

**Quantity of stocked fish:** The stocking rate depends on an culture system, (see table). According to the Responsible Farming of Tilapia in India 2011 guidelines, the optimum stocking density of GIFT tilapia are 5/m<sup>2</sup> or as the diversified system demands.

GIFT Best management practices for aquaculture				
Particulars	Pond culture	Cage culture	RAS	BFT
Area (H)	0.02-0.05	6 x 4 x 4	-	-
Depth (m)	4	1.0 - 1.5	-	-
Stocking weight of fish	10 gm	>30 gm	>30gm	>30 gm
Stocking density	5 / m <sup>2</sup>	50 / m <sup>3</sup>	100/m <sup>3</sup>	80-100/m <sup>3</sup>
Culture period	5-6	4-6	4-6	4-6

**Execution of stocking:** Fish should pass with least stresses possible. Therefore, fish of all stages must be handled with care and released gently by means of acclimatization. Time invested in this action will achieve better survival of stocked fish

Fish seed stage	Average fish weight (grams)	Minimum Protein (%)	Feed type	Feed size (mm)
Fry	2-100	28	Floating	0.6-1.2
Fingerling	100-150	28	Floating	1.2-20
Advance fingerling/	150-600	28	Floating	2.0-4.0

**Supplementary feeding:** GIFT tilapia seeds need more food than the naturally available food in the fish pond. Artificial food in floating form is useful for their growth.

**Fish health management:** Fishes should be sampled once in every 15 days to check the health and growth. The body surface should be checked for presence parasites if any. The body surface should be checked for presence parasites if any.

**Harvesting:** Tilapia usually weighs 500 to 600 gm in 5-6 months after stocking. The periodical harvesting is done subsequently with dragnet of suitable mesh size and final harvesting is carried out by completely draining the pond.

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# GIFT Tilapia: A gift for fish farmers



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## Introduction

Genetically Improved Farmed Tilapia (GIFT) is an ideal candidate playing an important role in blue revolution and will continue to do so in the future. It can be grown in diverse farming systems with faster growth rates, higher survival rates, wide feeding habits, resistance to diseases and a shorter harvest time, these unique attributes make it an extremely popular food source in Asia. GIFT has been developed from selective breeding of the species Nile Tilapia, *Oreochromis niloticus* which is also called as Super Tilapia. The GIFT is the producer of the world's first selective breeding program for tropical fish and is an important progressive event in fisheries history. GIFT Tilapia has been developed as a part of a leading selective breeding program that began in 1988 to adapt to a rapidly growing and changing environment. Today, GIFT Tilapia is produced in at least 14 countries. GIFT tilapia has been improving for almost 30 years and is still improving. Given the current and potential contribution of GIFT Tilapia in fish production basket, there is no doubt that GIFT Tilapia can truly be a gift for aquaculture.

## Features of Gift Tilapia Fish

- 1) suitability for wide range of farming systems
- 2) high tolerance to variable water quality and climate
- 3) salinity tolerance and good disease resistance
- 4) low feed conversion and feed efficiency.
- 5) shorter harvest time; more than 200 gm can be sell

6) high stocking density

7) faster growth rate than any other fishes

According to the revised guidelines for Responsible Farming of Tilapia in India 2020, it is mandatory to get formal permission for the culture of GIFT tilapia. The process for obtaining a license is very simple and the terms and condition are as follows (DoF, 2020).

- 1) Before farming, Farmers/ Entrepreneurs should be apply to the State Fisheries Department to register their farm.
- 2) Farms may be located in areas which are not prone to floods or in a buffer zone around a declared sanctuary or bio-reserve or other vulnerable areas in order to avoid escape to the open water bodies.
- 3) Farms of any size of pond and culture system viz. Recirculating aquaculture system (RAS), cage culture, pen culture and Biofloc technology (BFT) are allowed to do GIFT tilapia culture.
- 4) Grow-out ponds should be stocked seed of more than 10 g whereas the stocking size in cages and pens, RAS, BFT systems should be at least 30g or above.
- 5) 5 nos/m<sup>2</sup> or as the diversified system demands.
- 6) It is mandatory to have a provision of Bird scaring device/fencing around the whole pond.
- 7) Bund height should be high enough to avoid fish escape.
- 8) It is necessary to have your own system to check the quality of water.
- 9) It is necessary to keep all the records daily e.g. Feeding rate, water quality, fish weight over a period of time, etc.

## Management of Culture practices

GIFT Tilapia can be farming in various culture systems such as earthen ponds, concrete tanks, super aerated ponds, raceways, recirculating aquaculture systems, cage culture, pen culture and Biofloc technology.

**Pond drying:** In the course of harvesting ponds, water is drained. It is a general rule that ponds should remain as dry as possible until the next production season.

**Liming:** Quick lime at the rate of 200 kg/ha is recommended for accelerating the mineralization of organic matter and act as prophylactic measure. It act as buffer against pH changes and it increases the availability of carbon for photosynthesis.

**Inundation of pond:** When filing pond, there are recommended intervals of time otherwise water condition become favourable for aquatic plants which will grow with the rising water. Appropriate screening of water during inundation of ponds is the only prevention against the entering unwanted fish and items.

**Manuring and fertilization:** It is essential nutrient play a vital role in the productivity of the pond where fish prefer natural fish food is expected. Organic manure i.e. cattle dung @ 1000 kg/ha is generally applied in 4 equal installments. Inorganic fertilizers like Urea @ 25 kg/ha/month and single super phosphate 20 kg/ha/month. Manuring and fertilization should be applied at monthly intervals.