Oceanography/Vol.3/No.9/Spring 2012/1/6-6

Effect of Different Dietary Carbohydrate to Lipid Ratios on the Growth and Feed Performance of juvenile benni (*Barbus sharpeyi*)

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Received Date: July 25, 2011 **Corresponding Author* *Accepted Date: December 20, 2011*

Abstract

This study was undertaken to determine the effects of various dietary carbohydrate to lipid (CHO/L) ratios on growth and feed performance of benni (*Barbus sharpeyi*) juveniles. Nine iso-nitrogenous (25% crude protein) and iso-caloric (3.5 kcal/g digestible energy) diets with varying CHO/L ratios (0.8 to 8.8) were tested for 8 weeks with three replicates. Each replicate was stocked with 20 fish (initial mean weight: 16.4 ± 0.2 g) that were fed to satiation thrice daily. Growth and feed indices increased significantly with change in dietary CHO/L ratio up to a signifinant level and then decreased ($P < 0.05$). Maximum Weight gain (118.4 ± 7.8), weight gain rate (35.9 ± 2.5), specific growth rate (0.5 ± 0.03), feed conversion ratio (2.7 ± 0.04), feed efficiency ratio (0.3 ± 0.01), protein efficiency ratio (1.4 ± 0.02) and net protein utilization (30.9 ± 6.3) were observed in diet D5, with CHO/L ratio of 4/8, that didn't show any significant difference with diet D4, with CHO/L ratio of 3/8, but showed signifinant difference with other diets. It could be concluded that the optimal dietary CHO/L ratio for optimal growth and feeding performance of *Barbus sharpeyi* juveniles, ranged between 3.8 and 4.8.

Keywords*: Barbus sharpeyi, Carbohydrate, Lipid, Growth, Feeding.*