

ABSTRACT

A feeding experiment was conducted on carp (grass carp - *Ctenopharyngodon idella*) for 60 days in order to evaluate the best protein level. Different diet ingredients were procured from local market and analyzed for % age protein, % age fat, % age ash, % fibre, % age moisture contents and energy. Five isoenergetic (17.91 ± 0.02) KJ MJ⁻¹ and isolipidic diets (8.56 ± 0.09) g with varying protein levels T₁ (20%), T₂ (25%), T₃ (30%), T₄ (35%) and T₅ (40%) were prepared from local diet ingredients and fed to duplicate groups of 10 fish (average weight 0.57 ± 0.001 g fish⁻¹). Over 60 days feeding trial, the highest mean weight gain, average daily growth, percent weight gain, specific growth rate but lowest feed conversion ratio were observed for T₅ (40% protein level) diet at (P<0.05). Minimum mean weight gain, average daily growth, percent weight gain, specific growth rate but the highest feed conversion ratio were observed for T₁ (20% protein level) diet. Temperature (26-30°C), pH (8.3-8.5), and dissolved oxygen (6.00-7.00 mg/L) were within the optimum range throughout the experiment and did not significantly differ among different treatments at (P<0.05). However growth was affected by diel fluctuation of temperature in last thirty days of experiment. Nitrite, nitrate, ammonia, total alkalinity, total hardness and chlorides were within the desired range for all the treatments (T₁-T₅). Forty percent protein level seems to be optimum for rearing grass carp (*Ctenopharyngodon idella*) fry.