

Effect of some abiotic factors on the growth of *Oreochromis niloticus* Linnaeus, 1758 (Perciformes: Cichlidae) in tropical ecosystems (Cameroon)

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ABSTRACT:

The growth of *Oreochromis niloticus* (2.6g initial average size) was studied in 100m² earthen ponds for 180 days under tropical field environment. Varying fertilizing regimes consisting of *Pennisetum purpureum* (PP) and *Musa sapientum* (MS), two locally available weedy grasses were applied in duplicates in the experimental ponds, at the rate of 0.1-0.2 kg dry matter per m² per day. Water quality parameters were monitored bimonthly between 8:00am-9:00am. Final average fish weight varied significantly ($p < 0.05$) as follows: 43.85g, 35.5g, 59.5g, 24.9g and 50g, 2 respectively for PP, MS, MS+PP, T₀ and T₁. Corresponding daily growth were 2.2g/d, 0.1g/d, 0.3g/d, 0.1g/d and 0.2g/d. Survival rate equally varied significantly as follow: 60 %, 67 %, and 98 %, 70 % and 97 % respectively. During the study period, the results indicated the water quality were permissible limits and can be used for livestock of *Oreochromis niloticus*.

Keywords:

Oreochromis niloticus, Fish farming, Pond, Water quality, Fertilization.