

Growth performance, feed utilization and body composition of Nile tilapia, *Oreochromis niloticus* (Linnaeus, 1758) fed with different levels of black soldier fly, *Hermetia illucens* (Linnaeus, 1758) maggot meal diet

ABSTRACT

In this study, fish meal (FM) was replaced by the black soldier fly maggot meal (BSFM) with replacement levels at 0%, 25%, 50%, 75% and 100%. The feeding trial was conducted for 56 days and the effect of each replacement level on the growth performance, feed utilization, body composition and survival of the experimental fish was assessed. All the experimental diets were well accepted by the fish. No mortality was observed during the experimental period. Diet 3 resulted in the highest weight gain and SGR values of 8.74 ± 0.18 and $2.43 \pm 0.04\%$ respectively. FCR and PER values obtained for Diet 3 were also better compared to that with other diets. Although there were no significant differences in crude protein content among fishes fed different diets (Diet 1 to Diet 5), fish fed Diet 3 showed significant ($p < 0.05$) increase in crude protein content at the end of the experiment. Based on these results, it may be concluded that BSFM can be used to replace FM with up to 50% replacement without causing adverse effects on growth and feed utilization parameters.

Keyword: *Hermetia illucens*; Black soldier fly maggot meal; *Oreochromis niloticus*; Growth performance; Feed utilization