

Abstract

This experiment was conducted to investigate the effects of replacement of soybean meal with silkworm pupa meal (SWM) on growth performance and immune system of grass carp (*Ctenopharyngodon idella*). The control diet (0SWM) was formed by using soybean meal (SBM) as basal protein source and other three experimental diets were produced by substitution of 25% (25SWM), 50% (50SWM) and 75% (75SWM) SBM with SWM. Four groups of grass carp of (5.0 - 5.55 g) were fed these for 60 days. The results indicated that the special growth rate, weight gain, protein efficiency ratio and feed conversion rate of experimental fish in 25SWM was higher as compared to control (0SWM) and other experimental diets group. SWM supplemented diets had improved the immune system of grass carp and best immune response was observed in 25SWM diet. In conclusion, SWM can be included into diet to replace 50% SBM of grass carp without negative effect on growth; furthermore, it can improve its immunity response. SWM, being wastage of sericulture industry, is also eco-friendly which has almost zero carbon foot print on atmosphere. Thus, SWP is promising SBM alternative with its protein rich nutritional profile, economical production costs and environment friendly features.