SOIL FERTILITY IMPROVEMENT

ISCED UNIT CODE: 0811 451 03A

TVET CDACC UNIT CODE: HO/CU/HP/CR/04/5/MA

Unit duration: 100 Hours

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Improve soil fertility

Unit Description

This unit specifies the competencies required to improve soil fertility. It includes competencies for performing soil sampling, preparing organic manure and applying soil amendments.

Summary of Learning Outcomes

SNO	Learning Outcome	Duration (Hours)
1.	To perform soil sampling	40
2.	To prepare organic manure	40
3.	To apply soil amendments	20
	TOTAL	**100**

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Perform soil sampling	**Theory** 1.1 Soil sampling 1.1.1 Definition of terms 1.1.2 Importance of soil sampling 1.1.3 Soil sampling tools, equipment and materials 1.1.3.1 Hoes	• Written tests • Third party report • Reflection papers • Projects • Interviews/ Oral questions

	1.1.3.2 Machetes 1.1.3.3 Soil augur 1.1.3.4 Shovels 1.1.4 Methods of soil sampling 1.1.4.1 Zigzag method 1.1.4.2 Traverse method 1.2 Sampling procedures 1.2.1 Field layout 1.2.2 Sample collection 1.2.3 Compositing 1.2.4 Packaging **Practice** Conduct soil sampling using different methods	• Workshop reports • Individual/group assignments • Case Studies • Practicals
2. Prepare organic manure	**Theory** 2.1 Organic manures 2.1.1 Definition of terms 2.1.2 Importance of organic manure 2.1.3 Types of organic manure 2.1.3.1 Green manure 2.1.3.2 Farmyard manure 2.1.3.3 Compost manure 2.1.4 Characteristics of organic manures **Practice** Prepare different types of organic manures	• Written tests • Reflection papers • Projects • Interviews/ Oral questions • Workshop reports • Individual/group assignments • Practicals
3. Apply soil amendments	**Theory** 3.1 Soil amendments 3.1.1 Definition of terms 3.1.2 Importance of soil amendments 3.1.3 Types of soil amendments 3.1.3.1 Fertilizers	• Written tests • Third party report • Reflection papers • Projects • Interviews/ Oral questions

	3.1.3.2 Agricultural lime 3.1.3.3 Gypsum **Practice** Apply soil amendments using various method	• Workshop reports • Individual/group assignments • Case Studies • Practicals

Suggested Methods of Instruction

- Role playing
- Group discussion
- Direct instruction

Recommended Resources for 30 Trainees

General Resources	Tools and Equipment	Materials and Supplies
Source of water	Machetes	25 Papers
Gutters	Secateurs	
25 Bucket	Shovels	
25 Shears	Pegs	
25 Soil augur	Soil augur	
25 Panga	Panga	
25 Hammer	Hammer	
25 Saw	Saw	
10 Flow meters	Bucket	
10 Pumps	Shears	
10 Sprinkler	Dibbler	
25 Dibbler	Weighing balance	
	Sampling bags	
	Labels	
	Marker pens	