



Study on activity of enzymes and growth indices in farmed Beluga juveniles (*Huso huso*) fed with diet containing Sodium chloride (NaCl)

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Abstract

The recent study carried out to investigate effects of adding NaCl (sodium chloride) in diet of farmed *Huso huso* juveniles and its influence on growth indices and enzymes activities in different treatments. The treatments designed in 3 levels of 3, 6 and 9% NaCl in diet and one control group with no NaCl. Thus, 480 species of *Huso huso* with mean weight of 175g and 5 months old placed in 12 fiberglass vans having 2000 liter volume, for 12 weeks. The results showed significant increase in growth indices such as body weight, SGR, BWI, HIS & ADG. Significant differences observed between treatments and control group ($P < 0.05$). So as, SGR percent was 1.41 in control group but it was 1.58 in treatments 1&2. Also BWI percent was 68.68% in control group which increased to 98.62% in T2. Moreover, HIS was 3.16g and 4.37g in control group & T2, respectively. The result, showed decrease in FCR from 1.2g in control group to 1.1g in the treatments. In addition, study on enzymes like Alkaline phosphatase, protease, lipase and amylase showed that in the treatments they were significantly more than control group ($P < 0.05$). According to results, the most increase rate belonged to alkaline phosphatase which increased from 3380 ± 405 u/kg to 12117.50 ± 1667.50 u/kg in control group and treatment with 6% NaCl, respectively. Statistical analysis of final biometry results and enzymes examination indicated better growth rate in treatments containing NaCl in diet which leads to the most enzymes activities, the least FCR and maximum SGR compared to control group.

Keywords: *Huso huso*, Sodium chloride (NaCl), Digestive enzymes, Biochemical