

## **BEE BEHAVIOR IN BEE HANDLING**

**UNIT CODE:** 0811 341 05 A

**TVET CDACC UNIT CODE:** AGR/CU/API/CC/01/4/MA

**UNIT DURATION:** 80 Hours

### **Relationship to Occupational Standard**

This unit addresses the Unit of Competency: Apply bee behavior in handling bees

### **Unit Description**

This unit covers the competencies required to apply bee behavior in handling bees. It involves applying knowledge of bee communication behavior, reproductive bee behavior and bee swarming behavior.

### **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.	Apply knowledge of bee communication behavior	30
2.	Apply knowledge of reproductive bee behavior	30
3.	Apply bee swarming behavior	20
<b>Total</b>		<b>80</b>

## Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcomes	Content	Suggested Assessment Methods
1. Apply knowledge of bee communication behaviour	1.1 Bee communication behaviour 1.1.1 Dances 1.1.2 Pheromones 1.2 Conflict resolution using bee communication behaviour 1.3 Colony strengthening using bee communication behaviour 1.4 Colony unit defense using bee communication behaviour	<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>
2. Apply knowledge of reproductive bee behaviour	2.1 Bee reproductive behaviour in bee colony management 2.2 Bee reproductive behaviour in breeding 2.3 Bee reproductive behaviour in control of inbreeding	<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. Apply knowledge of bee swarming behavior	3.1 Bee swarming behavior 3.1.1 Reasons for swarming 3.1.2 Signs of swarming 3.1.2 Stages for swarming 3.1.2 Control for swarming 3.2 Bee swarming behavior in colonies management 3.3 Bee swarming behavior in colony division	<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**

- Group discussion
- Project
- Direct instruction
- Project-Based Learning (PBL)
- Demonstrations

### **Recommended Resources for 25 Trainees**

<b>s/no</b>	<b>Items</b>	<b>Specifications</b>	<b>Quantity</b>	<b>Ratio</b>
<b>1.</b>	Lecture room		<b>1</b>	<b>1:25</b>
<b>2.</b>	Projector		<b>1</b>	<b>1:25</b>
<b>3</b>	Laptop		<b>1</b>	<b>1:25</b>
<b>4</b>	Forceps		<b>5</b>	<b>1:5</b>
<b>5</b>	Sweep nets		<b>15</b>	<b>1:2</b>
<b>6</b>	identification charts		<b>15</b>	<b>1:2</b>
<b>7</b>	killing insect bottles		<b>15</b>	<b>1:2</b>
<b>8</b>	mounting boards		<b>15</b>	<b>1:2</b>
<b>9</b>	mounting pins		<b>50</b>	<b>2:1</b>
<b>1.</b>	Colonised bee hives		<b>5</b>	<b>1:5</b>