

## TEMPERATE FRUITS PRODUCTION

**ISCED UNIT CODE:** 0812 451 09A

**TVET CDACC UNIT CODE:** HO/CU/HP/CR/01/5/MA

**Unit duration:** 120 Hours

### **Relationship to Occupational Standards**

This unit addresses the Unit of Competency: Produce temperate fruits

### **Unit Description**

This unit specifies the competencies required to produce quality and clean temperate fruits. It involves preparing temperate fruits planting materials, establishing temperate fruits, managing temperate fruits and performing temperate fruits post-harvest practices

### **Summary of Learning Outcomes**

SNO	Learning Outcome	Duration (Hours)
1.	Establish Temperate fruits nursery	10
2.	Establish Temperate fruits orchard	40
3.	Manage Temperate fruits	40
4.	Perform Temperate fruits post-harvest practices	30
	<b>TOTAL</b>	<b>120</b>

### **Learning Outcomes, Content and Suggested Assessment Methods**

Learning Outcomes	Content	Suggested Assessment Methods
1. Establish Temperate fruits nursery	<b>Theory</b> 1.1 Nursery site selection 1.1.1 Definition of temperate fruits 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</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> </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>	<p>questions</p> <ul style="list-style-type: none"> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
2. Establish Temperate fruits orchard	<p><b>Theory</b></p> <p>2.1 Orchard site selection</p> <ul style="list-style-type: none"> <li>2.1.1 Importance of an orchard</li> <li>2.1.2 Factors considered when siting an orchard</li> </ul> <p>2.2 Preparation of the land</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>2.3 Planting of seedlings</p> <p>2.4 Field management practices</p> <p><b>Practice</b></p> <p>2.5 Carry out land preparation using various methods.</p> <p>2.6 Carry out planting of seedlings</p> <p>2.7 Carry out field management practices</p>	<ul style="list-style-type: none"> <li>• Individual/group assignments</li> <li>• Practicals</li> </ul>
3. Manage Temperate fruits	<p><b>Theory</b></p> <p>3.1 Field management practices</p> <p>3.1.1 Gapping</p> <p>3.1.2 Training</p> <p>3.1.2.1 Pruning</p> <p>3.1.2.2 Trellising</p> <p>3.1.2.3 Staking</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>3.5 Harvesting of temperate fruits</p> <p>3.6 Management of wastes</p> <p><b>Practice</b></p> <p>3.7 Carry out management practices using various methods</p> <p>3.8 Carry out harvesting of temperate fruits</p> <p>3.9 Carry out management of waste in an orchard</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>

<p>4. Perform Temperate fruits post-harvest practices</p>	<p><b>Theory</b></p> <p>4.1 Post-harvest practices</p> <p>4.2 Examples of post-harvest practices</p> <ul style="list-style-type: none"> <li>1.2.1 Cooling</li> <li>1.2.2 Freezing</li> <li>1.2.3 Drying</li> <li>1.2.4 Grading</li> <li>1.2.5 Sorting</li> <li>1.2.6 Packaging</li> <li>1.2.7 Storage</li> <li>1.2.8 Transportation</li> </ul> <p>4.3 Marketing techniques</p> <ul style="list-style-type: none"> <li>1.3.1 Online marketing</li> <li>1.3.2 Influencer marketing</li> <li>1.3.3 Public relation</li> </ul> <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>• Written tests</li> <li>• Reflection papers</li> <li>• Projects</li> <li>• Interviews/ Oral questions</li> <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 30 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