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JOURNAL OF APPLIED AQUACULTURE
https://doi.org/10.1080/10454438.2020.1785984

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Effects of dietary tamarind pulp extract on growth performance, nutrient digestibility, intestinal morphology, and resistance to *Aeromonas hydrophila* infection in Nile tilapia (*Oreochromis niloticus* L.)

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ABSTRACT

The effect of tamarind pulp extract (TPE) on the growth performance, apparent nutrient digestibility, intestinal morphometrics, body proximate composition, and resistance against *Aeromonas hydrophila* infection in Nile tilapia was determined. The fish were fed experimental diets formulated to contain 0.0 (control), 5, 10, 15, or 20 g TPE/kg diet at 3% body weight daily for 84 days. Thereafter, a 14-day challenge test with *A. hydrophila* infection was done. The results showed that TPE supplementation significantly ($P < 0.05$) enhanced the fish growth, protein efficiency ratio, apparent lipid and protein digestibility, villi height, and absorption area at levels of 10–20 g/kg diet compared to the control diet. Similarly, TPE supplementation increased the crude lipids and ash contents in the fish body. Postchallenge fish fed TPE-supplemented diets showed a higher survival rate relative to fish fed the control diet. The results demonstrated that dietary TPE promoted growth, nutrient digestibility, and protection against *A. hydrophila* infection in Nile tilapia, and its inclusion at 15 g/kg diet is therefore recommended.

KEYWORDS

Nile tilapia; tamarind pulp; performance; *Aeromonas hydrophila*