

## CONSTRUCT HORTICULTURAL FARM STRUCTURES AND FARM ROADS

ISCED UNIT CODE: 0716 551 22A

TVETCDACC UNIT CODE: HO/OS/HP/CR/02/6/MA

### UNIT DESCRIPTION

This unit specifies the competencies required to construct farm structures. It involves performing farm structures feasibility survey, designing farm structures and constructing farm structures.

### ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
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. Perform farm structures feasibility survey	1.1 <b><i>Personal protective equipment's</i></b> are worn as per work requirement 1.2 <b><i>Tools, equipment</i></b> and <b><i>materials</i></b> are assembled as per work requirement 1.3 Feasibility survey is conducted in line with work requirements 1.4 Feasibility study report is prepared as per standard operating procedure
2. Design farm structures	2.1 Farm structures are designed in line with feasibility survey report 2.2 Working drawings are prepared as per <b><i>engineering standards</i></b> 2.3 Bill of quantity and budget is prepared as per work requirement 2.4 Material schedule is prepared in line with design and drawings

	2.5 Approvals are obtained from <b><i>construction regulatory bodies</i></b>
3. Construct farm structures and farm roads	3.1 Construction tools and equipment are assembled as per work requirement. 3.2 Personal protective equipment's are worn as per work requirement 3.3 <b><i>Farm structures</i></b> are constructed in according to working drawings
4. Maintain farm structures	4.1 Personal protective equipment's are worn as per work requirement 4.2 Tools, equipment and materials are assembled as per work requirement 4.3 Worn out <b><i>farm structure parts</i></b> are repaired or replaced as per work requirement 4.4 Waste management is undertaken in accordance to work requirement

## 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
1. Personal protective equipment may include but are not limited to:	<ul style="list-style-type: none"> <li>• Gloves</li> <li>• Helmet</li> <li>• Face shields</li> <li>• Safety goggles</li> <li>• Safety boots</li> <li>• Overalls</li> <li>• Dust coat</li> <li>• Ear muffs</li> <li>• Face masks</li> </ul>
2. Tools, equipment and materials may include but are not limited to:	<ul style="list-style-type: none"> <li>• Hammer</li> <li>• Spirit levels</li> </ul>

	<ul style="list-style-type: none"> <li>• Wheelbarrows</li> <li>• Concrete mixer</li> <li>• Cement</li> <li>• Ballast</li> <li>• Pipe wrench</li> <li>• Welding kit</li> <li>• Crow bar</li> <li>• Nails</li> <li>• Mattock</li> <li>• Saw</li> <li>• Spade</li> <li>• Trowel</li> <li>• Sand</li> <li>• Iron sheets</li> <li>• Bricks</li> <li>• Barbed wire</li> <li>• Plain wire</li> <li>• Posts</li> <li>• Assorted timber</li> </ul>
3. Engineering standards may include but are not limited to:	<ul style="list-style-type: none"> <li>• Standards in farm structures construction</li> </ul>
4. Construction regulatory bodies may include but are not limited to:	<ul style="list-style-type: none"> <li>• NEMA</li> <li>• National Construction Authority</li> <li>• County governments</li> </ul>
5. Farm structures may include but are not limited to:	<ul style="list-style-type: none"> <li>• Green house</li> <li>• Nursery shed</li> <li>• Mushroom house</li> <li>• Shade nets</li> <li>• Soil and water conservation structures</li> <li>• Biogas digester</li> <li>• Silos</li> <li>• Dryers</li> </ul>

	<ul style="list-style-type: none"> <li>• Pack house</li> <li>• Water pans</li> </ul>
6. Farm structures parts may include are but not limited to;	<ul style="list-style-type: none"> <li>• Poly rose</li> <li>• Frames and hatches</li> <li>• Insect nets</li> <li>• Shade nets</li> <li>• Water pipes and fittings</li> <li>• Garden fence</li> <li>• Garden trellis</li> <li>• Surveillance gadgets</li> <li>• Ventilation system</li> <li>• Lighting system</li> <li>• Roof</li> </ul>

## 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:

- Field assessment procedures
- Different land condition
- Machinery operation
- Different farm tools, equipment and materials
- Waste management and disposal methods
- Agricultural Project management
- Analysis and design methods
- Occupational Safety and Health Procedures

### Required skills

The individual needs to demonstrate the following skills:

- Technical report writing
- Digital literacy

- Concrete making
- Measuring
- Joinery
- Communication skills
- Observation
- Decision Making
- Planning skills

## EVIDENCE GUIDE

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

1. Critical aspects of competency	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> <li>1.1 Used personal protective equipment as per work requirement</li> <li>1.2 Prepared a feasibility study report as per standard operating procedures</li> <li>1.3 Designed farm structures in accordance with standard procedures</li> <li>1.4 Prepared working drawings as per the engineering standards</li> <li>1.5 Prepared bill of quantity in line with the designs</li> <li>1.6 Prepared material schedule in line with the design and drawings</li> <li>1.7 Assembled construction tools and equipment as per work requirement.</li> <li>1.8 Constructed farm structures in accordance to working drawings</li> <li>1.9 Managed wastes generated in production process in accordance to work requirement</li> </ul>
2. Resource implications	<p>The following resources should be provided:</p> <ul style="list-style-type: none"> <li>2.1 Appropriately simulated environment where assessment can take place</li> <li>2.2 Access to relevant work environment</li> <li>2.3 Resources relevant to the proper activities or tasks</li> </ul>
3. Methods of assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>3.1 Observation</li> <li>3.2 Oral questioning</li> <li>3.3 Portfolio of evidence</li> <li>3.4 Interviews</li> <li>3.5 Practical tests</li> </ul>

	3.6 Third party report 3.7 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.