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Supplemental feed formulation for the best growth performance of Nile tilapia *(Oreochromis niloticus)* in pond culture system

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Aquaculture remains virtually nonexistent in Ethiopia despite the nation's suitable natural and socio-economic conditions to support its development. One of the major setbacks to the sector's development in the country is a critical shortage of well formulated aquafeeds. Nile tilapia *(Oreochromis niloticus* (Linnaeus, 1758)) is one of the potential aquaculture species in the country. Therefore, this study was conducted to identify the best supplemental feed formulation from locally available and low-cost ingredients for the best growth performance and yield of Nile tilapia in earthen pond culture. The experiment was designed to consist of three treatments of 30%, 35% and 40% crude protein formulated feeds and one control, each in two replicates. Juvenile fishes of known initial length and weight were stocked into the experimental ponds at a rate of two fish/m-2. The fishes in the treatment ponds were fed with the formulated feeds at 5% of their body weight twice a day for 150 days. The growth, feeding and condition factor parameters were computed following known equations in the literature. Variations in the mean fish size were tested using one-way ANOVA. The values of growth and yield as well as feed conversion parameters and fish condition were higher for the fishes fed with the 35% crude protein level. These parameters decreased as the amount of crude protein was increased beyond 35%. The economic valuation suggested that large-scale earthen pond production of Nile tilapia can be economically feasible based on the feed formulated from the local ingredients experimented in the present study.

Biography

Firew Admasu Hailu has persuaded his studies from Jimma University, Ethiopia and is currently working as an instructor in the College of Natural and Computational Science at department of Biology at Dilla University.

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