and records

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was 	<ul style="list-style-type: none"> • Speak loudly • Using sign language 	<ul style="list-style-type: none"> • Use written response as an option for the

		<p>conducted with the trainee through the service of the sign language interpreter</p> <ul style="list-style-type: none"> • Use short and clear questioning • Time extension 	<p>interpreter if necessary</p>	<p>trainees having speech challenges</p>
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

ASSESSMENT CRITERIA:

LO-1 Schedule pest management activities

- Activities identified in the action plan are scheduled within the monthly, weekly or daily work plans.
- Work time is allocated to complete the activities in accordance with the requirements of the action plan, and within realistic expectations.
- Employees or contracted personnel with relevant skills and competency are allocated for the completion of required activities.
- Plant, machinery, equipment and materials required to complete required activities are procured for the time the activities are to be carried out.
- **Relevant stakeholders** are consulted regarding the scheduling of activities.
- Relevant OHS standards and other **Federal, State and local legislation & regulations** are applied in the allocation and procurement of human and physical resources.
- Milestones are aligned to critical control points in the target pests' life cycle, behavior patterns and the local land management and production activity cycles.
- Measurable performance criteria for objectives at each milestone are determined.
- Activities required to achieve objectives by proposed deadlines are listed in consultation with local land users.
- Activities are selected and scheduled to comply with the **pest management strategy**, in consideration of community attitudes, and in accordance with relevant statutory and regulatory requirements.
- Monitoring and measurement activities are selected and scheduled to comply with the vertebrate pest management strategy and in accordance with **relevant** statutory and **regulatory** requirements.

LO-2. Estimate resources required to complete the required activities

- Personnel required to carry out activities are estimated.
- Plant and machinery required to carry out activities are estimated.
- Materials required to carry out activities are estimated.
- Personnel, plant, machinery and materials are sourced and coasted in consultation with **other stakeholders**.

LO-3. Brief employees or contracted personnel regarding the pest management activities

- Employees or contracted personnel are informed of the requirements of the pest management plan and action plan.
- Employees or contracted personnel are informed of land owner/manager expectations and reporting and recording requirements.
- Employees or contracted personnel are advised of **OHS standards** and other statutory and regulatory requirements to be applied in carrying out the required activities.

LO-4. Assist supervision of farmers, employees or contracted personnel

- Plant, machinery and equipment are checked for serviceability in accordance with manufacturer's specifications and statutory and regulatory requirements.
- Materials are checked for compliance with OHS standards and other statutory and regulatory requirements.
- Personal protective equipment and clothing used or worn by employees or contracted personnel are checked for compliance with OHS standards and other statutory and regulatory requirements.
- Procedures and skills applied by employees and contracted personnel are monitored for compliance with OHS standards and other statutory and regulatory requirements.
- Feedback, advice and coaching are provided to employees and contracted personnel as required to improve or correct procedures and skills.

LO-5 Coordinate contingency management activities

- First aid procedures are initiated and coordinated in response to accident or injury to employees or contracted personnel.
- Relevant authorities are notified and arrangements made in the event of the need for rescue of injured employees or contracted personnel.

- Activities that are not carried out due to accidents, injury, other incidents or unfavourable conditions are rescheduled within the monthly, weekly or daily work plans

LO-6 Report progress in relation to pest management action plan

- Reports and records supplied by employees and/or contracted personnel are received and assessed.
- Reports and records are compiled and documented in accordance with employer or organizational requirements and statutory and regulatory requirements.

Resource requirements

AGR CPMM4 M12 09 21 Implementing Pest Management Action Plans				
Item No.	Category/Item	Description/ Specifications	Qty.	Recommended Ratio (Item: Trainees)
A. Learning Materials				
1.	TTLM	Information .sheet, LAP Test and Operational sheet	30	1:1
2.	Text books		5	1:6
B. Learning Facilities & Infrastructure				
1	Lecture Room	5mx6m	1	1:30
2	Library	10mxm15m	1	1:30
3	Laboratory	10mx15m	1	1:30
4	Demonstration field	heactar	1	1:30
D. Tools and Equipment				
1	Gloves	Made from fabric	30	1:1
2	Mask	Standard	25	1:30
3	Over-Coat	Fit to worker body	30	1:1
E Consumable Materials				
1.	Paper	A4	1dusta	1:30
2.	Ball pen			
3				

LEARNING MODULE 13		
TVET-PROGRAMME TITLE Crop Production And Marketing Management L-IV		
MODULE TITLE: Applying and Developing a soil health and Plant Nutrition Program		
MODULE CODE: <u>AGR CPM4 13 0921</u>		
NOMINAL DURATION: 30Hours		
MODULE DESCRIPTION: This module specifies the knowledge, skills and attitude required to assess soil and develop a soil health and plant nutrition program in the agricultural sector. Planning requires consideration of site factors, plant species requirements, soil and plant tissue analysis, soil ameliorants and nutrient application procedures, and monitoring Occupational Health and Safety (OHS) hazards and environmental impacts. It involves the application of knowledge including plant biology, plant nutrition requirements, and soil, water and other growing media properties		
LEARNING OUTCOMES		
At the end of the module the learner will be able to:		
LO1: Determine relevant site and soil characteristics		
LO2: Determine the requirements for plant production.		
LO3: Document the soil health and plant nutrition program and specifications		
LO4: Monitor production and evaluate the program.		
MODULE CONTENTS:		
LO1: Determine relevant site and soil characteristics		
1.1 Defining goals and target site for assessment and development of program		
1.2 Accessing and reviewing relevant climate data, environmental context		
1.3 Determining soil, plant and water tests		
1.4 Developing soil, plant and water tests program		
1.5 Implementing and monitoring testing tasks		
1.6 Compiling and presenting data and readings		
1.7 Determining seasonal variations and requirements		
1.8 Characteristics, condition and nutritional status of soils and plant species		
LO2: Define the requirements for plant production		

- 2.1 Identifying OHS hazards
- 2.2 Identifying different nutritional requirements of the plant
- 2.3 Developing program
- 2.4 Soil amendments, management practices and fertilizer requirements
- 2.5 Identifying and costing resources, tools, equipment and machinery
- 2.6 Cost-effective approach to soil management, soil amendment
- 2.7 Identifying Environmental implications of program

LO3: Document the soil health and plant nutrition program and specifications

- 3.1 Establishing detailed plan, objectives, specifications and associated costs
- 3.2 Developing and documenting detailed on-site procedures and schedules

LO4: Monitor production and evaluate the program.

- 4.1 Monitoring program implementation and results
- 4.2 Reviewing and refining Program
- 4.3 Identifying Non-compliance with documented objectives and specifications
- 4.4 Implementing remedial actions
- 4.5 Incorporating agreed changes

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

	❖ Summarize main points	format		
		<ul style="list-style-type: none"> Summarize main points 		
Demonstration	<ul style="list-style-type: none"> Conduct close follow up Use verbal description Provide special attention in the process of guidance facilitate the support of peer trainees Prepare & use simulation 	<ul style="list-style-type: none"> use Sign language interpreter Use video recorded material Ensure attention of the trainees Provide structured training Show clear and short method Use gesture provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Illustrate in clear & short method Use Video recorded material Ensure the attention of the trainees provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines Assign peer trainees to assist Conduct close follow up Provide tutorial support(if necessary)
Group discussion	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member Brief the thematic issues of the work 	<ul style="list-style-type: none"> Use sign language interpreters Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member 	<ul style="list-style-type: none"> Facilitate the integration of trainees with group members Conduct close follow up Introduce the trainees with other group member Inform the group members to speak loudly 	<ul style="list-style-type: none"> Introduce the trainees with their peers

ASSESSMENT METHODS				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment

ASSESSMENT CRITERIA:

LO-1. Determine relevant site characteristics

- Goals and target site for assessment and development of program are defined following a review of enterprise production plan and in consultation with landholder.
- Relevant climate data, environmental context information and site data are accessed and reviewed.
- Appropriate soil, plant and water tests are determined according to plant species, climatic conditions, prevailing growth media, industry best practice and enterprise guidelines.
- Soil, plant and water testing program is developed that defines sampling, field testing, off-site analysis activities, task responsibilities, involvement of contractors, scheduling and desired information outcomes.
- Testing tasks are implemented and monitored, liaison procedures with outside testing agencies are supervised, and remedial action is undertaken where necessary.
- Data and readings are compiled and presented in a form that can be easily understood.
- Seasonal variations and requirements are determined from published data on species, historical records, own experience, industry best practice and enterprise guidelines.
- Characteristics, condition and nutritional status of soils and **plant species** under production are determined by analyzing collected data and comparing to accepted standards.

