

Suitable dietary protein/lipid of hybrid, female red sea bream *Pagrus major* and Male Black Sea Bream *Acanthopagrus schlegeli* in Juvenile Stage, as compared with Red Sea Bream

Abstract

To determine a suitable dietary protein/lipid (CP/CL) ratio in the early juvenile stages of hybrid porgy (F1), female red sea bream (RSB) × male black sea bream, five diets with various CP/CL ratios—60/7, 55/12, 51/17, 46/23, and 41/28—were prepared and provided to juveniles in triplicate. At the smaller juvenile stage, F1, weighing 0.32 g, a significantly higher specific growth rate (SGR) and feed efficiency (FE) were seen with 60/7 and 55/12 diets. However, in RSB weighing 0.26 g, SGR and FE were higher with the 60/7 diet than the other diets at 21°C. At the larger juvenile stage, F1, weighing 3.7 g, there was no significant difference in SGR or FE among the diets, but RSB weighing 4.0 g fed 60/7, 55/12, and 51/17 diets had higher SGR and FE than 46/23 and 41/28 diets at 24°C. Moreover, survival and apparent nutrient retention of F1 at both stages were significantly higher than those in RSB. These results indicate that both F1 and RSB weighing ca. 0.3 g require a higher dietary CP/CL than those weighing ca. 4 g. Additionally, F1 in both trials showed the suitability of a lower dietary CP/CL than RSB, indicating that mass production of F1 juveniles will be more economical than RSB.