

The effect of varying dietary protein level on the growth, food conversion, protein utilization and body composition of tropical catfish *Mystus nemurus* (C. and V.) cultured in static pond water system

ABSTRACT

Tropical catfish, *Mystus nemurus* (C. & V.) (25.89 ± 0.7 g) were stocked semi-intensively in 0.03-ha earthen ponds at the rate of 10 000 ha⁻¹ and fed six iso-energetic practical diets ranging from 27% to 50% protein for 8 weeks. Each diet was fed in three replicate ponds twice daily to satiation. Experimental fish were also reared extensively, in control ponds, without supplementary feed. Fish fed the 42% protein diet had the highest standing crop, weight gain and protein utilization values and the differences from other diets were statistically significant ($P > 0.05$). Protein efficiency ratio (PER) decreased as dietary protein increased. The experiment indicated that natural food organisms contributed to some degree if not significantly to the catfish production. Weight gain, food conversion ratio (FCR), PER and SGR (specific growth rate) indicated that a 42% protein diet with digestible protein-to-energy ratio (D/E) of 27.57 mg kj₋₁ produced maximum growth in the static pond system.

Keyword: Fish; Protein diet; Catfish production