

PRODUCE ORNAMENTAL PLANTS

ISCED UNIT CODE: 0812 451 13A

TVETCDACC UNIT CODE: HO/OS/HP/CR/03/5/MA

UNIT DESCRIPTION

This unit specifies the competencies required to produce ornamental plants. It involves preparing ornamental plants planting materials, establishing ornamental plants, managing ornamental plants and performing ornamental plants post-harvest practices.

ELEMENTS AND PERFORMANCE CRITERIA

| ELEMENT | PERFORMANCE CRITERIA |
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| These describe the key outcomes which make up workplace functions | These are assessable statements which specify the required level of performance for each of the elements <i>(Bold and italicized terms are elaborated in the range)</i> |
| 1. Prepare ornamental plants planting materials | 1.1 Personal protective equipment are worn as per work requirement 1.2 Nursery site is selected based on farm layout 1.3 Nursery site soil analysis is performed as per work procedure. 1.4 Tools, equipment and materials are assembled as per work requirement. 1.5 Nursery is prepared according to agronomic requirements of ornamental plants. 1.6 Ornamental planting materials are raised in nursery as per work procedure. 1.7 Ornamental plants nursery management practices are performed as per agronomical requirements. |
| 2. Establish ornamental plants | 2.1 Personal protective equipment are worn as per work requirement 2.2 Tools, equipment and materials are assembled as per work requirement 2.3 Tillage practices are carried out as per agronomic requirements 2.4 Soil and water conservation measures are applied as per agronomic needs |

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| | <p>2.5 <i>Soil amendments</i> are applied as per soil analysis report</p> <p>2.6 Seedlings are transplanted based on agronomic requirements</p> |
| 3. Manage ornamental plants | <p>3.1 Tools and equipment for carrying out management practices are assembled as per work requirement</p> <p>3.2 Gapping is carried out as per agronomic requirements</p> <p>3.3 Training and pruning is carried out as per agronomic requirements</p> <p>3.4 <i>Crop protection practices</i> are carried out as per agronomic requirement</p> <p>3.5 Physiological disorders are managed as per agronomic requirement</p> <p>3.6 Soil amendments are applied as per soil analysis report</p> <p>3.7 Mulching is carried out as per agronomic requirements</p> <p>3.8 Watering is carried out as per agronomic requirements</p> <p>3.9 Ornamental plants are harvested as per agronomic requirements</p> <p>3.10 Waste management is undertaken in accordance to work requirement</p> |
| 4. Perform ornamental plants post-harvest practices | <p>4.1 Tools and equipment for carrying out post-harvest practices are assembled as per work requirement</p> <p>4.2 Quality and quantity of ornamental plants is assessed as per work procedures</p> <p>4.3 <i>Post-harvest practices</i> are carried out in accordance to work requirement</p> <p>4.4 Waste management is undertaken in accordance to work requirement</p> |

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

| Variable | Range |
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| 1. Personal protective equipment may include but are not limited to: | <ul style="list-style-type: none"> • Gloves • Safety goggles • Safety boots |

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| | <ul style="list-style-type: none"> • Overalls • Dust coat • Ear muffs • Face masks |
| 2. Tools, equipment and materials may include but are not limited to: | <ul style="list-style-type: none"> • Hoes • Machetes • Secateurs • Shovels • Soil augur • Panga • Pegs • Hammer • Saw • Bucket • Secateurs • Shears • Dibbler • Pegs • Spray pumps • Watering cans • Hose pipes • Plough • Harrows • Ridges • Boom sprayer • Pruning saw • Wire strainer • Traps • Pipe sprinklers • Scouting flags • Storage tanks • Tractors |

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| | <ul style="list-style-type: none"> • Grading shed • Bud count square • Meteorological equipment • Pesticides • Fertilizers • Stationery • Manures • Seedlings /planting materials • Khaki paper bags size 3 • Rope • Nets • Translucent papers • Papers • Fencing wire • Staking sticks • Nails • Herbicides • Pesticides • Pheromones • Seeds • Seedlings • Splits • Crowns • Slips • Cuttings • Suckers • Plantlets |
| 3. Ornamental plants planting materials may include but are not limited to: | <ul style="list-style-type: none"> • Seeds • Splits • Suckers |

