

## FISH FARMING

**UNIT CODE:** 0811 451 15A

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

**UNIT DURATION:** 100 HOURS

### Relationship to Occupational Standards

This unit addresses the unit of competency: Carry out fish farming

### Unit Description

This unit addresses the Unit of Competency required to carry out fish farming. It involves constructing fish farming structures, feeding fish, managing fish hatcheries and fish cages, harvesting of fish, processing harvested fish and managing recirculatory aquaculture systems

### Summary of Learning Outcomes

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

| S/No         | Learning Outcomes                        | Duration (Hours) |
|--------------|--|------------------|
| 1.           | To construct fish farming structures     | 30               |
| 2.           | To feed fish                             | 20               |
| 3.           | To manage fish hatcheries and fish cages | 25               |
| 4.           | To harvest fish                          | 25               |
| <b>Total</b> |  | <b>100</b>       |

### Learning Outcomes, Content and Suggested Assessment Methods

| Learning outcomes                    | Content  | Suggested assessment methods   |
|--------------------------------------|--|--|
| 1. Construct fish farming structures | <b>Theory</b><br><b>1.1 Fish farming structures</b><br>1.1.1 Definition of terms | <ul style="list-style-type: none"><li>Written tests</li><li>Projects</li><li>Interviews/oral</li></ul> |

|   |  |   |
|---|--|---|
|   | <p>1.1.2 Types of fish farming structures</p> <p>1.1.3 fish farming site selection</p> <p>1.1.4 Importance of site selection</p> <p>1.2 Fish farm structures construction tools and equipment's</p> <p>1.3 Fish farm water filtration system installation</p> <p>1.3.1 Construction of auxiliary farm structures</p> <p>1.3.1.1 Farm stores</p> <p>1.3.1.2 Roads</p> <p>1.3.1.3 Fences</p> <p>1.3.1.4 Offices</p> <p>1.4 Installation of predator control devices</p> <p>1.4.1 Importance of predator control devices</p> <p>1.4.2 Types of predator control devices</p> <p>1.4.2.1 Netting</p> <p>1.4.2.2 Scare devices</p> <p>1.4.2.3 Barriers and enclosures</p> <p><b>Practice</b></p> <p>1.5 Carry out construction of fish rearing structures.</p> <p>1.6 Install predator control devices</p> | <p>questions</p> <ul style="list-style-type: none"> <li>• Individual/group assignments</li> <li>• Practical</li> </ul>  |
| 2. Perform fish farm management practices | <p><b>Theory</b></p> <p>2.1 Fish farm management practices</p> <p>2.1.1 Definition of terms</p> <p>2.1.2 Importance of fish farm management.</p> <p>2.1.3 Fish management practices</p> <p>2.1.3.1 Checking water quality parameters</p>   | <ul style="list-style-type: none"> <li>• Written tests</li> <li>• Projects</li> <li>• Interviews/oral questions</li> <li>• Individual/group assignments</li> <li>• Practical</li> </ul> |

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|                             | <p>2.1.3.2 Rearing units' maintenance practices</p> <p>2.1.3.3 Control of predator, parasite and diseases.</p> <p>2.1.3.4 Waste management</p> <p>2.2 Preparation of fish management records</p> <p><b>Practice</b></p> <p>2.3 Carry out fish management practices</p> <p>2.4 Prepare fish management records</p>  |   |
| 3. Manage fish hatcheries   | <p><b>theory</b></p> <p>3.1 fish hatchery management</p> <p>1.6.1 Definition of terms</p> <p>1.6.2 Hatchery management tools and equipment</p> <p>1.6.2.1 Uses of hatchery management tools and equipment</p> <p>1.6.2.2 Maintenance of hatchery management tools and equipment's</p> <p>1.7 Hatchery pre-stocking activities</p> <p>1.8 Brood stock management</p> <p>1.9 Hatchery records preparation</p> <p><b>Practice</b></p> <p>1.10 Carry out hatchery pre-stocking activities.</p> <p>1.11 Carry out brood stock management</p> <p>1.12 Prepare hatchery records</p> | <ul style="list-style-type: none"> <li>Written tests</li> <li>Projects</li> <li>Interviews/oral questions</li> <li>Individual/group assignments</li> <li>Practical</li> </ul> |
| 4. Harvest and process fish | <p><b>Theory</b></p> <p>4.1 Fish harvesting</p> <p>4.1.1 Fish harvesting tools, equipment's and materials</p> <p>4.1.1.1 Fishing nets</p>  | <ul style="list-style-type: none"> <li>Written tests</li> <li>Projects</li> <li>Interviews/oral questions</li> <li>Individual/group assignments</li> </ul>                    |

|  |  |   |
|--|--|---|
|  | <p>4.1.1.2 Fishing traps</p> <p>4.1.1.3 Longlines and handlines</p> <p>4.1.2 Uses of harvesting tools, equipment and materials</p> <p>4.1.3 Maintenance of harvesting tools and equipment.</p> <p>4.2 Fish harvesting methods</p> <p>4.2.1 Trawling</p> <p>4.2.2 Longlining</p> <p>4.2.3 Purse seining</p> <p>4.3 Fish processing</p> <p>4.4 Marketing fish products and by products.</p> <p>4.5 Fish records.</p> | <ul style="list-style-type: none"> <li>• Practical</li> </ul> |
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### Suggested Methods of Instruction

- Role playing
- Group discussion
- Direct instruction

### Recommended Resources for 25 Trainees

| S/No.    | Category/Item                        | Description/Specifications | Quantity | Recommended Ratio<br>(Item: Trainee) |
|----------|--------------------------------------|----------------------------|----------|--------------------------------------|
| <b>A</b> | <b>Learning Materials</b>            |                            |          |                                      |
| 1.       | Journals                             | Aquaculture                | 5 pcs    | 1:5                                  |
| 2.       | writing materials                    |                            | 50       | 2:1                                  |
| 3.       | Charts                               |                            | 1        | 1:25                                 |
| 4.       | PowerPoint presentations             | For trainer's use          | 1        | 1:25                                 |
| 5.       | Whiteboard                           |                            | 1        | 1:25                                 |
| 6.       | Assorted color of whiteboard markers | For trainer's use          | 1        | 1:25                                 |

|          |   |  |   |      |
|----------|---|--|---|------|
| 7.       | Printers  |  | 1 | 1:25 |
| 8.       | Projector                                       |  | 1 | 1:25 |
| <b>B</b> | <b>Learning Facilities &amp; infrastructure</b> |  |   |      |
| 1.       | Lecture/theory room                             |  | 1 | 1:25 |
| 2.       | Agriculture lab                                 |  | 1 | 1:25 |
| <b>C</b> | <b>Tools and Equipment</b>                      |  |   |      |
| 1.       | Measuring tape                                  |  | 1 | 1:25 |
| 2.       | Aerator   |  | 1 | 1:25 |
| 3.       | Pump  |  | 1 | 1:25 |
| 4.       | Wheelbarrow                                     |  | 1 | 1:25 |
| 5.       | Shovels   |  | 1 | 1:25 |
| 6.       | Water taster                                    |  | 1 | 1:25 |

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