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Effect of oral consumption of Aloe vera gel in performance and microbial and liver tissue of Rainbow Trout (*Oncorhynchus mykiss*)

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Abstract

Today using herbal drug in animal husbandry has been extended. It's obvious that the rainbow trout is one of the most important fishes for breeding. The *Aloe vera* plant in traditional medicine in the world has many beneficial effects. The purpose of this study is to determine the effects of oral usage of *Aloe vera* raw gel in intestinal microbial flora and some blood and liver parameters of The Rainbow Trout. For this purpose, 90 healthy fishes with approximate weight of 10.7 ± 3.5 were chosen. They were put in 3 groups with 30 members and 3 repeated fishes for each one. The physical and chemical conditions of water chosen carefully. The raw gel of *Aloe vera* at a rate of 0.5% was added to daily meal. The research period lasted 3 months. Food conversion ratio, liver sampling, blood parameters and intestinal contents were estimated. The research showed that between the rate of feed conversion ratio in treatment group and control group was a meaningful relevance ($p < 0.05$). Liver of control group had more Glycogen in dedicated coloring. Enzymes of Liver, crude protein, Albumin, Uric acid showed no changes ($p > 0.05$). The rate of intestinal bacteria had no specific changes, but Lactobacilli increased and coliforms decreased significantly ($p < 0.05$). The result showed that using *Aloe vera* raw gel can produce positive effects on feed conversion rate and population of microflora of intestine and also hepatic reserve of Rainbow Trout. **Key words:** Rainbow trout, *Aloe vera*, liver tissue, Intestine microflora, Blood parameters