GIFT "Genetically Improved Farmed Tilapia": All Male Tilapia Fingerlings with Greater Yield and Uniformity

Greater yield and uniformity in tilapia farming

The technology involves predominantly growing male tilapia. This can be achieved through various methods such as manual selection, hormone treatment, or natural techniques. Specifically bred tilapia (GIFT) is recommended for commercial farming.

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This technology is TAAT1 validated.

8·8 Scaling readiness: idea maturity 8/9; level of use8/9

Project adoption 1

Technology integrated in the PROMAC project.

0.1 USD	**300 - 900 g**	**IP**
Cost of one month mono-sex fingerlings in Kenya	Weight of male fingerlings stocked in cages in 5 to 8 months of culture	Patent granted

Problem

- **Low and uneven yields:** Mixed-sex stocks reproduce frequently, reducing yields and harvest uniformity.
- **Slow growth:** Female reproduction reduces energy available for growth and feed conversion.
- **Lower returns:** Smaller and uneven fish reduce marketable output and profitability.
- **Inefficient sex selection:** Manual selection is time-consuming and can discard nearly half of the fingerlings.

Solution

- **Higher and uniform yields:** All-male stocks limit reproduction and produce larger, more uniform harvests.
- **Faster growth:** Male tilapia use more energy for weight gain, improving growth and feed conversion.
- **Improved performance:** GIFT selective breeding improves key production traits and marketable output.
- **Productive male stocks:** GIFT all-male fingerlings reduce reliance on manual sex selection at farm level.

Key points to design your business plan

This technology benefits manufacturers, resellers, and users:

- Manufacturers can boost profitability and efficiency with up to 98% all-male tilapia stocks. Strategic collaborations with research institutions and genetic breeding programs can refine production traits.
- Resellers provide access to high-quality, genetically improved mono-sex tilapia broodstock. Collaborative opportunities exist with equipment suppliers and distributors to expand market reach.
- Users, particularly fish farmers, benefit from reliable growth rates, disease resistance, enhancing productivity and profitability. Comprehensive training programs and collaborations with support services ensure successful tilapia farming practices.

Inclusion assessment 4

Climate impact 7

Technology from

ProPAS

Commodities

Fish

Sustainable Development Goals

2 ZERO HUNGER

8 DECENT WORK AND ECONOMIC GROWTH

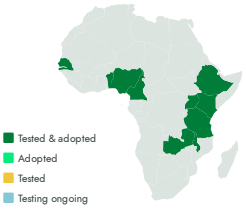
Categories

Production, Improved varieties, Yield improvement

Best used with

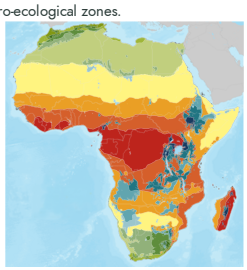
Hapa Nets for Fingerling
See all 1 technologies online

Tested/adopted in



Where it can be used

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



Target groups

Breeders