

**A COMPARATIVE STUDY ON THE GROWTH OF POST
LARVAE OF THE FRESH WATER PRAWN
(*Macrobrachium rosenbergii*) USING FEEDS FORMULATED
WITH DIFFERENT SOURCES OF PROTEIN.**

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ABSTRACT

Post larvae of *Macrobrachium rosenbergii* were fed with three feed formulated with different protein sources (mussels, trash fish and slaughter house wastages) to find out whether there is a significant difference in the specific growth rate, feed conversion ratio, mean percentage survivals, final body weight and the percentage of crude protein content. Poultry feed (starter-1) was used as a control. The post larvae were fed twice daily at a rate of 10 % of the biomass in two culture cycles carried out in May- July and August -October 2004.

In both culture cycles, water temperature in glass tanks varied between 28 °C and 29 °C and dissolved oxygen level ranged between 5 mg/l and 12 mg/l. The pH of water in glass tanks varied between 7 and 9, alkalinity level changed between 108 mg/l and 156 mg/l, total hardness varied between 171 mg/l and 268 mg/l, total nitrite level ranged from 0.0008 mg/l to 0.1840 mg/l and total ammonia level ranged from 0.020 mg/l to 0.958 mg/l. There were no significant differences in the mean values for water temperature, pH, alkalinity and hardness.

The final weight between post larvae fed with diet M₄ (Poultry feed) was significantly lower than that of the post larvae fed with the diet M₁ (protein source: mussels), M₂ (protein source: trash fish) and M₃ (protein source: slaughter house wastages). The Feed conversion ratios (FCR) of post larvae fed with the diet M₁, M₂, M₃ and M₄ were 3.00-3.51, 2.74-3.70, 2.21-3.30 and 4.5-5.30 respectively. These values were not significantly different from each other and were significantly lower than the FCR value of post larvae fed with diet M₄. Percentage of crude protein in diets M₁, M₂, M₃ and M₄ were 32.97-33.53, 33.16-34.80, 35.54-34.82 and 20.44-21.73 respectively. The percentage of crude protein levels in diet M₁, M₂ and M₃ were not significantly different from each other but were significantly higher than the that of diet M₄. Percentage of crude protein of post larvae fed with the diet M₁, M₂, M₃ and M₄ were

22.02-22.63, 23.14-23.88, 23.00-23.92 and 20.00-21.04 respectively. The percentage of crude protein in the post larvae fed with diets M₁, M₂ and M₃ were not significantly different from each other but were significantly higher than that of the post larvae fed with diet M₄.

Growth of post larvae of *M. rosenbergii* is influenced by the protein contents of the diet. The formulated feeds using mussels, trash fish, and slaughter house wastages as protein sources are more effective in growth of post larvae of *M. rosenbergii* than the commercial feed (poultry feed). The formulated feed using slaughter house wastages is the most effective feed for the growth of post larvae of *M. rosenbergii*.