The effect of different levels Canola meal on growth performance and body composition in *Rutilus frisii kutum* fingerlings

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Abstract

The efforts of other alternative products to replace fish meal protein in fish diets are being done in order to producing cheaper diet. This study was carried out with the aim of alternating Canola meal instead of fish meal in fish diet over a 60-day period during the autumn and the winter 2011 in the Sefidrood Aquaculture Research Station (Inland Water Aquaculture Research Institute).The fingerlings of *Rutilus frisii kutum* with weight 1.2 grams were transferred to 100-liter fiberglass tanks and stocked with 15 fingerlings in each tank. The fish were divided into five treatments including 10% , 20% , 30% , and 40% of Canola meal and also control group. Each treatment was repeated 4 times. According to Duncan test, there was no significant statistical difference between 20% treatment with 30% and 40% treatments, and also control group and 10% treatment ($P<0.05$), considering to food conversion rate (FCR), special growth rate (SGR), and weight gain (WG). The results showed that the maximum and minimum amount of weight gain were occurred in 10% treatment (mean= 97.74±3.81) and 40% (mean= 65.22±9.17), respectively. The minimum of the special growth rate (0.83±0.09) was observed in 40% and the maximum of that (1.44±0.03) was measured in 10% treatment. The minimum average of FCR (3.01±0.08) was referred to 10% treatment and the maximum of that (4.1±0.44) was referred to the 40% treatment. According to the obtained results, it is recommended that 10% treatment of Canola meal can be used in the diet of *Rutilus frisii kutum* fingerlings. The lowest carcass protein, 20% with the 58.85 and 60.11 was the highest in the control.The lowest and the highest carcass fat percentage was observed in control (24) and treated 40% (25.8), respectively. Minimum and maximum amount of ash and rubble in order to control treatment and treatment was 30% and minimum and maximum amount of moisture in the treatment of carcass were 10% (72.11) and 30% (73.75), respectively).Respecting to results, it can alternate canola meal instead of fish meal at amount of 10 percentage in diet of *Rutilus frisii kutum.*

Keywords: Canola meal, Growth, Body composition, Fingerlings, *Rutilus frisii kutum.*