

**STUDY OF GROWTH PERFORMANCE OF
Oreochromis niloticus (NILE TILAPIA) FED BY
FORMULATED DIET INCORPORATED WITH
PHYTASE ENZYME**



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ABSTRACT

Fish is highly enriched with nutrients and served as a valuable source of protein. Major constraints faced by inland aquaculture industry of Sri Lanka are higher feed cost and less growth performance of fish. Nile tilapia (*Oreochromis niloticus*) significantly contributes to the inland aquaculture due to its high adaptability to different environmental conditions and high growth rate. Phytase enzyme incorporated feed increases the release of phosphorus from plant meals and enhance the digestion in fish. Present study was focused to determine the effect of phytase enzyme incorporated artificial feed on growth performance of *Oreochromis niloticus*. Two treatments, Treatment 1 artificial feed with phytase enzyme and treatment 2 without phytase enzyme were conducted in fiberglass tanks (3.14m³) with 3 replicates. Artificial feeds were formulated with 39% protein and 0.2gkg⁻¹ phytase enzyme. Nile Tilapia fingerlings (mean weight 5g ± 1) were stocked with a stocking density of 5 fish per tank and reared for 10 weeks. They were fed three times per day at 5% of body weight. The live weight, total length and standard length of fish were measured within two week intervals. The weight gain of treatment 1 (17.25±4.65) and treatment 2 (15.31g ± 4.10) were significantly different (p<0.05). Since treatment 1 revealed the highest weight gain phytase enzyme incorporated feed could be recommended to obtain a high growth performance in Nile tilapia in aquaculture industry.

Key Words Fish feed, Growth performance, *Oreochromis niloticus*, Phytase Enzyme