

عنوان مقاله:

Research Article: The effect of Biofloc system on water quality, growth and hematological indices of Juvenile great sturgeon (Huso huso)

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خلاصه مقاله:

The basis of biofloc technology is biomaterials, dead organic particles, microbes, algae, protozoa and other organisms. The biofloc acts as a biological filter and is an environment for bacteria that can remove the ammonia. In this study, for evaluate the effect of biofloc system on physical and chemical parameters of water, growth performance and blood indices, ۱۲۰ juvenile *Huso huso* with an initial mean weight of 168.2 ± 2.9 g were introduced in ۶ fiberglass tanks with volume ۲۰۰۰ liters and reared for ۸ weeks. Treatments included control and a biofloc system with ۳ replications in each treatment. During the experiment, physical and chemical parameters of water, growth, and blood indices in fish were measured. Based on the results, a significant decrease was observed in feed conversion ratio (FCR). Specific growth rate (SGR), weight gain and weight gain percentage increased significantly in biofloc system compared to the control ($p < 0.05$). The lowest number of white blood cells, neutrophils and the highest number of red blood cells, hematocrit and mean corpuscular volume (MCV) were observed in the biofloc treatment and there was a significant difference compared to control treatment ($p < 0.05$). Physicochemical parameters results such as pH, NO_3^- , NH_3 , NH_4^+ and TAN values showed a significant difference in biofloc system compared to the control ($p < 0.05$). In addition, biofloc treatment had more bacteria than the control ($p < 0.05$). Salinity, nitrogen to phosphorus ratio, alkalinity and orthophosphate levels showed no significant difference between control and biofloc system ($p > 0.05$). However, the total amount of suspended solids (TDS) in biofloc treatment was significantly higher in biofloc system than the control ($P < 0.05$). Therefore, biofloc system can be selected as the better treatment than control according to its good performance in farmed beluga.

کلمات کلیدی:

Biofloc, Water quality, Growth, Hematological indices, *Huso huso*

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