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Effect of hydrolyzed mealworm and superworm meals on serum biochemical indices of sea trout *Salmo trutta morpha trutta* juveniles

S Talibov[1,2], J Mazurkiewicz[1,2], S N Merida[2], M Rawski[1,2] and **D Jozefiak[1,2]**
[1]Poznan University of Life Sciences, Poland
[2]HiProMine. S.A. , Robakowo, Poland

The aim of the present study was to evaluate the effect of hydrolyzed *T. molitor* (mealworm) and *Z. morio* (superworm) larvae meals as partial replacement of fishmeal on growth and feed utilization of sea trout juveniles. Sea trout fingerlings were randomly allocated into 9 tanks and 25 fish per tank. Fish received three diets in triplicate tanks for 8 weeks. A control diet (CD) contained no insect meal, and the two tested diets contained 10% of hydrolyzed mealworm (MWD) and superworm meals (SWD). At the end of the trial fish from each tank were bulk weighed, numbers were counted, and mean body weight of fish was measured. 10 fish from each tank were dissected for determination of somatic indices. Results indicate that hydrolyzed meals of mealworm and superworm can partially replace fishmeal in sea trout diets with no negative effect on growth performance. However, protein efficiency ratio can be negatively affected. This could be due to the chitin-derived nitrogen from the exoskeleton of insects which can potentially overestimate the amount of protein in isoproteic diets. Significantly high hepatosomatic index for superworm diet fed group suggests lipid accumulation in the liver tissue.

sanan.talibov@hipromine.com