

## Substitution of Fish Meal by Local Vegetable Raw Materials in the Feed of Juvenile Nile Tilapia (*Oreochromis Niloticus*, Linne, 1758) in Senegal

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**Abstract :** The study is a contribution to the development of a feed for juvenile tilapia *Oreochromis niloticus*, from local raw materials in order to reduce the cost of feeding farmed tilapia in Senegal. Three feeds were formulated from local raw materials. The basic composition of the tested feeds is as follows: A1 (peanut meal, rice bran, millet bran, maize meal and no fish meal); A2 (peanut meal, rice bran, millet bran, maize meal and 10% fish meal) and A3 (peanut meal, rice bran, millet bran, maize meal and 25% fish meal). All feeds contain 31% protein. The trial compared three batches, in 2 replicates, with different diets. The initial weight of the juveniles was  $0.37 \pm 0.5g$ . The daily ration was distributed at 9 am and 4 pm. After 90 days of the experiment, the final mean weights were  $2.45 \pm 0.5g$ ;  $2.75 \pm 0.5g$ ; and  $4.67 \pm 0.5g$  for A1, A2, and A3, respectively. A performance test, of which the objective was to compare growth parameters, was conducted. The results of the growth parameters of juveniles fed A3 were significantly higher ( $p < 0.05$ ) than those fed A1 and A2. The weight growth study shows similar growth during the first month. However, from this date onwards, juveniles fed A3 show a faster growth, which is maintained throughout the experiment. On the other hand, the Protein Efficiency Coefficient and the Survival Rate showed no significant difference. The zootechnical parameters are not significantly different ( $p > 0.05$ ) between the two tanks for the same feed treatment.

**Keywords :** nutrition, feed, fingerlings, *Oreochromis*, local raw materials, feed cost

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