

Effect of maitake mushroom *Grifola frondosa* on the growth performance of post larvae of white leg shrimp

Abstract

This study was conducted to evaluate the supplementation effect of maitake mushroom, *Grifola frondosa* in diet on growth and survival of white leg shrimp, *Litopenaeus vannamei* post larvae in a closed recirculating culture system. The experimental shrimps were fed with control diet (D-Con) and treatment diet that was supplemented with 2% of dried maitake mushroom powder (D-MM) which contained 336 mg of β -glucan / 100 g diet for one week before they were artificially infected with *Vibrio harveyi* at a concentration of 1.0×10^7 CFU/ml and thereafter for another 3 weeks. The results revealed that the percentage of body weight gain, daily growth index and survival rate were higher and feed conversion ratio was better in shrimps fed with D-MM diet than those fed with D-Con diet. Moreover, the number of *Vibrio* spp. in the hepatopancreas of shrimp fed the D-MM diet was significantly lower ($P < 0.05$) than that of the D-Con diet group. This study suggests that the addition of dried maitake mushroom powder in the diet can improve the growth, survival rate and feeding performance of the white leg shrimp post larvae and also helped to control the number of *Vibrio* spp. at minimal in the animals.