

Effects of palm oil products on growth performance, body composition and fatty acid profile of juvenile Malaysian mahseer (*Tor tambroides*)

ABSTRACT

This study was performed to investigate the effects of different types of palm oil on the survival, growth performance, body indices, lean percentage, body composition and fatty acid profile of juvenile Malaysian mahseer, *Tor tambroides*. Four extruded diets containing 5% crude palm oil (CPO), refined, bleached, deodorised palm oil (RBDPO), RBD palm olein (RBDPOo) and RBD palm stearin (RBDPOs) were prepared. Triplicate groups of *T. tambroides* juveniles (1.65 ± 0.6 g) were stocked in 60 litres aquaria at 20 fish per aquarium and fed the diets for 12 weeks. Fish fed CPO and RBDPOs diet showed the best feed conversion ratio (FCR), while the lowest viscero-somatic index (VSI) was observed in juveniles fed RBDPOo and RBDPOs. A significantly higher ($P < 0.05$) protein and gross energy retention were observed in juveniles fed RBDPOs compared to those fed RBDPO. The highest muscular retention of n-3 and n-6 long-chain polyunsaturated fatty acids (n-3 and n-6 LC-PUFA) was observed in juveniles fed CPO diet. In addition to giving a higher PUFA ratio in mahseer muscle than other palm oil products, CPO was the most cost effective palm oil type and was recommended as the lipid source in the diet of *T. tambroides* juvenile.

Keyword: *Tor tambroides*; Crude palm oil; RBD palm oil; Palm olein; Palm stearin