

## MANAGE APIARY

**UNIT CODE:** 0811 341 05A

**TVET CDACC UNIT CODE:** AGR/OS/API/CR/02/4/MA

### UNIT DESCRIPTION

This unit covers the competencies required to manage an apiary. It involves managing bee forage resources; carrying out bee feeding; inspecting bee hives and controlling bee pests and diseases and performs hygiene and sanitation.

### ELEMENT AND PERFORMANCE CRITERIA

<b>ELEMENT</b>  These describe the key outcomes which make up workplace function	<b>PERFORMANCE CRITERIA</b>  These are assessable statements which specify the required level of performance for each of the elements.  <i><b>Bold and italicized terms are elaborated in the Range</b></i>
1. Manage bee forage resources	1.1 <i><b>Personal protective equipment (PPEs)</b></i> are worn as per work requirement 1.2 Tools and equipment are assembled as per work requirement 1.3 Suitable <i><b>bee forages</b></i> are identified as per National Bee Keeping Manual 1.4 Bee forage is established as per National Bee Keeping Manual 1.5 Bee forage flowering calendar is developed as per National Bee Keeping Manual 1.6 Bee forages are conserved as per National Bee Keeping Manual 1.7 Bee forage resources records are maintained as per work requirement 1.8 Bee forage waste is managed as per Environmental protection regulations
2. Carry out bee feeding	2.1 Personal protective equipment (PPEs) are worn as per work requirement 2.2 <i><b>Artificial bee feeds</b></i> are provided as per National Bee Keeping Manual 2.3 Water is provided as per National Bee Keeping Manual

	<p>2.4 Bee feeding records are maintained as per work requirement</p> <p>2.5 Waste is managed as per Environmental protection regulations</p>
3. Inspect bee hives	<p>3.1 Personal protective equipment (PPEs) are worn as per work requirement</p> <p>3.2 Tools and equipment are assembled as per work requirement</p> <p>3.3 Bee hive external inspection is carried out as per National Bee Keeping Manual</p> <p>3.4 Bee hive is smoked as per National Bee Keeping Manual</p> <p>3.5 Bee hive is opened as per National Bee Keeping Manual</p> <p>3.6 Bees and combs are inspected as per National Bee Keeping Manual</p> <p>3.7 Bee hive is closed as per National Bee Keeping Manual</p> <p>3.8 Inspection records are maintained as per work requirement</p> <p>3.9 Inspection waste is managed as per Environmental protection regulations</p>
4. Control bee pests and diseases	<p>4.1 Bees and combs are inspected as per National Bee Keeping Manual</p> <p>4.2 <b><i>Control measures for bee pests</i></b> are applied as per National Bee Keeping Manual</p> <p>4.3 <b><i>Control measures for bee diseases</i></b> are applied as per National Bee Keeping Manual</p> <p>4.4 Bee pests and disease records are maintained as per work requirement</p> <p>4.5 Bee hive waste is managed as per Environmental protection regulations</p>
5. Perform hygiene and sanitation	<p>5.1 Bee drinkers and feeders are cleaned and disinfected as per National Bee Keeping Manual</p> <p>5.2 Affected bees, bee hives and combs are disposed as per National Bee Keeping Manual</p> <p>5.3 Hygiene and sanitation records are maintained as per work requirement</p> <p>5.4 Waste is managed as per Environmental protection</p>

	regulations
--	-------------

## RANGE

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

Variable	Range
1. Personal Protective Equipment (PPEs) may include but not limited to:	1.1 Gumboots 1.2 Gloves 1.3 Dust coat 1.4 Overall 1.5 Bee suit
2. Bee forages may include but not limited to:	2.1 Mountain mint 2.2 Purple coneflower 2.3 Summer flox 2.4 Wood mint 2.5 Sunflower 2.6 Rosemary 2.7 Citrus trees 2.8 Avocado 2.9 Key apple 2.10 Eucalyptus 2.11 Passion 2.12 Bananas 2.13 Acacia species 2.14 Cucumber 2.15 Pumpkin 2.16 Bottle brush 2.17 Neem tree 2.18 Calliandraspp 2.19 Coffee 2.20 Croton spp

	2.21 Sisal 2.22 Maize 2.23 Mango tree 2.24 Leucena 2.25 Prosopis 2.26 Dombeya 2.27 Clover
3. Artificial bee feeds include but not limited to:	4.1 Sucrose solution 4.2 Fruit juices
4. Control measures for bee pests include but not limited to:	5.1 Trapping active moths 5.2 Destruction of egg, larvae and pupa 5.3 Removing infested combs 5.4 Fumigating bee hives
5. Control measures for bee diseases include but not limited to:	6.1 Apiary sanitation 6.2 Avoid disposal of hive materials 6.3 Hive inspection

## REQUIRED SKILLS AND KNOWLEDGE

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

### Required Skills

The individual needs to demonstrate the following skills:

- Organizing skills
- Negotiation skills
- Interpersonal skills
- Communication skills
- Evaluation skills
- Problem solving
- Critical thinking

### Required Knowledge

The individual needs to demonstrate knowledge of:

- Use of tools and accessories

- Use of the right fuel material for the smoker
- Right approach to the hive
- Hive opening procedure
- Appearance of healthy and unhealthy brood
- Brood pests and diseases
- Castes differentiation
- Bee communication
- Bee pests and disease identification
- Pest infestation
- Differentiation of strong/ weak colonies
- Different pests/ disease control measures

## EVIDENCE GUIDE

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

1. Critical aspects of Competency	1.1 Identified suitable bee forages as per National Bee Keeping Manual 1.2 Established bee forages as per National Bee Keeping Manual 1.3 Conserved bee forages as per National Bee Keeping Manual 1.4 Provided artificial bee feeds as per National Bee Keeping Manual 1.5 Provided water as per National Bee Keeping Manual 1.6 Carried out external bee hive inspection as per National Bee Keeping Manual 1.7 Inspected bees and combs as per National Bee Keeping Manual 1.8 Disposed affected bee hives as per National Bee Keeping Manual
2. Resource Implications	The following resources should be provided: 2.1 Appropriately simulated environment where assessment can take place. 2.2 Access to relevant assessment environments. 2.3 Resources relevant to the proposed assessment activity or tasks.

3. Methods of Assessment	<p>Competency in this unit may be assessed through:</p> <ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Written tests</li> <li>• Third party report</li> <li>• Portfolio of evidence</li> <li>• Oral questions</li> </ul>
4. Context of Assessment	This competency maybe assessed in a workplace or in a simulated workplace.t
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.