

## **BEE PRODUCTS HARVESTING**

**UNIT CODE:** 0811 341 03 A

**TVET CDACC UNIT CODE:** AGR/CU/API/CR/03/4/MA

**UNIT DURATION:** 150 Hours

### **Relationship to Occupational Standard**

This unit addresses the Unit of Competency: Harvest bee products

### **Unit Description**

This unit covers the competencies required; it involves in conduct pre-harvesting practices, perform bee product harvesting, extract bee honey and perform post-harvest practices.

### **Summary of learning outcomes**

By the end of this unit of learning, the trainee should be able to:

<b>S/No</b>	<b>Learning Outcomes</b>	<b>Duration (Hours)</b>
1.	Conduct pre-harvesting practices	50
2.	Perform bee product harvesting	30
3.	Extract bee honey	40
4.	Perform post-harvest practices	30
<b>Total</b>		<b>150</b>

## Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Conduct pre-harvesting practices	<p><b>1.1 PPEs</b></p> <p>1.1.1 Types</p> <ul style="list-style-type: none"> <li>✓ Gumboot</li> <li>✓ Gloves</li> <li>✓ Bee suit</li> </ul> <p>1.1.2 Uses</p> <p>1.1.3 Maintenance</p> <p>1.1.4 Importance</p> <p><b>1.2 Bee hive handling Tools and equipment</b></p> <p>1.2.1 Types</p> <ul style="list-style-type: none"> <li>✓ Hive tool</li> <li>✓ Swarm net</li> <li>✓ Bee brush</li> <li>✓ Bee smoker</li> <li>✓ Honey extractor</li> <li>✓ Queen excluder</li> </ul> <p>1.2.2 Uses</p> <p>1.2.3 Maintenance</p> <p>1.2.4 Importance</p> <p><b>1.3 Bee colonies for harvesting</b></p> <p>1.3.1 Queen</p> <p>1.3.2 Worker bees</p> <p>1.3.3 Drones</p> <p><b>1.4 Bee products</b></p> <p>1.4.1 Honey</p> <p>1.4.2 Wax</p> <p>1.4.3 Propolis</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>

	<p>1.4.4 Bee venom</p> <p>1.4.5 Royal jelly</p> <p>1.5 Bee products harvesting schedule</p> <p>1.6 Bee products pre-harvesting records Practice</p>	
2. Perform bee product harvesting	<p>2.1 Persona; protective equipment</p> <p>2.2 Tools and equipment</p> <p>2.3 Bee products harvesting</p> <p>2.4 Harvesting records</p> <p>2.5 Waste management</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>
3. Extract bee honey	<p>3.1 PPEs</p> <p>3.2 Tools and equipment</p> <p>3.3 Honey combs decapping</p> <p>3.4 Bee honey extraction</p> <p>3.5 Honey Production record</p> <p>3.6 Honey extraction waste management</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. Perform post-harvest practices	<p>1.1 PPEs</p> <p>1.2 Bee handling tools and equipment</p> <p>1.3 Returning of Langstroth super boxes</p> <p>1.4 Sieving of extracted bee honey</p> <p>1.5 Post-harvest records</p> <p>1.6 Post-harvest waste management</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>

### Suggested Methods of Instruction

- Direct instruction
- Practical
- Demonstration
- Project-Based Learning (PBL)
- Group discussion

### Recommended Resources for 25 Trainees

<b>Tools and Equipment</b>	<b>Specification</b>	<b>Quantity</b>	<b>Recommended ratio</b>
Bee smoker		5	1:5
Bee brush		5	1:5
Swarm net		5	1:5
Hive tool		5	1:5
Honey extractor		2	1:13
Queen excluder		5	1:5
Notebook for observations		1	1:25
Textbooks		5 pcs	1:5
Charts			
Power point presentations	For trainer's use		
Lecture/theory room		1	1:25
Workshop		1	1:25
Laboratory		1	1:25
Site		1	1:25