

The Effects of Garlic (*Allium sativum*) in the Diet on Some Serum Biochemical Parameters of Oscar Fish (*Astronotus ocellatus*)

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Abstract : The use of herbs as natural additives in fish diets are used to enhance the efficiency and safety systems. The use of herbs, garlic, due to the structure and composition of it has beneficial role in human nutrition and animal nutrition. This study was conducted evaluate the effect different levels of garlic (*Allium sativum*) powder on the some serum biochemical parameters of Oscar fish (*Astronotus ocellatus*). Fish were divided into four groups fed on diets containing garlic in different levels; 5 g kg⁻¹, 10 g kg⁻¹, 20 g kg⁻¹, 30 g kg⁻¹ diet and the control group diet was without garlic. A total number of 300 fish was used and Triplicate groups of Oscar fish with initial weight of 12.43±0.24 g were hand-fed to visual satiation at three meals per day. The experiment extended for two months. Total Protein (TP), Albumin (ALB), Globulin (GLB) and Albumin/Globulin (A/G) ratio, were determined. Based on the results, no significant differences were seen among treatments and control groups during the experimental period for TP, ALB, GLB, and A/G ratio ($p > 0.05$). Although, the highest amount of serum total protein and globulin levels were observed in diet containing 10 g kg⁻¹ of garlic. Also, the highest value of albumin and A/G were observed in diet containing 20 g kg⁻¹ of garlic, but there were no significant difference with other treatments. The results of this study show that addition of garlic *Allium sativum* to fish diet can improve fish health.

Keywords : garlic (*Allium sativum*), serum, Oscar fish (*Astronotus ocellatus*), iran

Conference Title : ICFAS 2015 : International Conference on Fisheries and Aquatic Sciences

Conference Location : London, United Kingdom

Conference Dates : August 20-21, 2015