Research Efforts

The Department of Agriculture (DA), Bureau of Agricultural Research (BAR) and the Bureau of Fisheries and Aquatic Resources (BFAR) are currently collaborating to realize the technical and economic feasibility of culturing the Red Tilapia for the benefit of the Filipino fish farmers.

As of now, Red Tilapia can be found all over the Philippines where technology demonstrations on the culture of this tilapia variant are taking place.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF AGRICULTURE
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WHY GROW RED TILAPIA?

A HIGH-VALUE VARIANT OF THE FILIPINOS' ALL-TIME FAVORITE FISH

Introduction

The Philippines is currently ranked 6th in world tilapia production with 279,585.9 MT while the Bicol Region ranked 4th in national tilapia production with 12,574.22 MT in 2021. The grey or Nile tilapia (*Oreochromis niloticus*) and the black tilapia (*Oreochromis mossambicus*) are the dominant freshwater fish being sold in the market. There is a huge demand for this fish due to its good palatability and its being a good source of protein, sold alive or fresh, meaty, having no muscular spine and is easy to prepare with a lot of recipes/ menu to choose from. The addition of red tilapia to the tilapia aquaculture industry is a boost to production, provides more consumer preference, and more business opportunities.

The demand for tilapia is increasing in the Philippines. With rapid population growth and declining fish catch from marine and inland waters, there is a need to increase fish production in aquaculture.

The red tilapia is just like the two species mentioned above but it is an improved variant produced from the cross-breeding of various *Oreochromis* species which resulted to its red coloration. This can be produced in fish ponds, fish cages and fish pens in a freshwater environment. It has a wide range of salinity tolerance from 0 to 25 ppt, which makes it also viable for brackishwater pond, cage and aquasilvi culture. The good characteristics of this species makes it suitable for micro (backyard) farming, small- and medium-scale production and livelihood. It is considered a high-value food fish due to high demand in high-end restaurants owing to its color and taste, emulating other expensive marine species.

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Why is it red?

Red Tilapia was originally from genetic mutants of Oreochromis niloticus, *Oreochromis mossambicus* and *Oreochromis aureus*.

The first red tilapia was developed by aquaculturists in Taiwan in the late 1960s, by cross-breeding a female mutant reddish orange Mozambique tilapia (an albino), *Oreochromis mossambicus* with a normal male (gray) Nile tilapia, Oreochromis niloticus. It was called the Taiwanese Red Tilapia.

Another strain of red tilapia was developed in Florida in the 1970s. This was achieved by crossing a normal-colored female Zanzibar tilapia (*Oreochromis urolepis hornorum*) with red-gold male Mozambique tilapia (*Oreochromis mossambicus*).

A third strain of red tilapia was developed in Israel also in the 70s, from a mutant pink Nile tilapia (*O. niloticus*) crossed with wild blue tilapia (*O. aureus*).

The Red Tilapia was introduced in the Philippines from Singapore in 1978. This was subsequently crossed with Nile tilapia (*O. niloticus*) from Taiwan, Japan and Singapore.

Culture Potential

The Bureau of Fisheries and Aquatic Resources (BFAR) in now in the pursuit of coming up with site-specific protocols for the grow-out culture of the red tilapia.

Current techno-demo efforts are being undertaken to improve its productivity and promote its culture among Filipino fish farmers.

Our goal is to scale out its production technologies developed by various Philippine research institutions in a manner which will encourage technology adopters and potential investors to increase household incomes and livelihood opportunities from this species.