LO-2. Determine the requirements for plant production

- Different nutritional requirements of the plant during growing cycle and a **range of conditions** are identified according to published data on species, historical records, own experience and enterprise guidelines.
- Program is developed to achieve appropriate soil conditions and nutrient availability for plant production according to enterprise production plan.
- **Soil amendments**, management practices and fertilizer requirements needed for production are determined.
- **Resources, tools, equipment and machinery** required for program are identified and costed, and availability is confirmed with suppliers, contractors and appropriate personnel.
- Cost-effective approach to soil management, soil amendment, and provision of plant nutrients is determined.
- **OHS hazards** associated with program are identified, risks are assessed and

controls are developed and documented.

- **Environmental implications** of program are identified and documented in plant nutrition program.

LO-3. Document the soil health and plant nutrition program and specifications

- Detailed plan, objectives, specifications and associated costs are established based on program requirements and are presented to land manager.
- Detailed on-site procedures and schedules required for program are developed and documented.

LO-4. Monitor production and evaluate the program.

- Program implementation and results are monitored by testing soil, plants and/or produce according to industry practice to ensure requirements of enterprise production plan are achieved.
- Program is reviewed and refined to ensure it is responsive to changing conditions.
- Non-compliance with documented objectives and specifications is identified and remedial actions are implemented to alleviate or overcome identified shortcomings in program.
- **Remedial action** to improve plant nutrition is taken documented and reported to land manager according to enterprise plan.
- Agreed changes are incorporated into a detailed plan

Resource Requirements

AGR CPM4 13 0921 Developing A Soil Health and Plant Nutritional Program				
No.	Category/Item	Description/ Specifications	Qty.	Recommended Ratio (Item: Trainees)
A. Learning Materials				
1.	TTLM	Information Sheet, LAP TEST ,Operation sheet	30	1:1
2.	Text books		5	1:6
B. Learning Facilities and Infrastructure				
1.	Lecture Room	5mx10m	1	1:30
2.	Library	15mX15 m	1	1:30
3.	laboratory	standard	1	1:30
4.	Demonstration field	hectare	1	1:30
C. Consumable Materials				
1	Paper	A4	1dusta	1:30
2	Chart paper	A1	1pkt	1:30
D. Tools and Equipment				
1	air blowers	standard	1	1:30
2	Pumps	standard	1	1:30
3	Seeders	standard	1	1:30
4	backhoe	standard	1	1:30
5	Tractors	three-point linkage spreaders	1	1:30
6	Rippers	standard	1	1:30
7	Backhoe	standard	1	1:30
8	electrical conductivity meter	standard	1	1:30
9	hand or powered auger	standard	2	1:15
10	PH meter	standard	1	1:30
11	aerial photographs	standard	1	1:30

LEARNING MODULE-14

**TVET-PROGRAMME TITLE:**

Crop Production and Marketing Management L-IV

MODULE TITLE:**Participating to develop a soil use map for a property****MODULE CODE :**

AGR CPMM 4 M14 09 21

NOMINAL DURATION:**34 HOURS****MODULE DESCRIPTION:**

This module covers the knowledge, skills and attitude of determining soil characteristics and participate in developing soil maps to illustrate the characteristics of a property in order to identify any areas of concern, and to assist in making decisions about plants/crops, irrigation and drainage. This is usually without supervision but with general guidance on progress. It requires knowledge of soil testing, environmental impact of irrigating and the ability to use soil and water testing techniques. The outcomes of this process will inform decisions relating to whole farm planning.

LEARNING OUTCOMES

At the end of this module the learner will be able to;

LO1. Collect information for soil mapping

LO2. Participate to analyse soil information

LO3. Participate to plot topography and soil survey data on property map

MODULE CONTENTS;

LO1. Collect information for soil mapping

1.1 Using soil testing agencies to Confirm soil samples

1.2 Collecting the physical characteristics of the soil

- 1.3 . Collecting the chemical characteristics of the soil
- 1.4 Collecting the biological characteristics of the soil
- 1.5 Determining soil parameters for specified plants
- 1.6 Collecting on cultural significance and habitats of biodiversity
- 1.7 keeping record procedures accordance with enterprise

Lo2. Participate to analyse soil information

- 2.1. Classification of soil
- 2.2. Establishing parameters for proposed land use and production.
- 2.3 Evaluating Soil Characteristics to Determine the Land Use Need
- 2.4 Determining Readily Available Water (RAW) values for irrigation sites

LO3. Participate to plot topography and soil survey data on property map

- 3.1 Establishing Format To Map Interpreted Results
- 3.2 Identifying Potential Uses of the Soil for Purposes of Land Classing Land Capability,
- 3.3 Defining Property boundaries and property features
- 3.4 Identifying Irrigation Area
- 3.5 Plotting Contour Or Spot Level Information
- 3.6 Plotting Soil Sampling Sites On Map
- 3.7 Describing Soil Profile and Irrigation Characteristics for Each Irrigation Area
- 3.8 Mapping The Readily Available Water (RAW) Values For Irrigation Sites
- 3.9 Describing Specific Areas are Plotted On The Map

LEARNING METHODS				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice ❖ Encourage trainees to record the lecture in audio format ❖ Provide Orientation on the physical feature of the work shop ❖ Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees <p>provide tutorial support</p> <ul style="list-style-type: none"> • (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the 	<ul style="list-style-type: none"> • Speak loudly • Using sign language 	<ul style="list-style-type: none"> • Use written response as an option for the

		<p>proper communication was conducted with the trainee through the service of the sign language interpreter</p> <ul style="list-style-type: none"> • Use short and clear questioning • Time extension 	<p>interpreter if necessary</p>	<p>trainees having speech challenges</p>
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

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ASSESSMENT CRITERIA:

LO-1. Collect information for soil mapping

- Confirm soil samples were collected for off-site assessment by soil testing agencies using recommended procedures.
- The information on the physical characteristics of the soil is collected.
- The information on the chemical characteristics of the soil is collected.
- The information about biological characteristics of the soil is collected.
- The acceptable soil parameters for specified plants are determined from published data and historical records.
- Information about areas of cultural significance and habitats of biodiversity on the property is collected.
- Research outcomes are collated in accordance with enterprise record keeping procedures.

LO-2. Participate to analyse soil information

- The soil types of the sample area are classified according to standards for soil classification.
- Collected results are compared with established parameters for actual or proposed land use and production
- Soil characteristics are evaluated to determine whether they can be altered to meet land use needs
- The Readily Available Water (RAW) values for irrigation sites are determined in line with industry standards.

LO-3. Participate to plot topography and soil survey data on property map

- Interpreted results are mapped in an established format according to enterprise guidelines.
- Potential uses of the soil for purposes of land classy land capability, areas of cultural significance and habitats of biodiversity are identified.
- Property boundaries and property features are defined
- Paddocks or irrigation areas are identified.
- Contour or spot level information is plotted.
- Soil sampling sites are plotted on map.
- Soil profile and irrigation characteristics for each sampling site and/or irrigation area are described and indexed to the map.

- The Readily Available water values for irrigation sites are indexed to the map.
- Areas of specific concern are plotted on the map and descriptions are indexed to the map.

