

## CUT FLOWERS PRODUCTION

**ISCED UNIT CODE:** 0812 451 05A

**TVET CDACC UNIT CODE:** HO/CU/HP/CR/04/4/MA

**Unit duration:** 150 Hours

### Relationship to Occupational Standards

This unit addresses the Unit of Competency: **Produce cut flowers**

### Unit Description

This unit specifies the competencies required to produce ornamental plants. It involves establish cut flowers nursery, establishing cut flowers, managing cut flowers and performing cut flowers post-harvest practices.

### Summary of Learning Outcomes

SNO	Learning Outcome	Duration (Hours)
1.	Establish cut flowers nursery	30
2.	Establish cut flowers	40
3.	Manage cut flowers	40
4.	Perform cut flowers post-harvest practices	40
	<b>TOTAL</b>	<b>150</b>

### Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Establish cut flowers nursery	<b>Theory</b> 1.1 Nursery site selection 1.1.1 Definition of cut flowers 1.1.2 Importance of nursery site selection	<ul style="list-style-type: none"><li>• Written tests</li><li>• Reflection papers</li><li>• Projects</li><li>• Interviews/ Oral questions</li></ul>

	<p>1.1.3 Factors considered when siting a nursery</p> <p>1.1.4 Tools, equipment and materials used</p> <p>1.1.4.1 Panga</p> <p>1.1.4.2 Jembe</p> <p>1.1.4.3 Slashers</p> <p>1.1.4.4 Rake</p> <p>1.1.4.5 Seeds</p> <p>1.1.4.6 Splits</p> <p>1.1.4.7 Suckers</p> <p>1.2 Nursery preparation</p> <p>1.3 Planting seeds in a nursery</p> <p>1.4 Nursery management practices</p> <p>1.4.1 Mulching</p> <p>1.4.2 Shading</p> <p>1.4.3 Hardening off</p> <p>1.4.4 Watering</p> <p>1.4.5 Fertilizer application</p> <p>1.4.6 Pest and diseases control</p> <p>1.4.7 Pricking out</p> <p><b>Practice</b></p> <p>1.5 Carry out a nursery bed preparation and planting</p> <p>1.6 Carry out nursery bed management practices</p>	<ul style="list-style-type: none"> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
2. Establish cut flowers	<p><b>Theory</b></p> <p>2.1 Preparation of the land</p> <p>2.2 Planting of seedlings</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> </ul>

	<p>2.3 Field management practices</p> <p><b>Practice</b></p> <p>2.4 Carry out land preparation using various methods.</p> <p>2.5 Carry out planting of seedlings</p> <p>2.6 Carry out field management practices</p>	<ul style="list-style-type: none"> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
3. Manage cut flowers	<p><b>Theory</b></p> <p>3.1 Field management practices</p> <p>3.1.1 Gapping</p> <p>3.1.2 Thinning</p> <p>3.1.3 Fertilizer application</p> <p>3.1.4 Pest and disease control</p> <p>3.1.4.1 Causal agent</p> <p>3.1.4.2 Signs and symptoms</p> <p>3.1.5 Irrigation</p> <p>3.1.6 Mulching</p> <p>3.2 Harvesting of cut flowers</p> <p>3.3 Management of wastes</p> <p><b>Practice</b></p> <p>3.4 Carry out management practices using various methods</p> <p>3.5 Carry out harvesting of cut flowers</p> <p>3.6 Carry out management of waste</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
4. Perform cut flowers post-harvest practices	<p><b>Theory</b></p> <p>4.1 Post-harvest practices</p> <p>4.2 Examples of post-harvest practices</p> <p>4.2.1 Cooling</p> <p>4.2.2 Freezing</p> <p>4.2.3 Drying</p>	<ul style="list-style-type: none"> <li>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <li>• Workshop reports</li> </ul>

	4.2.4 Grading 4.2.5 Sorting 4.2.6 Packaging 4.2.7 Storage 4.2.8 Transportation 4.3 Marketing techniques 4.3.1 Online marketing 4.3.2 Influencer marketing 4.3.3 Public relation 4.4 Management of wastes <b>Practice</b> 4.5 Carry out post-harvest practices using various methods 4.6 Carry out the management of waste	<ul style="list-style-type: none"> <li>• Individual/group assignments</li> <li>Practicals</li> </ul>
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### Suggested Methods of Instruction

- Role playing
- Group discussion
- Direct instruction
- Role playing
- Group discussion
- Direct instruction
- Questionnaires
- Interviews
- Experiment
- Survey
- Observation

### Recommended Resources for 25 Trainees

General Resources	Tools and Equipment	Materials and Supplies
• Source of water	• 25 Spray pumps	• Seeds
• Gutters	• 25 Watering cans	• 25 Suckers
• 25 Bucket	• 25 Hose pipes	• Seedlings
• 25 Shears	• 25 Plough	• 25 Cuttings
• 25 Soil augur	• 25 Harrows	• 25 Tubers
• 25 Panga	• 25 Ridgers	• 25 Tissue culture
• 25 Hammer	• 25 Boom sprayer	• 25 Buds
• 25 Saw	• 25 Pruning saw	• 25 Corms
• 10 Flow meters	• 25 Wire strainer	• 25 Corms Pesticides
• 10 Pumps	• 25 Traps	• Fertilizers
• 10 Sprinkler	• 25 Pipe sprinklers	• 25 Stationery
• 25 Dibbler	• 25 Scouting flags	• Manures
	• 25 Storage tanks	• 25 Ropes
	• 25 Tractors	• 25 Nets
	• 25 Grading shed	• 25 Papers
	• 25 Bud count square	• 25 Fencing wire
	• 25 Meteorological equipment	• 25 Staking sticks
	• 25 Hoes	• 25 Nails
	• 25 Machetes	25 Herbicides
	• 25 Secateurs	• Seeds