Tank Systems for Fish Culturing

Aquaculture Innovation: Growing the Future, Nurturing the Waters

A concrete tank for raising catfish

A tank system for fish culturing is a land-based, intensive aquaculture enclosure. Made from materials like concrete or plastic, it requires a complete feed diet and can operate on various water and air supply systems. It's designed for high-density rearing of species like catfish and tilapia, with regular sorting needed. Success hinges on excellent water quality and year-round availability.

WorldFish
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This technology is TAAT1 validated.

8·8 Scaling readiness: idea maturity 8/9; level of use 8/9

Gender assessment 4

Climate impact 7

Problem

- **Resource and Environmental Challenges**: Limited land and water resources, difficulty in maintaining optimal water conditions, and significant environmental footprint of traditional methods.
- **Production and Efficiency Issues**: Limited capacity for high-density rearing, high death rates due to cannibalism, and inefficient feed use leading to slow growth.
- **Market Accessibility**: Increased costs and reduced freshness due to distance from markets.

Solution

- **Resource and Control Efficiency**: Less land and water usage with optimal environmental control.
- **Intensive Rearing and Survival**: High-density fish production with minimized cannibalism.
- **Market Proximity and Feed Optimization**: Close to markets with maximized food conversion.
- **Environmental, Biosecurity, and Energy Solutions**: Reduced footprint, disease risk, and energy use.

Key points to design your project

Tank systems in aquaculture offer a sustainable solution to traditional fish farming by providing a controlled environment for high-density stocking, using less land and water. They boost income and align with sustainability goals.

Implementing this technology involves:

- **Training** farmers on fish biology, feed and water management, and disease control.
- **Setting up infrastructure**, including tanks, water systems, aeration systems, and procuring quality inputs like fish seed and feed.
- **Implementing best practices** such as regular water monitoring, proper feeding, health checks, and establishing market linkages for produce sale.

Prerequisites include significant initial investment, continuous supply of quality water, access to training, understanding of local market demand, and logistics for produce transportation. These may vary based on local context and project objectives.

Cost: $$$ **120 USD**

Premade suspended tanks with a volume of 2000 liter

500 kg

harvest every 9months for a stocking rate of 50 fish per square meter

330 USD

Gross margin after deducting operating costs

Technology originally documented by

ProPAS

Commodities

Fish

Sustainable Development Goals

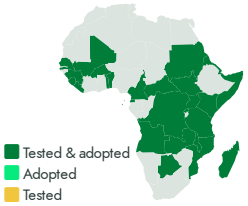
Categories

Production, Equipment, Aquaculture Systems

Best used with

- All Male Tilapia Fingerlings with Greater Yield and Uniformity ›
- Fast Growing and Hybrid African Catfish ›

Tested/adopted in



Where it can be used

This technology can be used in the colored agro-ecological zones.