

**GROWTH PERFORMANCE OF CULTURING
TILAPIA NILOTICA (LIN.) (PISCES, CICHLIDAE) IN
FIXED CAGES IN UNNICHCHAI RESERVOIR,
WITH DIFFERENT DIETS**

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BY

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ABSTRACT

Sri Lanka is rich in water resources in and around the country and its population depends on the water resources for food and to generate income. Although there are plenty of inland water resources, they are not utilized properly especially to obtain fishery resource until the last Tsunami, which caused catastrophic effect on the coastal fishery. Introducing cage culture farming in tanks will contribute to decrease the fish demand created by the Tsunami effect. However, no any attempt have been made yet in the eastern sector to boost the inland culture fishery in tanks due to the lack of proper knowledge among the peoples about fin fish culturing in cage. Hence, this research, which concerned about inland cage culture, will provide fruitful information to the peoples to develop such culturing methods. This research mainly investigates the growth performance and yield of *Tilapia nilotica* in cages and in cement tanks. The Unnichchai reservoir was selected for the cage culture and cement tanks (four) in Eastern University. Four cages (of 150x 80x180 cm) were installed in the Unnichchai tank. And each cage and tank was stocked with twenty-five fingerlings of same age (three weeks) and approximately same size (2 inches). The fingerlings were fed with three different types of food mixtures, such as Rice bran, Rice bran mixed with rice flour, and tropical fish feed. One cage and tank was left as a control with natural food in the water. Body weight and total length of fish were measured fortnightly. The experiment was conducted for nearly five months. The result shows high growth in cages than the cement tanks (the average growth rate in cage is 0.129 cm/day, in tank 0.058 cm/ day).

There is no significant difference in average length variation for different feed in the fish cultured in cages ($p= 0.188 >0.05$). However there is significant difference in average length variation for different feed in tank culture ($p= 0.0001 <0.05$). The condition factor (c) that used to determine the habitat quality is high in the fixed cages than the cement tanks. The average condition factor (c) in the cages is 0.041 and in cement tanks, the average condition factor (c) is 0.027, this reflects that the cage, as semi intensive culture is more suitable for *Tilapia nilotica* culture than the cement tanks.

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