Resource Requirements

AGR CPMM 4 M14 09 21 Participating to develop a soil use map for a property				
	CATEGORY/ITEM	DESCRIPTION/ SPECIFICATIONS	QTY.	Recommended Ratio (Item: trainees)
A.	Learning Materials			
1.	TTLM	Information Sheet LAP TEST, Operation sheet	30	1:1
2.	Text books		6	1:5
B.	Learning Facilities and Infrastructure			
1.	Lecture Room	5mx6m	1	1:30
2.	Library	5mx10m	1	1:30
3.	Demonstration site	hectare	1	1:30
4.	laboratory	10mx10m	1	1:30
C.	Consumable Materials			
	Paper	A4	1dusta	1:30
	Chart	standard	1	1:30
	Pens	Ball pen	5pcs	1:6
	Note pads	Medium size	5pcs	1:6
D.	Tools and Equipment			
	Hand auger	Scroll/cylinder	3	1:10
	PH testing	standard	2	1:15
	EC meter	standard	1	1:30
	Aerial Photographs	standard	5	1:6
	Sample Bags	nylon	5	1:6
	Tape Measure	plastic	2	1:15
	Plastic kit	plastic	5	1:6
	Table	wood	3	1:10

LEARNING MODULE 15



**TVET-PROGRAMME TITLE: Crop Production and Marketing Management
Level IV**

**MODULE TITLE: Performing field surveillance for a specific emergency plant
disease**

MODULE CODE: AGR CPM4 15 09 21

NOMINAL DURATION: 32 hours

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to carry out field surveillance for a specific emergency disease or plant pest must be transferable to a range of work environments and contexts, including the ability to deal with unplanned events. For example, this could include work with outbreaks of different emergency diseases or plant pest incursions and with possibly unfamiliar species. Field surveillance teams work under instructions from the control centre.

LEARNING OUTCOMES

At the end of the module the learner will be able to:

LO1. Look for signs or symptoms

LO2. Organize and respond to an emergency disease or plant pest

MODULE CONTENTS:

LO1.Look for signs or symptoms

- 1.1 Receiving and confirming work instructions from surveillance coordinator.
- 1.2 Identifying Signs or symptoms for emergency disease or plant pest
- 1.3 Accessing expertise assist in diagnosis
- 1.4 Collecting, handling, packaging and dispatching diagnostic samples

LO2. Organize and respond to an emergency disease or plant pest.

- 2.1 Alerting signs of an emergency disease or plant pest
- 2.2 Taking appropriate measures
- 2.3 Collecting and reporting disease or plant pest outbreak
- 2.4 Giving directions and warnings Property owners/persons
- 2.5 Conducting Personal decontamination and decontamination of equipment

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in Brail format ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

		points		
Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers

Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	

ASSESSMENT CRITERIA

LO1. Look for signs or symptoms

- Work instructions from surveillance coordinator or other appropriate authority are received and confirmed.
- Signs or symptoms of an emergency disease or plant pest are identified, appropriate samples for testing collected, and evidence gathered to support a diagnosis according to relevant standards and protocols.
- Available expertise is accessed to assist in diagnosis, as appropriate.
- Diagnostic samples are collected, handled, packaged and dispatched according to relevant standards and protocols.

LO2 Organize and respond to an emergency disease or plant pest


- Where signs of an emergency disease or plant pest are found, surveillance coordinator is alerted.
- Appropriate measures are taken to immediately contain emergency disease or plant pest according to instructions from control center and relevant guidelines.
- Information relevant to management of emergency disease or plant pest outbreak is collected and reported to surveillance coordinator.
- Property owners/persons in charge are given directions and warnings about suspected emergency disease or plant pest.
- Personal decontamination and, where appropriate, decontamination of equipment and vehicles, are conducted according to relevant standards and protocols for emergency disease or plant pest.

Annex: Resource Requirements

AGR CPM4 15 0921 Perform Field Surveillance for a Specific Emergency Plant Disease					
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)	Requirements (e.g. Maintenance)
A. Learning Materials					
1.	TTLM	Prepared by trainer	30	1:1	Revised
		Applied Farm Management.	6	1:5	
		Elements of crop production, Practical Manual	6	1:5	
		Crop Production. Practical Manual.	6	1:5	
		EOS for AGR HCP	1	1:30	
		Modern Weed Management	6	1:5	
		Vegetable production in Tropics.	6	1:5	
		Weed Management	6	1:5	
		Weed identification guide Book (Colored)	6	1:5	
B Learning Facilities and Infrastructure					
1	Demonstration farm	hectare	1	100 m ² :1	Permanent
2	Laboratory	5 x 8 m	1	1:30	Fully equipped
3	Class rooms	5 x 8 m	1	1:30	Fully equipped
4	Agricultural Factories				
5	Library	5 x 8 m	1	1:30	Resent reference books
6	Internet	On 25 computer	1	1:1	
7	Students Dormitory				
8	Students dining room				
9	Vehicles	Costar	1	1:30	
C. Consumable Materials					
1	Duplication paper	Desta	10	10:30	
2	Printing paper	Desta	10	10:30	
3	Photocopy paper	Desta	10	10:30	

4	Pen	Ball point Bic	60	2:1	
5	Pencil	BH	30	1:1	
6	Stencil	Ambassador	2	2:1	
7	CD RW		60	2:1	
8	CD R		60	2:1	
9	Toner	4250	2	2:30	
10	Stencil ink	Pkts	2	2:30	
11	Marker	(art-line 90)	60	2:1	
12	Graph paper	Roll	10	10:30	
13	Philip char paper	Roll	1	1:30	
14	Scotch tape	Pcs	10	10:30	
15	UHU		30	1:1	
16	Fastener	Pkts	1	1:30	
17	Small stapler	Pcs	6	1:5	
18	Large Stapler	Pcs	6	1:5	
19	Medium Stapler	Pcs	6	1:5	
20	Paper basket	Pcs	2	2:30	
21	Paper tray	Pcs	6	1:5	
22	Staple remover	Pcs	6	1:5	
23	Spills	pkts	10	10:30	
24	Classer	pcs	120	5:1	
25	File Box	With ring	30	1:1	
26	File Box	With string	30	1:1	
27	Bag	Brief case	1	1:30	
28	Calculator	Scientific	30	1:1	
29	Ruler	Plastic (30, 50, 100 cm)	30	1:1	
30	T-Square		30	1:1	
31	Writing pad	Small	30	1:1	
32	Writing pad	Medium	30	1:1	
33	Writing pad	Large	30	1:1	
D	Tools and Equipment				
1	LCD Projector	PCS	1	1:30	Maintenance
2	Computer	Desk Top Flat screen, 17" DELL	30	1:1	Maintenance
3	Computer	Lab top (Toshiba)	1	1:30	Maintenance
4	Camera	Digital	1	1:30	Maintenance
5	Video Camera	Digital	1	1:30	Maintenance
6	Photocopier	Hp laser Jet	1	1:30	Maintenance
7	Printer Color	Hp laser Jet	1	1:30	Maintenance
8	Printer Normal	Hp laser Jet	1	1:30	Maintenance
9	Scanner	Hp	1	1:30	Maintenance
10	Seeds	Different types	10 kg	10:30	
11	Fertilizers	Organic and NPK/NPS	120 kg	4:1	

12	Chemicals	Different (liters)	6	1:5	
13	Sickles	Pcs	30	1:1	Maintenance
14	Rake	Pcs	30	1:1	Maintenance
15	Spade	Pcs	30	1:1	Maintenance
16	Shovel	Pcs	30	1:1	Maintenance
17	Machete	Pcs	30	1:1	Maintenance
18	Mattock/pick axe	Pcs	30	1:1	Maintenance
19	Hoe (small)	Pcs	30	1:1	Maintenance
20	Hoe (large)	Pcs	30	1:1	Maintenance
21	Forked hoe	Pcs	30	1:1	Maintenance
22	Watering can	Pcs	30	1:1	Maintenance
23	Rope	(in meter-string or plastic)	6000 m	200:1	
24	Measuring tape	50 and 100 m	30	1:1	
25	Wheel barrow	Pcs	30	1:1	
26	Sacks	(50 and 100 kg capacity)	120	4:1	
27	Graduated cylinder	50 and 100 ml	30	1:1	
28	Pegs	1m length	3000	100:1	
29	Soil laboratory kit	Set			
30	Soil organic matter	Well decomposed (truck)	1		
31	microscopy	Pcs	5	5:30	
32	Beam balance	Pcs			
33	spoons	Pcs	30	1:1	
34	Fore-ceps	Pcs	30	1:1	
35	Thatch grass	Bundles	10	10:30	
36	Play-wood	M ²	6	1:5	
37	Weed presser		30	1:1	
38	Eye goggle		30	1:1	
39	Respirator		30	1:1	
40	Hand glove		30 pairs	1:1	
41	Herbarium box		6	1:5	
42	Over all		30	1:1	
43	Boots		30 pairs	1:1	

