

Effects of palm oil blended with oxidized fish oil on growth performances, hematology, and several immune parameters in juvenile Japanese sea bass, *Lateolabrax japonicas*

Abstract

A 60-day feeding trial was conducted to determine the effects of palm oil blended with oxidized and non-oxidized fish oil on growth performances, hematology, and non-specific immune response in juvenile Japanese sea bass, *Lateolabrax japonicas*. Japanese sea bass (1.73 ± 0.01 g) were fed seven experimental diets containing 100 g/kg of dietary lipid in forms of palm oil (10P), fish oil (10F), fish oil blended with palm oil at different ratios, 6:4 (6F4P) and 4:6 (4F6P), oxidized fish oil (10OF), and oxidized fish oil blended with palm oil at different ratios, 6:4 (6OF4P) and 4:6 (4OF6P). After the feeding trial, the following results were illustrated. No significant effects were observed in survival, feed conversion ratio, condition factor, and hematocrit after feeding with experimental diets for 60 days. The relatively higher specific growth rate and hematology were observed in 6F4P. Furthermore, both palm oil and oxidized fish oil acted as a negatively on serum lysozyme activity ($P < 0.05$). This study suggested that a ration of 6F4P is recommended as an innocuous ratio for Japanese sea bass. Furthermore, according to the present investigation, palm oil seems to have the ability to improve the protein efficiency when added to oxidized fish diets as well as a positive trend to the growth performance ($P > 0.05$).