

## PRODUCTION OF FISH FEEDS

**ISCED UNIT CODE:** 0831 451 04A

**TVETCDACC UNIT CODE:** AQ/CU/AM/CR/02/4/MA

**UNIT DURATION:** 150 HOURS

### RELATIONSHIP TO OCCUPATIONAL STANDARDS

This unit addresses the unit of competency: produce fish feeds

### UNIT DESCRIPTION

This unit specifies the competencies required to produce fish feeds. It involves culturing live feed; preparing formulated fish feed; administering live fish feeds and administer formulated fish feeds.

### SUMMARY OF LEARNING OUTCOMES

By the end of the unit, the trainee will be able to:

1. To culture live feeds
2. To prepare formulated fish feeds
3. To administer live fish feeds
4. To administer formulated fish feeds

### LEARNING OUTCOMES, CONTENT AND SUGGESTED ASSESSMENT METHODS

LEARNING OUTCOMES	CONTENT	SUGGESTED ASSESSMENT METHODS
1. Culture live feeds	<b>Theory</b> 1.1 PPEs 1.1.1 Gumboots, 1.1.2 Helmets, 1.1.3 Gloves, 1.1.4 Overalls, 1.1.5 First aid kits 1.2 Tools and equipment selection. 1.2.1 Feed mixer 1.2.2 Feed extruder 1.2.3 Tanks 1.2.4 Assorted Sieves 1.3 Preparation of Live fish feeds culture	<ul style="list-style-type: none"><li>• Practical</li><li>• Project</li><li>• Third party report</li><li>• Portfolio of evidence</li><li>• Written tests</li><li>• Oral questioning</li></ul>

	<p>units</p> <p>1.4 Inoculation of live fish feeds</p> <p>1.4.1 Daphnia</p> <p>1.4.2 Rotifera</p> <p>1.4.3 Artemia</p> <p>1.4.4 Moina</p> <p>1.4.5 Copepods</p> <p>1.5 Monitoring of inoculated organisms</p> <p>1.6 Harvesting of live fish feeds</p> <p>1.7 Storage of excess Harvested live fish feeds</p>	
1. Prepare formulated fish feeds	<p><b>Theory</b></p> <p>1.1 Assembling of fish feed ingredients.</p> <p>1.1.1 Cereals and their by-products</p> <p>1.1.2 Animal protein sources</p> <p>1.1.3 Animal by-product sources</p> <p>1.1.4 Plant protein sources</p> <p>1.1.5 Minerals</p> <p>1.1.6 Feed additives</p> <p>1.2 Fish feed Formulation</p> <p>1.3 Addition of fish feed additives</p> <p>1.3.1 Feed binders</p> <p>1.3.2 Antioxidants</p> <p>1.3.3 Antibiotics</p> <p>1.3.4 Chemo-attractants</p> <p>1.3.5 Anabolic agents</p> <p>1.3.6 Feed stimulants</p> <p>1.3.7 Pigments</p> <p>1.4 mixing of formulated fish feeds</p> <p>1.5 packaging of formulated fish feeds</p> <p><b>Practice</b></p> <p>1.6 Carry out preparation of formulated fish feeds</p>	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Third party report</li> <li>• Portfolio of evidence</li> <li>• Written tests</li> <li>• Oral questioning</li> </ul>

2. Administer live fish feeds.	<b>Theory</b> 1.1 PPEs 1.2 Carrying out of live fish feeds 1.3 Transferring of fish feeds into the feeding jar 1.4 Carrying out of live fish feeding	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Third party report</li> <li>• Portfolio of evidence</li> <li>• Written tests</li> <li>• Oral questioning</li> </ul>
3. Administer formulated fish feeds.	<b>Theory.</b> 4.1 PPEs 4.2 Selection of tools and equipment 4.3 Carrying out of fish feeding with formulated feeds 4.4 Storing of unused fish feeds 4.5 Maintenance of fish feed records	<ul style="list-style-type: none"> <li>• Practical</li> <li>• Project</li> <li>• Third party report</li> <li>• Portfolio of evidence</li> <li>• Written tests</li> <li>• Oral questioning</li> </ul>

### **Suggested Methods of Instruction**

- Project
- Demonstration
- Practicals
- Discussions
- Direct instruction

### **Recommended resources for 25 trainees.**

<b>S/NO</b>	<b>Category/Item</b>	<b>Description/specification</b>	<b>Qty</b>	<b>Recommended ratio (item: trainee)</b>
	Projector	EPSOM	1	1:25
	Whiteboard/smartboard	2.5 By 1.5.M	1	1:25
	Desktop/computer		1	1:25
	Classroom	Well-lit with 25 seats	1	1:25
	Feed analysis laboratory	Well equipped	1	1:25
	Feed quality Journals		5	1:5
	Sets of Writing materials		25	1:25
	Video clips		5	1:25
	Human resource	Trainer and Technician	2	1:25
	Library	Equipped with animal nutrition books and E-section	1	1:25