

# Practical Aspects and Immune response of Probiotics Preparations Supplemented to Nile Tilapia (*Oreochromis Niloticus*) Diets

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### Abstract :

Abstract: This study was carried out for 7 months at fish Laboratory of Animal Production Department, National Research Center, Dokki, Egypt. The experiment aimed to investigate the effect of two commercial probiotics (Premalac and Biogen) each at 1, 2 and 3 g/Kg diet on growth performance and immune response of Nile tilapia fingerlings. Premalac is a dried fermented product of *Lactobacillus acidophilus*, *Aspergillus oryzae* extract, *Bifidobacterium bifidum*, *Streptococcus faecium*, *Torula* yeast, Skim milk, Vegetable oil and CaCo<sub>3</sub>. Biogen is a dried natural product composed of Allicin, high unit hydrolytic enzymes, *Bacillus subtilis* and Ginseng extract. A total of 420 fingerlings with a uniform size and weight (1 gram) were used of which 60 fingerlings represent the control group. The rest (360 fingerlings) distributed randomly into two blocks (probiotics), each block included three treatments (probiotic levels). Each treatment in addition to the control one were represented in three replicates (aquaria) in which 20 fingerlings were kept in each aquarium. The best results of growth and feed utilization of tilapia were obtained by fish diet supplemented with Biogen followed by those having Premalac, each at 2g/Kg diet. However, fish fed on Biogen-supplemented diets exhibited significantly higher values of nutrients digestibility. On the other hand, fingerlings fed either Premalac or Biogen at 2g/Kg had significantly higher total leucocytes count than the control which indicating high immune response of tilapia fingerlings. In conclusion, it is suggested that the tested probiotics preparations are suitable for mixing with tilapia diets to improve their performance and immunity. [Nature and Science. 2010;8(5):39-45]. (ISSN: 1545-0740).

### Key Word :

*Oreochromis Niloticus* , Immune response, Probiotics Preparations.

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