

## 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 establishing 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> <ul style="list-style-type: none"> <li>1.1.4.1 Panga</li> <li>1.1.4.2 Jembe</li> <li>1.1.4.3 Slashers</li> <li>1.1.4.4 Rake</li> <li>1.1.4.5 Seeds</li> <li>1.1.4.6 Splits</li> <li>1.1.4.7 Suckers</li> </ul> <p>1.2 Nursery preparation</p> <p>1.3 Planting seeds in a nursery</p> <p>1.4 Nursery management practices</p> <ul style="list-style-type: none"> <li>1.4.1 Mulching</li> <li>1.4.2 Shading</li> <li>1.4.3 Hardening off</li> <li>1.4.4 Watering</li> <li>1.4.5 Fertilizer application</li> <li>1.4.6 Pest and diseases control</li> <li>1.4.7 Pricking out</li> </ul> <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>

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

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

### Recommended Resources for 25 Trainees

<b>General Resources</b>	<b>Tools and Equipment</b>	<b>Materials and Supplies</b>
● 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