LEARNING MODULE- 16		
TVET PROGRAM TITLE	Crop Production and Marketing Management L-IV	
MODULE TITLE	Inspecting and supervising agricultural crop harvest	
MODULE CODE:	<u>AGR CPM4 16 09 21</u>	
NOMINAL DURATION	32 HOURS	
MODULE DESCRIPTION	The module covers the knowledge, skills and attitude involved in inspecting & supervising agricultural crop harvesting operations. It requires the application of skills and knowledge to estimate crop yield, assess risk and negotiate appropriate insurance, and schedule labour and equipment resources. It also requires an awareness of workplace safety, environmental protection associated with harvesting operations. The work is likely to be carried out under broad supervision within enterprise guidelines	
LEARNING OUT COME		
At the end of the training the trainees will able to:		
<p>LO-1 Prepare for harvesting</p> <p>LO-2 Determine harvest strategy</p> <p>LO-3 Co-ordinate the harvest strategy</p> <p>LO-4 Complete harvest operations</p>		
MODULE CONTENTS		
<p>LO-1 Prepare for harvesting</p> <p> 1.1 Assessing Crop maturity and quality.</p> <p> 1.2 Determining and carrying out Pre-harvest treatments</p> <p> 1.3 Identifying and compiling Requirements for licenses or permits .</p> <p> 1.4 Assessing, planning and implementing Insurance requirements</p> <p>LO-2 Determine harvest strategy</p> <p> 2.1 Estimating and calculating Optimum timing</p> <p> 2.2. Assessing and estimating resource requirements giving consideration</p> <p> 2.3. Confirming and arranging labour and equipment</p>		

2.4 Identifying and arranging requirements.

LO-3 Co-ordinate the harvest strategy

3.1 Implementing effective communication strategies

3.2 Implementing and adjusting harvesting operations

3.3 Coordinating and monitoring equipment operation

3.4 Identifying and controlling existing potential **hazards**

LO-4 Complete harvest operations

4.1 Locating Storage resources for efficient operations and identifying strategies

4.2 Segregating quality of grain.

4.3 Evaluating harvesting operations.

4.4 Documenting relevant information

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in Brail format ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having

		<p>conducted with the trainee through the service of the sign language interpreter</p> <ul style="list-style-type: none"> • Use short and clear questioning • Time extension 	necessary	speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

			<ul style="list-style-type: none">• Time extension	
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ASSESSMENT CRITERIA:

LO-1 Prepare for harvesting

- Crop maturity and quality is assessed in readiness for harvesting.
- Pre-harvest treatments for the control and eradication of pests are determined and carried out according to OHS requirements.
- Requirements for licenses or permits are identified and complied with.
- Insurance requirements are assessed and risk management strategies planned and implemented as required.

LO-2 Determine harvest strategy

- Optimum timing to carry out harvest is estimated and calculated according to crop maturity assessment.
- Resource requirements are assessed giving consideration to the size of the crop and estimated timing of harvest.
- Labour and equipment required to carry out harvesting operations is confirmed and arranged within budgetary constraints.
- Requirements for fire prevention and control are identified and arranged according to OHS requirements.

LO-3 Co-ordinate the harvest strategy

- Effective communication strategies are implemented to ensure smooth workflow operations and personnel safety.
- Harvesting operations are implemented and adjusted as required according to weather, equipment and staff requirements.
- Equipment operation is coordinated for maximum efficiency and monitored for performance effectiveness.
- Existing and potential **hazards** are identified and controlled according to OHS and **enterprise requirements**.

LO-4 Complete harvest operations

- **Storage resources** are located for efficient operations and strategies for drying grain are identified, if necessary according to marketing initiatives.
- Quality of grain is segregated to marketing grades and monitored for moisture content according to classification standards.
- Harvesting operations and outcomes are evaluated against harvest strategy.
- Relevant information is documented for continual analysis and effective planning management.

Annex: Resource Requirements

<u>AGR CPM4 16 09 21</u> Supervising Agricultural Crop Harvesting				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A. Learning Materials				
1.	TTLM	Information .sheet, LAP Test and Operational sheet	30	1:1
3.			5	1 : 5
B. Learning Facilities & Infrastructure				
2	Lecture Room	Area-15*15m ²	1	1:30
3	Library	Area- 5*5m ²	1	1:30
4	Work shop	Area-5*5m ²	1	1:30
5		Area-5*5m ²	1	1:30
6.	Laboratory manuals	Prepared by trainers	6	1:5
D. Tools and Equipments				
1	Trucks	With gauge of 8	1	1:30
2	Trailers			
3	Tractors			
4	Field bins			
5	Ware house	complete with installed aeration	1	1:30
6	probe			
7	grain sieves			
8	spear			
E Consumable Materials				
1.	Stationary items	A4 Paper	1dusta	1:30
3.	Mask	Standard	25	1:1
4	Over-coat	Fit to worker body	25	1:1

LEARNING MODULE 17



TVET-PROGRAMME TITLE: Crop Production and Marketing Management Level IV

MODULE TITLE: Maintaining Grain Quality in Storage

MODULE CODE: AGR CPM4 M17 09 21

NOMINAL DURATION: 30 Hours

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude of assessing and maintaining hygiene in grain storage areas, as well as monitoring the grain for deterioration or pests and contaminants. It includes implementing pre-determined integrated pest management strategies, and investigating and recommending options for technology, systems or practices that will improve grain and seed quality. Maintaining the quality of grain in storage is likely to be undertaken without supervision, with only general guidance on progress sought from others. It requires skills in sampling grain and working safely in a potentially hazardous environment, as well as in calculating volumes, mass and quantities.

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO1. Maintain hygiene in storage areas
- LO2. Monitor grain from arrival to dispatch
- LO3. Monitor and maintain grain condition in storage
- LO4. Control pests in storage area

MODULE CONTENTS:

LO1. Maintain hygiene in storage areas

- 1.1. Testing *grain* storage conditions
- 1.2. Identifying the need for *grain* storage repairs and maintenance
- 1.3. Applying treatments for grain storage facilities
- 1.4. Recording grain storage application treatments

LO2. Identifying the need for *grain* storage repairs and maintenance

- 2.1. Taking *grain* samples for testing
- 2.2. Taking *grain* samples for purity testing
- 2.3. Checking grain quality for dispatch

- 2.4. Taking , preparing and forwarding samples for analysis
- 2.5. Creating *records* of grain movements in and out of storage
- 2.6. Making recommendations adopt new technology, systems or practice
- 2.7. Undertaking activities for grain storage facilities

LO3. Applying *treatments* for grain storage facilities

- 3.1. Conducting regular checks of grain in storage
- 3.2. Conducting periodical checks of grain in long-term storage
- 3.3. Taking samples of the grain
- 3.4. Taking , preparing , and forwarding samples
- 3.5. Creating, maintaining and keeping records of grain tests and inspections
- 3.6. Monitoring the *condition of storage facilities*
- 3.7. Taking corrective action for grain storage facilities
- 3.8. Undertaking activities around the grain storage facilities

LO4. Control pests in storage area

- 4.1. Monitoring grain
- 4.2. Taking samples of the grain test.
- 4.3. Preparing and forwarding the sample for analysis.
- 4.4. Controlling pests in storage
- 4.5. Fumigating enclosed grain storage area
- 4.6. Identifying sources grain storage infestations
- 4.7. Undertaking grain storage pest control activities
- 4.8. Creating, maintaining and keeping records

