

SET UP FISH POND

UNIT CODE: AQ/OS/AT/CR/01/5/B

UNIT DESCRIPTION

This unit specifies the competencies required to set up a fish pond. It involves implementing farm site food safety plan, site selection, pond design and construction and repair of the fish pond.

ELEMENT These describe the key outcomes which make up workplace function.	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. <i>Bold and italicized terms are elaborated in the Range</i>
1. Implement farm site food safety plan	1.1 Farm site and adjacent site <i>hazards</i> are identified and documented 1.2 Possible <i>sources</i> of physical, chemical and microbial hazards are identified based on <i>prior use of land</i> . 1.3 <i>Preventive measures</i> for farm site hazards are implemented as per manual of standard operating procedures 1.4 Risk is communicated as per policies for internal and external communication
2. Prepare to set up a fish pond	2.1 Pond site is selected based on quality and quantity of water, soil type, topography and the level of identified risks. 2.2 <i>Fish pond layout</i> is designed as per specifications and principles of food hygiene. 2.3 <i>Fish pond</i> is designed in accordance with intended use, size and soil type. 2.4 Fish pond construction cost is worked out based on client's budget and the size of the pond. 2.5 <i>Tools, equipment, food grade materials</i> and <i>supplies</i> are identified and gathered based on job requirements. 2.6 <i>Statutory requirements</i> are met and necessary permits acquired from relevant authorities. 2.7 <i>PPEs</i> are identified and gathered as per job requirements.
3. Construct fish pond	3.1 Occupational safety precautions and food safety standards are applied according to pond site requirements and

	identified food safety risks 3.2 Fish pond site is cleared based on vegetation on the site and nature of topsoil. 3.3 Fish pond area is measured and pegged based on design dimensions. 3.4 A perimeter core trench is constructed around the pond area based on soil characteristics. 3.5 Fish pond area is excavated based on design dimensions. 3.6 Dykes are constructed and aligned to the design specification. 3.7 Supply and drainage channels are constructed based on design, topography and identified food safety risks. 3.8 Inlets and outlets are fitted based on design specifications and identified food safety risks. 3.9 Predator control devices and measures are applied as per identified food safety risks. 3.10 Soil erosion control measures are taken based on good agricultural practices manual
4. Test run the pond	4.1 Pond is filled with water fit for aquaculture stepwise to full capacity 4.2 Pond is checked for defects and wall stability as per standard operating procedures 4.3 Inlets and outlets are assessed against design specifications 4.4 Faults are reported and rectified as per standard operating procedures and identified food safety risks
5. Exit pond construction site	5.1 Recyclable materials and supplies are stored based manufacturer's instructions. 5.2 Non-recyclable materials are disposed off in regard to environmental protection regulations. 5.3 Tools and equipment are cleaned and stored as per workplace procedures. 5.4 Pond completion report is prepared and disseminated as per workplace procedures. 5.5 Hand over completed pond to the client

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range
1. Prior use may include but not limited to:	• For animal feeding or domestic animal production; • As a waste disposal site (garbage or toxic industrial waste); • As a sanitary waste management site; • For mining activities, oil or gas extraction; • For former agricultural activities; • Adjacent land and neighboring areas (risk of cross-contamination); • History of flooding in area of concern.
2. Hazards may include but not limited to:	• Physical • Chemical ○ Heavy metals ○ Industrial chemicals ○ Naturally occurring toxins ○ Pesticides • Microbial • Parasites
3. Sources of hazards may include but not limited to:	• Agricultural chemicals • Toxic plants • Fecal matter • Soil • Water
4. Preventive measures may include but not limited to:	• Location, design and layout of farm • Farm waste management • Pond nets • Pest control • Pond lining • Runoff control
5. Water fit for aquaculture include but not limited to	• Fish species specific recommended level of chlorine • Fish species specific Recommended pH range • Fish species specific Recommended Ammonia • Fish species specific recommended turbidity level • Free of infective pathogens

6. Fish ponds include but not limited to:	• Earthen ponds • Lined ponds • Concrete ponds
7. Pond layout is up to	• 6 ponds of size 300m²
8. Tools, equipment, materials and supplies include but not limited to:	• Tools-tape measure, spirit level, jembes, spades, pangas, • Equipment-plate compactors and rollers, wheelbarrows • Materials and supplies-ropes, liners, pegs, plumbing materials, lime, cement, sand,
9. Permits include but not limited to:	• Water abstraction permit (WARMA)
10. Statutory requirements include but not limited to:	• Relevant regulatory bodies ○ KEBS ○ Ministry of Health ○ WARMA ○ Ministry of Agriculture, Livestock and fisheries • EIA report • Lease agreement/ title deeds,
11. Soil erosion control measures include but not limited to:	• Planting grass on the dykes • Raising the dykes above adjacent ground level
12. PPE's include but not limited to	• Gum boots, helmets, gloves, overalls, first aid kits

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit of competency.

Required Skills

The individual needs to demonstrate the following skills:

- Food safety risk assessment and communication
- Use of tools and equipment
- Measurement
- Drawing and sketching
- Communication skills
- Basic first aid skills
- Design fish pond

- Interpretation of pond designs
- Basic survey skills
- Water quality parameter testing

Required Knowledge

The individual needs to demonstrate knowledge of:

- Food safety Standards (codes of practice for fish and fishery products)
- Regulatory bodies/ Competent authorities
- Hazard Analysis Critical Control Point (HACCP)
- National legislations and regulations
- Types of tools, equipment and PPEs
- Budgeting
- Behavior of predators and related control measures
- Water quality parameters
- Water quality test kits and digital meters

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge and range.

1. Critical Aspects of Competency	Assessment requires evidence that the candidate: 1.1 Implemented farm site food safety plan 1.2 Identified a suitable site for pond location 1.3 Cleared all vegetation and top soil, and stowed away from construction area 1.4 Measured and pegged the pond as per design dimensions 1.5 Positioned water intake structure, inlet pipe and outlet pipe 1.6 Aligned and compacted the dykes at regular intervals 1.7 Sloped the pond bottom to the required gradient 1.8 Tested the completed pond for functionality 1.9 Cleaned and stored tools and equipment as per work place procedures 1.10 Followed safety procedures
2. Resource Implications	The following resources must be provided: 2.1 Workplace or assessment location 2.2 PPEs 2.3 Tools and equipment 2.4 Pond construction materials

	2.5 Writing materials
3. Methods of Assessment	Competency may be assessed through: 3.1 Observation 3.2 Oral presentation 3.3 Projects 3.4 Written tests
4. Context of Assessment	Competency may be assessed on the job, off the job or a combination of these or during industrial attachment. Off the job assessment must be undertaken in a closely simulated workplace environment
5. Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended.

easytvvet.com