DIETARY PROTEIN TO ENERGY RATIO FOR BAGRID CATFISH (*Hemibagrus wyckioides*) : THE OPTIMUM P:E RATIO FOR GROWTH AND FLESH QUALITY

Abstract

Bagrid catfish (*Hemibagrus wyckioides*) is one of the most economically important species culture in cage along the Mun river; the biggest tributary of Mekong, Northeast of Thailand. The current feeding practice have been used waste food from market and the left over from poultry processing plant which lead to the flesh quality deterioration. Therefore the optimum P:E ratio of bagrid catfish should be studied. Ten practical diets were formulated to determine the effect of dietary P:E ratio to growth performance and flesh quality of bagrid catfish. There were five proteins levels (20, 25, 30, 35 and 40%) and two energy levels (227 and 331 mg/cal) at each protein level. The experiments were conducted under field condition, using 1*1*1.5 nylon cage settled in earthen pond, each cage contained 30 fish with 3 replications. Fish with initial weight of 27 g. were fed satiation twice a day for 120 days. The body weight increased significantly ($P<0.05$) with increasing of dietary protein from 20 to 35% and there was no significantly different ($P>0.05$) between fish fed 35 or 40% dietary protein. The optimum protein level for juvenile bagrid catfish was 35% with 275 kcal/100g digestible energy and 112 g/kcal P:E ratio. The increasing of dietary energy beyond this level did not improve the growth performance. There were no significantly difference ($P>0.05$) of protein and lipid fillet among treatments. Therefore it was the possibility that the excess of dietary energy of would be accumulate as visceral lipid. There were no significantly different ($P>0.05$) of pH, expressible drip, texture and color of fish fillet among treatments.

Keywords: Bagrid catfish, protein to energy ratio, flesh quality