

Abstract

The present study was designed to evaluate the dietary effect of dietary supplementation of *Bacillus licheniformis* on growth, hematological and immune parameters of Mozambique tilapia (*Oreochromis mossambicus*) fingerlings (Average initial weight 5.3 ± 0.01 g). A feeding trial of 8 weeks was carried out at Animal house, department of Zoology, GC university Lahore. During the trial, fish were fed with four experimental diets including a control diet and three supplemented diets such as, 10^5 , 10^7 and 10^9 cfu g^{-1} respectively. Fish were fed at a rate of 2% of body weight on daily basis in triplicates. At the termination of feeding experiment, growth related parameters, hematological and immune response of fish were evaluated. The increased growth rate and specific growth rate was observed in groups treated with supplemented diets. Feed conversion ratio (FCR) was significantly reported in similar groups. Similarly, leucocyte and erythrocyte count and glucose content were increased significantly in supplemented groups when compared with control groups. Total protein content and Peroxidase activity was significantly enhanced ($P < 0.05$) in fish fed with highest concentration (10^9 CFU/g) of probiotic in comparison to control and other dietary groups. In conclusion, supplementation of diet with *Bacillus licheniformis* could enhance growth rate, and health profile of *O. mossambicus*.