

Effects of dietary supplementation of lysine and methionine in tempeh-based diet on growth performance and feed utilization of tiger grouper, *Epinephelus fuscoguttatus* juveniles

Abstract

The potential of tempeh (TMP) with supplementation of methionine (Met) and lysine (Lys) as a substitute of fishmeal (FM) was evaluated based on the growth performance and feed utilization for tiger grouper (*Epinephelus fuscoguttatus*) juveniles. Three diets were formulated to replace FM with TMP at 0% (D1, control diet), 40% without essential amino acids (EAAs) supplementation (D2) and 40% with EAAs supplementation (D3, 0.5% of Met and 0.5% of Lys) and fed to triplicate groups of fish (22.90 ± 0.48 g) twice a day for 8 weeks. Weight gain (WG), specific growth rate (SGR) and feed intake (FI) of D1 group (114.31%, 1.59%, and 45.51 g fish⁻¹, respectively) were significantly higher than those fed with TMP-based diets ($P < 0.05$) of the fish. In the present study, results indicated that supplementation of EAAs was only able to improve feed utilization (PER and NPU) but not in growth performance (WG and SGR) of *E. fuscoguttatus* fed on TMP-based diets.