

Investigation of Growth Parameters and Digestive Enzyme Activities of Trout (*Oncorhynchus mykiss*, Walbaum, 1792) Fed with Beta Glucan-Containing Yeast

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Abstract

This research was conducted to study the effects of β -glucan-containing yeast on growth parameters and enzyme activities in rainbow trout (*Oncorhynchus mykiss*) at different ratios. Fish were randomly placed in plastic tanks (120x50x32 cm) (73.37±0.21 g; n=90) as three trial groups and replicates. Three different feeds were prepared; 0 g/kg in group G-1, % 0,5 in group G-2 and % 1 ratio CtriStim[®] (MOS+ β -glucan) were added to group G-3. The fish were fed with these experimental feeds for 60 days. At the end of the experiment the highest weights and weight gain values were 155.38±0.19 g, 8.76±0.16 g in the G-2 group respectively, when we compared average the live weight and weight gain values. Feed conversion ratio, specific growth rate, protein efficacy ratio and survival rate; The highest values were in the group G-2 with 1.13±0,03, 1.24±0,003, 1.91±0.001, 93.33 ±3.33 respectively (p<0.05); The highest pepsin activity was in the G-2 group (p<0.05) with 163.94±2.23 U/mg protein; The highest trypsin, amylase and lipase activities were found in G-2 group with 1.09±0.05, 5.31±0.22, 4.38±0.11 U/mg protein, respectively (p<0.05). There was no difference between the groups in terms of muscle nutritional components (p>0.05). It has been determined that both β -glucan yeast added group affects the growth parameters of trout as well as all enzyme activities positively but %0,5 β -glucan added group showed significantly different (p<0.05).

Keywords: *Oncorhynchus mykiss*, Prebiotic, Yeast, Beta glucan, Growth, Digestive enzyme activity

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