

FISH POND CONSTRUCTION

UNIT CODE: AQ/CU/AM/CR/01/4/B

Relationship to Occupational Standards

This unit addresses the unit of competency: Construct a fish pond

Duration of Unit: 120 hours

Unit Description

This unit specifies the competencies required to construct a fish pond. It involves ability to apply food safety measures in constructing a fish pond, select and prepare a fish pond construction site, excavate the pond, protect and test the completed pond

Summary of Learning Outcomes

1. Apply food safety measures in constructing a fish pond
2. Select fish farming site
3. Prepare pond construction site
4. Excavate fish pond
5. Complete pond construction

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Apply food safety measures in constructing a fish pond	<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 and importance of prerequisite programmes○ Relevant programmes in fish pond construction• Hazard analysis for fish pond construction<ul style="list-style-type: none">○ Types and sources of hazards○ Significance of hazards○ Methods of hazard control• Components of HACCP plan for fish pond construction	<ul style="list-style-type: none">• Written tests• Oral questioning• Observation• Practical

	<ul style="list-style-type: none"> ○ Critical control points ○ Critical control limits ○ Monitoring procedures on the control limits ○ Corrective actions ○ Verification and validation ○ Record keeping ● Standards and legislations in food safety on constructing a fish pond 	
2. Select fish farming site	<ul style="list-style-type: none"> ● Basic pond and farm layout designs ● Design interpretations ● Types of fish ponds ● Simple pond drainage systems ● Site selection criteria for fish ponds <ul style="list-style-type: none"> ○ Topography ○ Water ○ Soil type ○ Space ○ Vegetation type ○ Accessibility ○ Statutory requirements ● Site specific measurements for <ul style="list-style-type: none"> ○ Fish ponds ○ Drainage ○ Working space ○ Farm layout ● Tools and equipment used during site selection 	<ul style="list-style-type: none"> ● Written ● Oral ● Observation
3. Prepare pond construction site	<ul style="list-style-type: none"> ● Factors to consider before starting <ul style="list-style-type: none"> ○ Availability of extra labour ○ Equipment and materials required ○ Site related factors ● Wetlands <ul style="list-style-type: none"> ○ Types of wetlands ○ Types of soil found in wetlands ○ Types of wetland vegetation ○ Roots and root systems 	<ul style="list-style-type: none"> ● Written tests ● Oral presentation ● Observation ● Projects

	<ul style="list-style-type: none"> ○ Wetland animals and their behaviour ● Site clearing <ul style="list-style-type: none"> ○ Importance of site clearing ○ Site clearing techniques ○ Risks associated with site clearing ● Methods of disposing cleared vegetation 	
4. Excavate fish pond	<ul style="list-style-type: none"> ● Types of fish ponds ● Parts of a fish pond <ul style="list-style-type: none"> ○ Dykes ○ Inlets ○ Outlets ○ Freeboard ○ Bottom slope ○ Core trench ○ Harvesting basin ● Pond construction tools and equipment ● Pond measuring and pegging techniques ● Factors affecting design of pond dykes ● Construction, compacting and shaping of dykes ● Setting up of pond slopes and harvesting basins ● Common mistakes in pond construction ● Safety measures <ul style="list-style-type: none"> ○ Use of PPEs in pond construction ● Basic first aid techniques 	<ul style="list-style-type: none"> ● Oral questioning ● Observation ● Project
5. Complete pond construction	<ul style="list-style-type: none"> ● Fitting simple inlet and outlet systems <ul style="list-style-type: none"> ○ Types of inlet and outlet systems ○ Pipe joining and assembly ○ Alignment and fixing ● Pegging and trenching of supply and drainage channels <ul style="list-style-type: none"> ○ Factors to consider 	<ul style="list-style-type: none"> ● Written tests ● Oral presentation ● Observation ● Projects

	<ul style="list-style-type: none"> ○ Equipment required ○ Identification of ideal water intake point ○ Pegging techniques for water channels ○ Excavation and levelling ● Installation of screening and water control devices in pipes and channels ● Test running and repairing of newly constructed ponds drainage systems ● Dike protection and planting of grass <ul style="list-style-type: none"> ○ Types of grass ○ Planting techniques ○ Care of newly planted grass ● Control of floods and runoff ● Common defects in new ponds 	
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Suggested Delivery Methods

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

Recommended Resources

Tools and equipment

- Tape measure, spirit level, string level, jembes, spades, pangas, pick axe, rake, slashers, hacksaw
- Compactors and rollers, wheelbarrows

Materials and supplies

Strings and ropes, liners, pegs, PVC pipes and joints, adhesives, screens, lime, cement, sand, ballast, timber, nails, roofing material, chicken feeders and drinkers

Personal protective equipment (PPEs)

- Gloves
- Goggles
- Helmets
- Gum boots
- Overalls
- First aid kits

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