

Study on the effects of super-nutrients on growth, osmotic and immune system in Siberian sturgeon (Acipenser baerii)

Rahin alsadat Hashemi*, Mahmoud Bahmani, Ayoub Yousefi Jourdehi,

Abstract Today the role of aquaculture in the production of healthy food and food safety is well known. Using super supplements in the diet of aquatic animals as an additive can improve their growth and physiological responses. In the present study, the effects of different levels of super supplements compared with diets containing antibiotics on some growth, blood and immunity indices in Siberian sturgeon fish with an average weight of 93.29 ± 89.68 g and an average length of 18.1 ± 79.63 cm were examined. After two-week adaptation, 180 fish randomly divided in 15 fiberglass tanks (2000 liters) 12 fish per each. Super supplements at levels 2.5%, 5% and 10% were added to the diet and testing was performed in triplicate. Feeding during the growing period (90 days) and was 3 times daily. Bioassays of fish in all treatments were performed monthly during the growing period. The results showed that the use of super supplements in the diet has positive effects on growth parameters in Siberian sturgeon. Also, showed that the final weight and body weight gain compared to control treatments were significantly different. The specific growth rate and obesity factor showed significant difference with control. coefficient in control than other treatments did not show significant differences. Assessment of hematologic parameters such as counting the number of white blood cells, red blood cells and hematocrit control compared with other groups showed significant differences. In treatment groups the activity of lysozyme and serum levels of immunoglobulin and complement C3 and C4 were observed significant.

Keywords : Key Words: anti-biotic, super-nutrients, growth, immune, blood, Acipenser baerii.