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text ❖ Make sure the luminosity of the light of class room is kept ❖ Use normal tone of voice 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on

	<ul style="list-style-type: none"> ❖ Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<p>attention of the trainees</p> <ul style="list-style-type: none"> • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<p>format</p> <ul style="list-style-type: none"> • Ensure the attention of the trainees 	<p>their upper limbs to take note</p> <ul style="list-style-type: none"> • Provide Orientation on the physical feature of the work shop
Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist

		<ul style="list-style-type: none"> • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Conduct close follow up • provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if 	<ul style="list-style-type: none"> • Conduct close follow up and guidance 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional

	<p>necessary</p> <ul style="list-style-type: none"> • provide special attention in the process 	<p>necessary</p> <ul style="list-style-type: none"> • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<p>nominal hours if necessary</p>
<p>Individual assignment</p>	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	

ASSESSMENT METHODS:				
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or confirm whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having severe

				upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> Brief the instruction or provide them in large text/Brail Time extension 	<ul style="list-style-type: none"> Use sign language interpreter Brief on the instruction of the exam Provide activity-based/ practical assessment method Time extension 	<ul style="list-style-type: none"> Provide activity based assessment Brief on the instruction of the exam Use loud voice Time extension 	<ul style="list-style-type: none"> Provide activity based assessment Conduct close follow up Time extension

ASSESSMENT CRITERIA:

LO-1 Maintain hygiene in storage areas

- Storage conditions and facilities are regularly tested to maintain the standard of hygiene in stored grain.
- The need for repairs and maintenance is identified, and either carried out or a report of the need is made.
- Treatments are applied to storage facilities to maintain hygiene standards and in line with the grain storage program.
- The application of all treatments used is accurately recorded in line with the grain storage program.

LO-2 Monitor grain from arrival to dispatch

- Before the grain is stored, samples are taken for testing to ensure a complete record of the quality of the grain.
- Samples of the grain are taken regularly for testing to ensure purity standards in the grain.
- At dispatch, the grain is checked for quality and against the records taken at the point of storage.
- Test samples are taken, prepared and forwarded for analysis according to prescribed guidelines.
- Clear and accurate records of grain movements in and out of storage are created, maintained and kept as prescribed in the grain storage program.
- Recommendations are made to adopt new technology, systems or practices that will improve or maintain grain quality in storage.
- All activities around the grain storage facilities are undertaken according to the OHS guidelines detailed in the grain storage program

LO-3 Monitor and maintain grain condition in storage

- Regular checks of grain in storage are conducted to maintain continued freedom from contaminants and deterioration.

- Periodical checks of grain in long-term storage are conducted for quality factors and viability according to enterprise requirements.
- Where necessary, samples of the grain are taken for testing in a laboratory setting.
- Where test samples are required, they are taken, prepared, and forwarded for analysis according to industry quality assurance and laboratory requirements.
- Clear and accurate records of grain tests and inspections are created, maintained and kept as described in the grain storage program.
- The condition of storage facilities is monitored using the schedule and methods outlined in the grain storage program.
- Where it is required, appropriate corrective action is taken to maintain grain quality.
- All activities around the grain storage facilities are undertaken according to the OHS guidelines detailed in the grain storage program.

LO-4 Control weeds and pests in storage area

- Grain is monitored according to the monitoring points, targets and methods outlined in the grain storage program.
- Samples of the grain are appropriately taken to test for pest infestation.
- Where it is required, the sample is prepared and forwarded for analysis according to the prescribed guidelines.
- Pests in storage are controlled according to the guidelines in the grain storage program.
- Enclosed grain storage area is fumigated, and the surrounding environment is kept clean according to the integrated pest management strategy in the grain storage program.
- The sources of any infestations are identified and steps are taken to control them in line with the integrated pest management strategy in the grain storage program.
- All pest control activities are undertaken in line with the OHS guidelines detailed in the grain storage program.

- Clear and accurate records of treatments to the grain and storage facilities are created, maintained and kept as described in the grain storage program.
- Clear and accurate records of all chemical use in the storage facility, and the applicable withholding periods are created, maintained and kept as described in the grain storage program.

Resource Requirements

AGR CPMM4 M1709 21 Maintaining Grain Quality in Storage				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Information Sheet, LAP TEST Operation sheet	5	1:5
	TEXT BOOKS	To be prepared by trainers	5	1:5
B. Learning Facilities and Infrastructure				
1.	Lecture Room	5MX6M	1	1:30
2.	Library	15MX15M	1	1:30
3.	Laboratory	Area-5*5 m ²	1	1:30
C. Consumable Materials				
2.	Paper	A4	1dusta	1:30
3.	Recording book			
4.				
5.				
6.	Glove/apron	Made from fabric	25	1:1
D. Tools and Equipments				
1	Ware house	Standard	1	1:30
2	grain sieves	Standard	1	1:30
3	probe	Standard	2	1:15
4	spear			

LEARNING MODULE-18

TVET-PROGRAMME TITLE:	Crop Production and Marketing Management L-IV
MODULE TITLE	Interpreting and documenting crop Production data
MODULE CODE	AGR CPMM4 M18 09 21
NOMINAL DURATION	40hours
MODULE DESCRIPTION:	This module covers the knowledge, skills and attitude of analysing, interpreting and documenting data for crop and horticultural production. It requires the ability to collect and organize production data, analyse, interpret and present data. Analysing and interpreting data for production requires knowledge of the relevant legislation, industry and enterprise codes of practice, enterprise record keeping and recording practices, methods to collect and analyse production data, business equipment and principles of report writing and data presentation.
LEARNING OUTCOMES	
At the end of the module the learner will be able to:	
LO-1. Collect and organize production data	
LO-2. Analyse, interpret and document data	
LO-3. Present data	
Module contents	
LO-1. Collect and organize production data	
1.1 Collecting and organizing information in a format	
1.2. Assessing information	
1.3 Making Methods of data analysis	
1.4 Using Business equipment to access, organize and monitor data	
1.5 Updating, modifying, maintaining and storing information	

LO-2. Analyze and interpret data

- 2.1. Defining objectives of analysis and requirements.
- 2.2. Making methods of **data analysis** reliable and suitable
- 2.3. Making assumptions used in analyses clear, justified and consistent
- 2.4. Supporting and contributing conclusions
- 2.5. Documenting processed data

LO-3. Present data

- 3.1 Preparing data in an appropriate format, style and structure
- 3.2. Clearing and conforming Structure and format of reports
- 3.3. Reporting and distributing findings
- 3.4 Obtaining feedback and comments

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in <u>Brail format</u> ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text <ul style="list-style-type: none"> • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact <ul style="list-style-type: none"> • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences <ul style="list-style-type: none"> • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up <ul style="list-style-type: none"> • Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
	•	•	•	•

ASSESSMENT METHODS:			
Interview		<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if necessary • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary.
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice

		<ul style="list-style-type: none"> • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Time extension
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Resource Requirements

AGR CPMM4 M18 09 21 Interpret and Document Crop Production Data				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Information Sheet ,LAP TEST, Operation sheet	30	1:1
B. Learning Facilities and Infrastructure				
1.	Lecture Room[working area]	Area- 5*5m ²	1	1:25
2.	Library	Area- 15X15 m ²	1	1:25
3.	Laboratory	Area- 5*5 m ²	1	1:25
C. Consumable Materials				
1.	Paper	A4	5rim	1:5
2.				
3.				
D. Tools and Equipment				

LEARNING MODULE- 19**TVET-PROGRAMME TITLE: Crop Production and Marketing Management Level IV****MODULE TITLE: Coordinating crop product marketing****MODULE CODE: AGR CPM4 19 09 21****NOMINAL DURATION: 34 Hours**

MODULE DESCRIPTION: This module covers the knowledge, skills and attitude required to coordinate crop products marketing and services in an agricultural sector. It requires the application of skills and knowledge to plan and implement a marketing strategy, and monitor and improve market performance. It also requires the ability to collect, analyse and present data in the internal and external business environment. In addition, it requires an awareness of industry structures and business trends. The work will be carried out independently within own area of responsibility and within enterprise guidelines.

