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Abstract record

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Growth performance and nutritional utilization efficiency of vitamin C in the diets of African catfish *Clarias gariepinus* (Burchell 1822) fingerlings.

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Abstract

This study was undertaken to evaluate the requirement of dietary ascorbic acid supplementation in the diet of African catfish *Clarias gariepinus* using measures of growth performance and nutrient utilisation. *Clarias gariepinus* fingerlings weighing 6.02 ± 0.4 g were randomly distributed into glass tanks measuring 60 cm × 45 cm × 45 cm dimension at ten fish per tank in a triplicate treatment. Five isonitrogenous and isocaloric diets containing 40% crude protein were formulated. Endogenous concentrations of Ascorbic acid (AA) were monitored in the diet, this was supplemented with graduated concentration of ascorbyl-2-polyphosphate at 0 (Control) 50, 100, 150 and 200 mg AA/kg, in Treatment 1, 2, 3, 4 and 5 respectively. Fish were fed practical diets twice daily at 9:00 h and 16:00 h GMT. Weekly weighing of fish was done and the data collected were subjected to statistical analysis. Biological evaluation of the fish was based on growth performance and nutrient utilisation efficiencies. The results showed that the productivity indices, specific growth rate (SGR), feed conversion ratio (FCR), protein efficiency ratio (PER) and feed efficiency ratio (FER) in all the treatment were significantly different from each other. In all parameters considered, treatment 4 fed 150 mg AA/kg gave the best growth performance and nutrient utilisation efficiencies.

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