

Garlic as a Prophylactic Agent in *Aeromonas hydrophila* Infection in Red Tilapia (*Oreochromis Spp*)

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Abstract

A study was carried out to compare the effects of garlic (*Allium sativum*), as a prophylactic agent, on survival rate of the red tilapia (*Oreochromis spp*). Mono-sex tilapia around the size of 3 cm were used in the experiment. Fish were assigned to five treatment groups, with two replicates each. Treatment groups were given different level of *A. sativum* (20, 30, 40, 50 g/kg body wt) in their diets. The control group diet was free from garlic. Fish were measured and weighed on the first day of the experiment to obtain the initial length and weight. Diet was administered *ad libitum* for 30 minutes, twice a day for 30 days. Excess feed was removed after 45 minutes after each feeding. On the 30th day fish were again measured and weighed to obtain the final length and weight before experimental infection with *Aeromonas hydrophila* by immersion route done and mortality rate monitored for 96 hours. The results show that there was lower mortality when garlic was added to the diet of the fish. There was also a significantly ($p < 0.05$) higher standard body length and body weight gain in the treatment groups than the control. These findings suggest that fish fed with garlic showed better growth performance. In conclusion the study showed that garlic can be used as a prophylactic agent against *A. hydrophila* infection and the addition of garlic at 50g/kg body wt in the diet can improve the growth performance of the tilapia.

Keyword: garlic, tilapia, *Aeromonas hydrophila*, mortality rate, growth performance