LEARNING OUTCOMES

At the end of the module, the trainee / learner will be able to:

- LO1.** Analyse market information
- LO 2. Identify marketing requirements
- LO 3. Develop a marketing plan
- LO 4. Implement marketing activities
- LO5. Evaluate marketing performance

MODULE CONTENTS:**LO1: Analyse market information**

- 1.1. Researching and analysing relevant information.
- 1.2. Presenting collected information
- 1.3. Analysing past trends and developments
- 1.4. Conducting market and situation analysis.
- 1.5. Identifying, researching and analysing markets
- 1.6. Identifying and evaluating competing products

- 1.7. Continual monitoring market environment.
- 1.8. Identifying the legal, ethical and environmental constraints

LO2: Identify marketing requirements

- 2.1. Creating promotional materials
- 2.2. Recording and communicating priorities, responsibilities, timelines and budgets.
- 2.3. Evaluating proximity of the market area.

LO3: Develop a marketing plan

- 3.1. Assessing and interpreting alternative marketing strategies and techniques
- 3.2. Assessing marketing strategies, market environment and substantiated trends.
- 3.3. Incorporating suitable advice.
- 3.4. Developing a measurable cost-effective marketing plan.
- 3.5. Preparing and recording detailed plans for promotional activities
- 3.6. Outlining promotional plan
- 3.7. Taking into account strategies of feedback.
- 3.8. Establishing marketing objectives

LO4 Implement marketing activities

- 4.1. Scheduling planned marketing activities.
- 4.2. Establishing criteria to promotional activities.
- 4.3. Developing and meeting measurable performance targets
- 4.4. Defining and establishing required distribution channels
- 4.5. Organizing distribution channels, and product and service information.
- 4.6. Making adjustments to the promotional strategy product distribution
- 4.7. Implementing marketing activities

LO5. Evaluate marketing performance

- 5.1. Monitoring Product, pricing and distribution policies
- 5.2. Identifying and taking corrective action
- 5.3. Making an objective assessment of the marketing plan and implementation
- 5.4. Documenting relevant information

LEARNING METHODS:			
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)		
	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> Assign sign language interpreter Arrange the class room seating to be conducive for eye to eye contact Make sure the luminosity of the light of class room is kept Introduce new and relevant vocabularies Use short and clear sentences Give emphasis on visual lecture and ensure the attention of the trainees Avoid movement during lecture time Present the lecture in video format Summarize main points 	<ul style="list-style-type: none"> Organize the class room seating arrangement to be accessible to trainees Speak loudly Ensure the attention of the trainees Present the lecture in video format Ensure the attention of the trainees 	<ul style="list-style-type: none"> Organize the class room seating arrangement to be accessible for wheelchairs users. Facilitate and support the trainees who have severe impairments on their upper limbs to take note Provide Orientation on the physical feature of the work shop
Demonstration	<ul style="list-style-type: none"> use Sign language interpreter Use video recorded material Ensure attention of the trainees Provide structured training Show clear and short method Use gesture Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Illustrate in clear & short method Use Video recorded material Ensure the attention of the trainees Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> Facilitate and support the trainees having severe upper limbs impairment to operate equipment/ machines Assign peer trainees to assist Conduct close follow up Provide tutorial support (if necessary)

Group discussion	<ul style="list-style-type: none"> ❖ Use sign language interpreters ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ 	<ul style="list-style-type: none"> ❖ Facilitate the integration of trainees with group members ❖ Conduct close follow up ❖ Introduce the trainees with other group member ❖ Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers
Exercise	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training ❖ Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> ❖ Conduct close follow up and guidance ❖ Provide tutorial support if necessary ❖ provide special attention in the process/practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Provide briefing /orientation on the assignment ❖ Provide visual recorded material 	<ul style="list-style-type: none"> • Provide briefing /orientation on the assignment • Provide visual recorded material 	

ASSESSMENT METHODS:

Interview	<ul style="list-style-type: none"> ❖ Use sign language interpreter • Ensure or conform whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers • Avoid essay writing • Time extension 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers if necessary. 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb impairment • Time extension for trainees having

			severe upper limb impairment
Demonstration/ Observation	<ul style="list-style-type: none"> ❖ Use sign language interpreter ❖ Brief on the instruction of the exam ❖ Provide activity-based/ practical assessment method ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Brief on the instruction of the exam ❖ Use loud voice ❖ Time extension 	<ul style="list-style-type: none"> ❖ Provide activity based assessment ❖ Conduct close follow up ❖ Time extension ❖

ASSESSMENT CRITERIA:

LO1. Analyse market information

- Relevant information is researched and analysed to identify market trends.
- Collected information is presented in a manner which provides clear and concise information.
- Past trends and developments are analysed to determine market variability and associated risks.
- Market and situation analysis is conducted using established techniques in accordance with available budget and the need for external assistance.
- Markets for existing or new products or services are identified, researched and analysed for possible entry or development.
- Competing products are identified and evaluated to determine strengths and weaknesses of own products
- Market environment is continually monitored in a consistent manner to ensure information is current and reliable.
- The legal, ethical and environmental constraints of the market(s) and their effect on the enterprise are identified.

LO 2. Identify marketing requirements

- Promotional materials are created that enhance the product and commercial presentation.
- Priorities, responsibilities, timelines and budgets are recorded and communicated to appropriate colleagues.
- Proximity of the market area is evaluated

LO3. Develop a marketing plan

- Alternative marketing strategies and techniques are assessed and interpreted to identify marketing targets and methods.
- Marketing strategies are assessed based on reliable data, market environment and substantiated trends
- Marketing options have incorporated suitable advice from marketing professionals.
- A measurable cost-effective marketing plan is developed by incorporating a reasoned analysis of market research and business plan objectives.
- Detailed plans for promotional activities are prepared and recorded according to enterprise guidelines.
- Promotional plan are outlined based on objectives, level of exposure to be achieved and available markets.
- Strategies have taken in to account of feedback from operational staff, time

- management and scheduling issues, and resource constraints.
- Marketing objectives are established based on new and retained business consistent with product and operational business plans.

LO4. Implement marketing activities

- Planned marketing activities are scheduled within appropriate timeframes.
- Criteria are established to measure impact and success of promotional activities.
- Measurable performance targets are developed and met business plan objectives.
- Required distribution channels are defined and established
- Distribution channels are organized, and product and service information are developed and readily available to clients.
- Adjustments to the promotional strategy product distribution are made promptly to ensure consistency of promotion.
- Marketing activities are implemented within budgetary constraints to meet legal, ethical and enterprise requirements

LO5. Evaluate marketing performance

- Product, pricing and distribution policies are monitored in relation to market changes, marketing objectives and enterprise requirements.
- Areas of positive performance are identified and corrective action is taken to remedy poor performance areas.
- An objective assessment of the marketing plan and implementation is made by a comparison of valid and reliable data against performance targets.
- Relevant information is documented for continual analysis and effective planning management.

Annex: Resource Requirements

AGR CPMM4 M19 09 21 Coordinating Crop Product Marketing				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A. Learning Materials				
1.	TTLM	Containing: infor. Sheet, LAP Test and oper.sheet	5	1:5
2.	Reference books	Chemical technology in the pre-treatment processes of textiles, S.R.KARMAKAR	5	1:5
3.	Manuals	To be prepared by the Trainer, MoE,	5	1 : 5
B. Learning Facilities & Infrastructure				
1.	Library	Area-15*15m ²	1	1:25
2.	Lecture Room	Area-5*5m ²	1	1:25
3.	Work shop	Area-5*5m ²	1	1:25
4.	Store	Area-5*5m ²	1	1:25
5.	Laboratory manuals	To be prepared by trainers	1	1:25
D. Tools and Equipment				
1	Batch pretreatment machine	Standard	1	1:25
2	semi-continuous machine	Standard	1	1:25
E Consumable Materials				
1.	Stationary items	A4 Paper	1dusta	1:25
3.	Mask	Standard	25pcs	1:1
4	over-coat	Fit to worker body	25	1:1

LEARNING MODULE 20



TVET-PROGRAMME TITLE: Crop Production and Marketing Management
Level IV

MODULE TITLE: Applying problem solving techniques and tools

MODULE CODE: AGR HCP4 M20 19 21

NOMINAL DURATION : 40hours

MODULE DESCRIPTION : This module covers the knowledge, skills and attitude required to apply scientific problem solving techniques and tools to enhance quality, productivity and other kaizen element on continual basis.

