

SETTING UP SMALL-SCALE FISH HATCHERY UNIT

UNIT CODE: AQ/CU/AM/CR/06/5/B

Relationship to Occupational Standards

This unit addresses the unit of competency: Set up small-scale fish hatchery unit

Duration of Unit: 258 hours

Unit Description

This unit describes the competencies required for setting up small scale fish hatchery unit. It involves applying food safety measures in setting up small scale fish hatchery, interpretation of basic fish hatchery designs, selection of ideal hatchery construction sites and preparation of cost estimates for hatchery construction. It also involves supervision of hatchery construction and installation of biosecurity measures.

Summary of Learning Outcomes

1. Apply food safety measures in setting up small scale fish hatchery
2. Prepare to set up a fish hatchery.
3. Supervise fish hatchery construction
4. Set up biosecurity measures

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Apply food safety measures in setting up small scale fish hatchery	<ul style="list-style-type: none">• Meaning of food safety• Importance of food safety• Principles of food safety• Prerequisite programmes<ul style="list-style-type: none">○ Meaning, importance, categories and establishment of prerequisite programmes○ Relevant programmes in setting up small scale fish hatchery• Hazard analysis for setting up small scale fish hatchery<ul style="list-style-type: none">○ Enterprise description○ Product description○ Layout of premises and surrounding environment	<ul style="list-style-type: none">• Written tests• Oral questioning• Observation• Case study• Third Party reports• Project• Practical tests

	<ul style="list-style-type: none"> ○ Development of flow diagram ○ Identification of hazards at each step of the flow diagram ○ Describing the hazard ○ Significance of hazards ● Establishment of the HACCP plan for setting up small scale fish hatchery <ul style="list-style-type: none"> ○ Identification of critical control points ○ Procedures for setting up critical control limits ○ Establishment monitoring procedures on the control limits ○ Establishment of corrective actions ○ Verification procedures ○ Record keeping ○ Validation procedures ● Standards and legislations in food safety on setting up small scale fish hatchery 	
<p>2. Prepare to set up a fish hatchery unit.</p>	<ul style="list-style-type: none"> ● Hatchery <ul style="list-style-type: none"> ○ Definition ○ Types and functions - small-scale vs. commercial ● Factors to consider in hatchery site selection <ul style="list-style-type: none"> ○ Physical factors ○ Statutory requirements ○ Economic factors ● Basic hatchery designs <ul style="list-style-type: none"> ○ Components of a fish hatchery unit ○ Interpretation of hatchery designs ● Validation of hatchery design done on-site ● Costing of hatchery construction 	<ul style="list-style-type: none"> ● Written tests ● Oral questioning ● Practical tests ● Projects

<p>3. Supervise fish hatchery construction</p>	<ul style="list-style-type: none"> • Use of PPEs in hatchery construction • Safety measures to be observed • Use of materials, supplies, tools and equipment in hatchery construction • Construction of culture units <ul style="list-style-type: none"> ○ Ponds – earthen, liner ○ Tanks – plastic, concrete ○ Collapsible fish ponds • Installation of indoor hatchery facilities <ul style="list-style-type: none"> ○ Sorting tables ○ Packaging tables ○ Incubation units ○ Plumbing works • Installation of outdoor hatchery facilities <ul style="list-style-type: none"> ○ Water intake structures ○ Piping ○ Overhead tanks ○ Drainage systems 	<ul style="list-style-type: none"> • Written tests • Oral questioning • Oral presentation • Practical tests
<p>4. Set up bio-security measures</p>	<ul style="list-style-type: none"> • Meaning of bio-security • Factors to consider in fish hatchery bio-security • Installation of footbaths and filtration systems • Construction of fences and quarantine facilities • Installation of intruder control facilities and devices e.g. nets, meshes, screens, cover nets 	<ul style="list-style-type: none"> • Oral questioning • Written tests • Practical tests • Projects

Suggested methods of Instruction

- Instructor led facilitation of theory
- Demonstration by trainer
- Practical work by trainee
- Viewing of related videos
- Group discussions

Recommended Resources

- Nets, meshes, screens, cover nets, gates, tape measure, spirit level, jembes, spades, pangas, plumbing tools, masonry tools,
- Compactors and rollers, wheelbarrows, aeration equipment, filtration

- Ropes and strings, liners, pegs, plumbing materials, lime, cement, sand, roofing materials, fencing wire, fittings, assorted screens, netting materials
- Safety goggles, gum boots, helmets, gloves, overalls, first aid kits, mouth piece

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