Dietary vitamin C requirement of hybrid, female red sea bream, pagrus major x male black sea bream Acanthopagrus schlegeli

Abstract

In order to clarify the dietary vitamin C (AsA) requierment of the hybrid, we used Lascorbyl-2-monophosphate Mg (APM) as an AsA source and examined on weight gain, growth performance, and hepatic and cephalic AsA contents. The hybrid weighing 15 g were fed with diets including 0, 50, 100 and 200 mg APM/kg up to apparent satiety, three times a day, six days a week for 6 weeks. The feeding trial was conducted on three replicates. Final mean body weight of hybrid fed the diets became 5 times of initial mean body weight without significant differences among the dietary treatments, together with feed efficiency, carcass proximate composition except crude ash and nutrient retentions. Hepatic AsA contents of hybrid fed 50-200 mg APM diets were slightly higher than that fed 0 mg APM diet. Cephalic AsA contents of the hybrid fed 50-200 mg AsA diets reached a plateau level, significantly higher than that fed 0 mg AsA diet. While, no difficiency sign of AsA was observed throughout the feeding trial. These results reveal that the hybrid require no more than 50 mg APM/kg diet, calculating18 mg AsA/kg diet, which may be scarce as compared with red sea bream as well as other cultured fishes.