LEARNING OUTCOMES

At the end of the module the learner will be able to:

- LO1.**Identify and select theme/problem
- LO2.**Grasp current status and set goal
- LO3.**Establish activity plan
- LO4.** Analyze causes of a problem
- LO5.**Examine countermeasures and their implementation
- LO6.**Assess effectiveness of the solution
- LO7.**Standardize and sustain operation

MODULE CONTENTS:

LO1. Identify and select theme/problem

- 1.1. Following safety requirements
- 1.2. Listing all possible problems
- 1.3. Identifying and listing all possible problems
- 1.4. Classifying problems on obviousness of cause and action
- 1.5. Selecting critical factors
- 1.6. Giving and selecting emphasis on problems related kaizen elements

LO2. Grasp current status and set goal

- 2.1. Defining extent of problem

2.2. Setting appropriate and achievable goal

LO3.Establish activity plan

3.1 . Confirming problems

3.2. Selecting high priority problem

3.3. Defining extent of problems

3.4. Establishing activity plan per 5W1H

LO4. Analyze causes of a problem

4.1 . Listing all possible causes of problem

4.2. Analyzing cause relationships using4M1E

4.3. Identifying causes of the problems

4.4. Selecting root causes

4.5.Selecting the root cause most directly related to the problem

4.6. Listing all possible ways using creative idea generation

4.7. Testing and evaluating suggested solutions

4.8. Preparing detail summaries of the action

LO5.Examine countermeasures and their implementation

5.1 . Implementing action plan

5.2. Monitoring Implementation and checking activities

LO6.Assess effectiveness of the solution

6.1 . Identifying tangible and intangible results

6.2. Verifying results over time

6.3. Comparing tangible results

LO7.Standardize and sustain operation

7.1. Standardizing and making achievable goal

7.2. Training all employees on new Standard Operating Procedures (SOPs)

7.3. Verifying and following SOP

7.4. Selecting next problem

LEARNING METHODS:				
For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture discussion	<ul style="list-style-type: none"> ❖ Provide large print text ❖ Prepare the lecture in Audio/video & in Brail format ❖ Organize the class room seating arrangement to be accessible to trainees ❖ Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the attention of the trainees • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format • Ensure the attention of the trainees 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take note • Provide Orientation on the physical feature of the work shop

Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of the trainees • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> •Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer trainees to assist • Conduct close follow up • Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group members to speak loudly 	<ul style="list-style-type: none"> • Introduce the trainees with their peers

Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • provide visual recorded material 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual recorded material 	

ASSESSMENT CRITERIA

LO1. Identify and select theme/problem

- Safety requirements are followed in accordance with safety plans and procedures.
- All possible problems related to the process /Kaizen elements are listed using statistical tools and techniques.
- All possible problems related to kaizen elements are identified and listed on Visual Management Board/Kaizen Board.
- Problems are classified based on obviousness of cause and action.
- Critical factors like the number of customers affected, Potentials for bottlenecks, and number of complaints etc... is selected.
- Problems related to priorities of Kaizen Elements are given due emphasis and selected.

LO2 .Grasp current status and set goal

- The extent of the problem is defined.
- Appropriate and achievable goal is set.

LO3. Establish activity plan

- The problem is confirmed.
- High priority problem is selected.
- The extent of the problem is defined.
- Activity plan is established as per 5W1H.

LO4. Analyze causes of a problem

- All possible causes of a problem are listed.
- Cause relationships are analyzed using 4M1E.
- Causes of the problems are identified.
- Root causes are selected.
- The root cause which is most directly related to the problem is selected.
- All possible ways are listed using creative idea generation to eliminate the most critical root cause.
- The suggested solutions are carefully tested and evaluated for potential complications.

- Detailed summaries of the action plan are prepared to implement the suggested solution.

LO5. Examine countermeasures and their implementation

- Action plan is implemented by medium KPT members.
- Implementation is monitored according to the agreed procedure and activities are checked with preset plan.

LO6. Assess effectiveness of the solution

- Tangible and intangible results are identified.
- The results are verified over time.
- Tangible results are compared with targets using various types of diagram.

LO7. Standardize and sustain operation

- If the goal is achieved, the new procedures are standardized and made part of daily activities.
- All employees are trained on the new Standard Operating Procedures (SOPs).
- SOP is verified and followed by all employees.
- The next problem is selected to be tackled by the team.

Annex: Resource Requirements

AGR HCP4 M20 19 21 Applying Problem Solving Techniques and Tools				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A.	Learning Materials			
1	TTLM.	Prepared by the trainer	30	1:1
2	Textbook		30	1:1
3	Reference book			
B.	Learning Facilities & Infrastructure			
1	Lecture room / work shop	5m*5m	1	1:30
2	Library	10m*10m	1	1:30
C.	Consumable Materials			
1	Copy paper	A4 size	5 rim	1:6
D.	Tools and Equipments			

LEARNING MODULE -21

TVET-PROGRAMME TITLE	Crop Production and Marketing Management L-IV
MODULE TITLE	Establishing quality standards
MODULE CODE	<u>AGR CPM21 09 21</u>
NOMINAL DURATION	30hours
MODULE DESCRIPTION:	This module covers the knowledge, skills and attitudes required to establish quality specifications for work outcomes and work performance. It includes monitoring and participation in maintaining and improving quality, identifying critical control points in the production of quality output, and assisting in planning and implementing of quality assurance procedures.
LEARNING OUTCOMES	
At the end of the module the learner will be able to:	
LO-1 Establish quality specifications for product LO-2 Identify hazards and critical control points LO-3 Assist in planning of quality assurance procedures LO-4 Implement quality assurance procedures LO-5 Monitor quality of work outcome LO-6 Participate in maintaining and improving quality at work LO-7 Report problems that affect quality	
MODULE CONTENTS:	
LO-1 Establish quality specifications for product 1.1 Sourcing and identifying market specifications and legislated requirements 1.2 Developing and agreeing quality specifications 1.3. Documenting and introducing Quality specifications	

1.4.Updating quality specifications

LO-2 Identify hazards and critical control points

2.1 Identifying Critical control points impacting on quality.

2.2 Determining degree of risk for each hazard.

2.3.Accomplishing necessary documentation

LO-3 Assist in planning of quality assurance procedures

3.1 Developing procedures for each identified control point

3.2.Minimizing hazards and risks.

3.3 Developing Processes

LO-4 Implement quality assurance procedures

4.1 Allocating responsibilities.

4.2Preparing instructions

4.3.Giving staff and contractor's induction training.

