

**EFFECTS OF DIETARY pH ON GROWTH PERFORMANCE
AND FEED UTILIZATION OF THE NILE TILAPIA
(*Oreochromis niloticus*)**

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ABSTRACT

Two feeding trials were conducted to investigate the effects of dietary pH (pH 2.5, 3.7, 4.6, 5.7-control, pH 7.0, and pH 8.0) and dietary acid source (acetic acid, citric acid, hydrochloric acid and control-no acid) on growth rate and feed utilization efficiency of the Nile tilapia fry. In addition, attractability indices of the diets at different pH and dietary acid sources were determined. Results of the first feeding trial showed that the feed with pH adjusted to 4.6 resulted in increased growth rate and improved feed utilization efficiency in the Nile tilapia. In the second feeding trial, the use of either hydrochloric, citric or acetic acid in adjusting the pH to the optimal 4.6 did not affect the growth performance of the fish. This study demonstrated that pH and not actually the kind of acid diet promoted growth and efficiency in the Nile tilapia fry. Furthermore, this study provides new information on the use of acid in aquaculture as feed additive for tilapia fry, which can be added to fish feed literature.

Keywords: tilapia, pH of feeds; organic acids; hydrochloric acids; attractability; feed acidity