

Tilapia Pureline

Tilapia is a genus of fish that belongs to the Cichlid family of which the Angelfish, Oscar, African Cichlids and others belong. The Tilapias are one of the major groups of food fishes around the world, especially in the tropical and semitropical areas, and have been cultivated for thousands of years. Pictures or carvings appear on artifacts and monoliths in Egyptian tombs as far back as 2,000 bc, but only in the last 50 years have we begun to focus on developing them as an alternative to harvesting everything that moves in the seas and lakes.

In the last 25 years we have concentrated on developing better gene lines in pure species of Mossambica, Hornorum, Nilotica and Aurea.

Tilapia Hybrids

As mentioned in the previous paragraph, we have concentrated on developing better gene lines in pure species of Tilapias. These Tilapia can then be crossed to create f-1 hybrids with all of the good combinations of improved characteristics and also with hybrid vigor and evenness of growth rate. These new varieties of hybrids such as the Pennyfish™ offer improvements in cost of production that promise to reduce the cost of producing fish for food to match that of Chicken, and to do it in a fraction of the space of other animal crops. All in all it may prove to be the cheapest source of low cost high quality protein on Earth.

Experimental

Here we will explain improvements to various gene lines which are currently being worked for.

SINGLE Pennyfish breeder colony

This breeder colony consist of 5 female orange t. mossambica which carries the xx chromosomes for sex determination and there fore produces only eggs with the x chromosomes for sex determination.

The Supermale, *T. hornorum* is a black tilapia fish from Zanzibar which was originally named *t. mossambicus* variety Zanzibar. The breeder colony has one Supermale which carries the genes ZZ for sex determination and so only can produce sperm with a Z chromosome for sex determination. When the Supermale *t. hornorum* (ZZ) mates with a female orange *T. mossambica* (xx) all of the fertilized eggs have (Zx) chromosomes for sex determination which means they will all be male since the Z chromosome dominates the x chromosome and so only pennyfish males are produced. Each such colony can produce in excess of 31,250 pennyfish during the estimated five years of breeding that they are capable of with good care.