4.4 Giving Staff and contractors a in-service training

LO-5 Monitor quality of work outcome

5.1. Identifying quality requirements

5.2. Inspecting inputs

5.3. Conducting work

5.4. Monitoring work processes

5.5. Adjusting processes

LO-6 Participate in maintaining and improving quality at work

6.1 Monitoring work area, materials, processes and product

6.2. Identifying and reporting non-conformance in inputs, process, product **and/or** service

6.3 Taking corrective action within level of responsibility

6.4. Raising quality issues

LO-7 Report problems that affect quality

7.1. Recognizing potential or existing quality problems.

7.2. Identifying instances of variation in quality

7.3. Report variation and potential problems

LEARNING METHODS:

For None Impaired Trainees	Reasonable Adjustment for Trainees with Disability (TWD)			
	Low Vision and Blind	Deaf	Hard of hearing	Physical impairment
Lecture-discussion	<ul style="list-style-type: none"> • Provide large print text • Prepare the lecture in Audio/video & in <u>Brail</u> format • Organize the class room seating arrangement to be accessible to trainees • Write short notes on the black/white board using large text • Make sure the luminosity of the light of class room is kept 	<ul style="list-style-type: none"> • Assign sign language interpreter • Arrange the class room seating to be conducive for eye to eye contact • Make sure the luminosity of the light of class room is kept • Introduce new and relevant vocabularies • Use short and clear sentences • Give emphasis on visual lecture and ensure the 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible to trainees • Speak loudly • Ensure the attention of the trainees • Present the lecture in video format 	<ul style="list-style-type: none"> • Organize the class room seating arrangement to be accessible for wheelchairs users. • Facilitate and support the trainees who have severe impairments on their upper limbs to take

	<ul style="list-style-type: none"> • Use normal tone of voice • Encourage trainees to record the lecture in audio format • Provide Orientation on the physical feature of the work shop • Summarize main points 	<p>attention of the trainees</p> <ul style="list-style-type: none"> • Avoid movement during lecture time • Present the lecture in video format • Summarize main points 	<ul style="list-style-type: none"> • Ensure the attention of the trainees 	<p>note</p> <ul style="list-style-type: none"> • Provide Orientation on the physical feature of the work shop
Demonstration	<ul style="list-style-type: none"> • Conduct close follow up • Use verbal description • Provide special attention in the process of guidance • facilitate the support of peer trainees • Prepare & use simulation 	<ul style="list-style-type: none"> • use Sign language interpreter • Use video recorded material • Ensure attention of the trainees • Provide structured training • Show clear and short method • Use gesture 	<ul style="list-style-type: none"> • Illustrate in clear & short method • Use Video recorded material • Ensure the attention of 	<ul style="list-style-type: none"> • Facilitate and support the trainees having severe upper limbs impairment to operate equipments/ machines • Assign peer

		<ul style="list-style-type: none"> • Provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • the trainees provide tutorial support (if necessary) 	<ul style="list-style-type: none"> • trainees to assist • Conduct close follow up • Provide tutorial support (if necessary)
Group discussion	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Brief the thematic issues of the work 	<ul style="list-style-type: none"> • Use sign language interpreters • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member 	<ul style="list-style-type: none"> • Facilitate the integration of trainees with group members • Conduct close follow up • Introduce the trainees with other group member • Inform the group 	<ul style="list-style-type: none"> • Introduce the trainees with their peers

			members to speak loudly	
Exercise	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/practical training • Introduce new and relevant vocabularies 	<ul style="list-style-type: none"> • Conduct close follow up and guidance • Provide tutorial support if necessary • provide special attention in the process/ practical training 	<ul style="list-style-type: none"> • Assign peer trainees • Use additional nominal hours if necessary
Individual assignment	<ul style="list-style-type: none"> • prepare the assignment questions in large text/Brail • Encourage the trainees to prepare and submit the assignment in large texts/Brail 	<ul style="list-style-type: none"> • use sign language interpreter • provide briefing /orientation on the assignment • 	<ul style="list-style-type: none"> • provide briefing /orientation on the assignment • provide visual 	

	<ul style="list-style-type: none"> • Make available recorded assignment questions • Facilitate the trainees to prepare and submit the assignment in soft or hard copy 	Provide visual recorded material	recorded material	
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ASSESSMENT METHODS:

Interview		<ul style="list-style-type: none"> • Use sign language interpreter • Ensure or confirm whether the proper communication was conducted with the trainee through the service of the sign language interpreter • Use short and clear questioning • Time extension 	<ul style="list-style-type: none"> • Speak loudly • Using sign language interpreter if necessary 	<ul style="list-style-type: none"> • Use written response as an option for the trainees having speech challenges
Written test	<ul style="list-style-type: none"> • Prepare the exam in large texts/Brail • Use interview as an option if 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or False, matching and short answers 	<ul style="list-style-type: none"> • Prepare the exam using short sentences, multiple choices, True or 	<ul style="list-style-type: none"> • Use oral response as an option to give answer for trainees having severe upper limb

	<p>necessary</p> <ul style="list-style-type: none"> • Prepare the exam in audio format • Assign human reader (if necessary) • Time extension 	<ul style="list-style-type: none"> • Avoid essay writing • Time extension 	<p>False, matching and short answers if necessary.</p>	<p>impairment</p> <ul style="list-style-type: none"> • Time extension for trainees having severe upper limb impairment
Demonstration/Observation	<ul style="list-style-type: none"> • Brief the instruction or provide them in large text/Brail • Time extension 	<ul style="list-style-type: none"> • Use sign language interpreter • Brief on the instruction of the exam • Provide activity-based/ practical assessment method • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Brief on the instruction of the exam • Use loud voice • Time extension 	<ul style="list-style-type: none"> • Provide activity based assessment • Conduct close follow up • Time extension

ASSESSMENT CRITERIA:

LO-1 Establish quality specifications for product

- Market specifications are **sourced** and **legislated requirements** identified.
- Quality specifications developed and agreed upon
- Quality specifications are documented and introduced to organization staff / personnel in accordance with the organization policy
- Quality specifications are updated when necessary

LO-2 Identify hazards and critical control points

- Critical control points impacting on quality are identified.
- Degree of risk for each hazard is determined.
- Necessary documentation is accomplished in accordance with organization quality procedures

LO-3 Assist in planning of quality assurance procedures

- Procedures for each identified control point are developed to ensure optimum quality.
- Hazards and risks are minimized through application of appropriate controls.
- Processes to monitor the effectiveness of quality assurance procedures are developed

LO-4 Implement quality assurance procedures

- Responsibilities for carrying out procedures are allocated to staff and contractors.
- Instructions are prepared in accordance with the enterprise's quality assurance program.
- Staff and contractors are given induction training on the quality assurance policy.
- Staff and contractors are given in-service training relevant to their allocated procedures

LO-5 Monitor quality of work outcome

- Quality requirements are identified
- Inputs are inspected to confirm capability to meet quality requirements
- Work is conducted to produce required outcomes
- Work processes are monitored to confirm quality of output and/or service
- Processes are adjusted to maintain outputs within specification

LO-6 Participate in maintaining and improving quality at work

- Work area, materials, processes and product are routinely monitored to ensure compliance with quality requirements
- Non-conformance in inputs, process, product and/or service is identified and reported according to workplace reporting requirements
- Corrective action is taken within level of responsibility, to maintain quality standards
- Quality issues are raised with designated personnel

LO-7 Report problems that affect quality

- Recognize potential or existing quality problems.
- Identify instances of variation in quality from specifications or work instructions.
- Report variation and potential problems to supervisor/manager according to enterprise guidelines

Annex: Resource Requirements

AGR CPM21 09 21 Establishing quality standards				
Item No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Learner)
A. Learning Materials				
1.	TTLM	Containing: information sheet, operation sheet and LAP Test	5	1:5
B. Learning Facilities & Infrastructure				
1.	Lecture Room	Area- 5*5m ²	1	1:25
2.	Library	Area-15*15m ²	1	1:25
C. Consumable Materials				
1.	Paper	A4	5packs	1:5
2.	Packaging material	Polypropylene	50pcs	2:1
		Cartoon	5	1:5
D. Tools and Equip.				
1	inspection machine,	<ul style="list-style-type: none"> • Roll weight: 100 kg • Max roll diameter: 600 mm • Min roll diameter: 100 mm 	1	1:25
2	Stamping or labeling machine	Standard	1	1:25
3	Packaging machine	Standard	1	1:25
4	Cart	Standard	1	1:25

The trainers who developed the Curriculum

No.	Name	Qual.	Educational background	Region	E-mail
1	Seboka Adugna	B	Plant science	Oromia	Adugnaseboka@gmail.com
2	Getenesh Belay	A	Horticulture	Oromia	nezbek2@gmail.com
3	Amenu Olani				
4	Jemal Furo	B	Plant science	Oromia	jemshusni@gmail.com