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| | <ul style="list-style-type: none"> • Buds • Cuttings • Seedlings • Cuttings • bulbs • Tubers • Corms • Tissue culture • Embryo culture |
| 4. Ornamentals plants include but not limited to | <ul style="list-style-type: none"> • Ornamental trees • Ornamental shrubs • Flowering annuals • Climbers and creepers • Cacti and succulent • Indoor plants • Water plants • Lawn grasses |
| 5. Agronomic requirements include but not limited to | <ul style="list-style-type: none"> • Seed bed preparation • Sowing • Mulching • Spacing • Gapping • Thinning • Pruning • Training • De- suckering • Watering • Cover cropping • Nutrient application |

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| 6. Tillage practices may include but are not limited to: | <ul style="list-style-type: none"> • Primary Tillage • Secondary • Tertiary |
| 7. Crop protection practices may include but are not limited to: | <ul style="list-style-type: none"> • Pest control • Disease control • Weed control |
| 8. Tillage practices may include but are not limited to: | <ul style="list-style-type: none"> • Primary Tillage • Secondary • Tertiary |
| 9. Nursery management practices may include but are not limited to: | <ul style="list-style-type: none"> • Mulching • Watering • Fertilizer application • Weed control • Pest control • Disease control • Shading • Hardening off |
| 10. Marketing techniques may include but are not limited to: | <ul style="list-style-type: none"> • Online marketing • Influencer marketing • Referrals • Advertisement • Auctioneering • Public relation • Cold calling • Content marketing • Invoicing • Loyalty programs |

REQUIRED KNOWLEDGE AND SKILLS

This section describes the knowledge and skills required for this unit of competency.

Required knowledge

The individual needs to demonstrate knowledge of:

- Sources of quality water
- Agro Ecological Zonation
- Types of tools and equipment used in production of ornamental plants
- Structures for production of ornamental plants
- Types of ornamental plants
- Physiology of ornamental plants
- Landscaping designs
- Soil conservation
- Phyto-sanitary requirements
- Sources of quality planting materials for ornamental plants
- Husbandry practices in ornamental plants production
- Ornamental plants production Technologies
- Procedures for calibration of equipment
- Record keeping and accounting
- Waste Management
- Occupational Safety and Health Procedures
- General management of ornamental plants farm

Required skills

The individual needs to demonstrate the following skills:

- Measuring
- Levelling
- Gaping
- Grafting
- Pruning
- Spraying
- Pests, diseases and nutrients deficiency scouting
- Equipment calibration
- Technical Report writing
- Observation
- Negotiation

- Digital literacy
- Soil sampling and testing

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

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| 1. Critical aspects of competency | <p>Assessment requires evidence that the candidate:</p> <p>1.1 Used personal protective equipment as per work requirement</p> <p>1.2 Treated planting materials based on agronomic requirements.</p> <p>1.3 Prepared planting materials in accordance to agronomic requirements.</p> <p>1.4 Planted ornamental plants as per agronomic requirements.</p> <p>1.5 Carried out crop protection practices on ornamental plants as per agronomic requirements</p> <p>1.6 Carried out gapping and thinning on ornamental plants as per work requirements</p> <p>1.7 Carried out pruning, training and de-suckering based on plant requirement</p> <p>1.8 Applied fertilizers in accordance to plant nutrient requirement</p> |
| 2. Resource implications | <p>The following resources should be provided:</p> <p>2.1 Appropriately simulated environment where assessment can take place</p> <p>2.2 Access to relevant work environment</p> <p>2.3 Resources relevant to the proper activities or tasks</p> |
| 3. Methods of assessment | <p>Competency in this unit may be assessed through:</p> <p>3.1 Observation</p> <p>3.2 Oral questioning</p> <p>3.3 Portfolio of evidence</p> |

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| | 3.4 Interviews 3.5 Third party report 3.6 Written tests |
| 4. Context of assessment | Competency may be assessed: 4.1 Workplace or simulated workplace |
| 5. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |