Abstract:

A 12-week feeding trial was conducted with rainbow trout fry (initial weight of 1.57 ± 0.01 g) to examine the effects of partial substitution of canola meal in prepared diets on growth, feed conversion ratio (FCR), nutrient digestibility, somatic indices, and survival rate. Five isonitrogenous (44% crude protein) and isocaloric (4000 kcal/kg digestible energy) diets were formulated to contain 8%, 16%, 24%, and 32% canola meal against no canola meal (control group). A total of 375 rainbow trout were distributed into 5 experimental groups with 3 replicates. At the end of the experiment, the fish that were fed diets containing 8% and 16% canola meal exhibited similar growth performance, FCR, and protein digestibility as those receiving the control diet (P > 0.05). Feed intake was reduced in the groups fed a diet containing a level of canola meal higher than 8%. A decrease in growth performance and FCR was found in the fish fed diets with 24% and 32% canola meal. Fish fed the diet containing 32% canola meal had the worst growth and FCR. No significant differences in lipid digestibility or somatic indices were found (P > 0.05). This study showed that canola meal could replace standard diets by up to 8% in rainbow trout fry without adversely affecting performance.

Key words: Canola meal, feed conversion ratio, growth, nutrient digestibility, rainbow trout fry