CARRY OUT BEE PRODUCTION

UNIT CODE: 0811 451 16 A

TVET CDACC UNIT CODE: AGR/CU/AP/CR/02/5/MA

UNIT DESCRIPTION

This unit specifies competencies required to carry-out bee production. It involves establishing an apiary, managing bee facilities, tools and equipment; managing bee colony, managing bee pests and diseases, harvesting bee products and marketing of bee products.

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
These describe the key outcomes which make up workplace function.	These are assessable statements which specify the required level of performance for each of the elements. *Bold and italicized terms are elaborated in the Range.*
1. Establish an apiary	1.1 Materials, tools and equipment for preparing the apiary site are assembled as per workplace procedures. 1.2 The *apiary site* is selected as per work place procedures 1.3 The apiary site is prepared as per the workplace procedures
2. Manage bee facilities, tools and equipment	2.1 *Personal protective equipment* are worn as per the occupational health and safety procedures 2.2 Relevant equipment and accessories are identified as per work place procedures 2.3 Repairable facilities, equipment and tools are repaired as per work place procedures 2.4 Equipment, tools and accessories are stored according to use the identified storage procedure
3. Manage bee colony	3.1 Personal protective equipment is worn as per the occupational health and safety procedures 3.2 The *bee hive* is opened as per workplace procedures 3.3 *Tools and equipment for dividing the colony* are identified and used as per the workplace procedure

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	3.4 Honey bee colony is divided as per the workplace procedures
4. Manage bee pests and diseases	4.1 Protective gears are worn as per the procedures 4.2 Hive is smoked and opened according to workplace procedures 4.3 Colonies to be inspected are identified based on apiary records 4.4 Observation of *signs and symptoms* of **pests and diseases** evidence is done according to bee brood health guidelines 4.5 **Control measures** are implemented as per the workplace procedures
5. Harvest bee products	5.1 Personal protective equipment are worn as per the occupational health and safety procedures 5.2 Colonies to be harvested are identified as per workplace procedures. 5.3 Hive is opened as per the workplace procedures 5.4 **Hive products** are harvested as per the workplace procedures
6. Market bee products	6.1 Hive products packaged as per industry standards 6.2 Hive products labelled and branded as per industry standards 6.3 Hive products marketed as per industry regulations

RANGE OF VARIABLES

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

RANGE	VARIABLE
1. Bee products may include but are not limited to:	• Honey, Propolis • Bee venom • Creamed honey • Manuka honey • Comb honey

RANGE	VARIABLE
	• Honeycomb, Beeswax • Bee pollen, Royal jelly
2. Tools and equipment may include but are not limited to:	• Smokers, Hive tools • Conical honey strainer • Wax press, Solar wax melter
3. Personal protective equipment may include but are not limited to:	• Bee suit, Gloves • Gumboots
4. Bee disease may include but are not limited to:	• Bee viruses, Nosemosis • Varroa mites • American Foulbrood (AFB) • European Foulbrood (EFB) • Amebiosis, Chalkbrood • Stonebrood • Small Hive Beetle (SHB)
5. Bee pests may include but are not limited to:	• Carpenter bee • Honey bee • Bumblebee • Ants • Mite • Lesser wax moth • Bee louse • Greater wax moth

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:

- Communication
- Analytical

- Evaluation

- Management

- Problem solving

- Time management

- Data collection

- Numeracy

- Observation

- Negotiation

- Digital literacy

- Equipment calibration

Required knowledge

The individual needs to demonstrate knowledge of:

- Beehive construction

- Apiary site selection

- Beehive stocking

- Swarming of bee

- Bee multiplication

- Bee nutrition

- Parasite and disease management in bees

- Bee products

- Bee production records

- Animal Produce handling

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.	Assessment requires evidence that the candidate:
	1.1 Constructed beehives based on resources available
	1.2 Managed apiaries based on GAPs

	1.3 Harvested bee products based on market demand 1.4 Managed bee diseases based on GAPs 1.5 1.6 Controlled bee parasites and predators based on GAPs
2. Resource Implications.	The following resources should be provided: 2.1 Access to relevant workplace where assessment can take place 2.2 Appropriately simulated environment where assessment can take place 2.3 2.3 Materials relevant to the proposed assessment activity or tasks
3. Methods of Assessment.	Competency may be assessed through: 3.1 Practical 3.2 Project 3.3 Portfolio of evidence 3.4 Third Party Report 3.5 Written Tests 3.6 Oral Questioning
4. Context of Assessment.	This competency may be assessed in a work place or in assimilated work place
5. Guidance information for assessment.	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.