

**Evaluation of yields and growth performance of Nile tilapia (*Oreochromis niloticus*), with ningu (*Labeo victorinus*) and African catfish (*Clarias gariepinus*) in earthen ponds in Kenya.**

**D.N. Oengal\* , D.Y. Mgaya, G. Mbahizereki, A.P. Shoko, and E.M. Nyanchiri**

*Kenya Marine and Fisheries Research Institute, Sangoro Aquaculture Station, P.O Box 136,  
Pap-Onditi, Kenya*

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**Abstract**

Hunger and malnutrition remain amongst the most devastating problems facing the majority of the world poor and needy with nearly 30% of 6.1 billion people suffering from one or more of the multiple forms of malnutrition. Aquaculture has been reported as the fastest growing food producing industry having grown from 5.3% to 35.2% in terms of global fish landing. Aquaculture in East Africa has however remained static due to among others management strategy. Polyculture of Nile tilapia, African catfish and *Labeo victorinus* is considered a management strategy with the potential to increase yields and profitability of tilapia farming in Sub-Saharan Africa. However for its ready adoption, detailed information particularly on stocking ratios and densities of different species is required to provide insight into the value of the technology to the farmers. Based on the above information, a 150 day experiment of mixed-sex Nile tilapia (*Oreochromis niloticus*), African catfish (*Clarias gariepinus*) and *Labeo victorinus* of mean weight 5g, 5g and 50g respectively were co-stocked in nine 100 m<sup>2</sup> earthen ponds (1.0 m depth). The experiment was a comparison of the growth performance of Nile tilapia when stocked with the two different species i.e. at a stocking density 3fish/M<sup>2</sup> of 3:1 combination ratio for both the species. Fish were fed on a 30% CP and the ponds fertilized fortnightly with chicken manure, urea and DAP to maintain 5kg/P/wk and 20kgN/ha/wk for P and N respectively. Mean daily growth rates, final weights, and yields of size tilapia after 150 days were significantly ( $P < 0.05$ ) higher in treatment 1 i.e. the treatment of tilapia: catfish and tilapia results in this study are detailed in this paper.

\*Correspondence : [dnoenga@yahoo.co.uk](mailto:dnoenga@yahoo.co.uk)