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Effects of Hypoxia, Normoxia and Hyperoxia on Hematological and Biochemical Parameters of Two Weight Classes in Farmed Great Sturgeon (*Huso huso*)

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Abstract

Sturgeons are of commercially important fish species in the Caspian Sea, but there are few reports about their oxygen requirements. In the present study, the effect of different oxygen levels on hematological parameters were examined in two weight classes of great sturgeon *Huso huso* including small size (average initial weight 280.9 ± 49.2 g) and large size (average initial weight 1217.9 ± 138.1 g). Oxygen treatments including Hypoxia (2-3 mg/l), Normoxia (5-6 mg/l) and Hyperoxia (9-10 mg/l) were set up with managing inflowing water and using system equipped with oxygen enriching for Hyperoxygenation (pure oxygen injected). Fish were acclimated to experimental tanks for one week and then randomly were transferred to 9 tanks for each class (3 fish per tank in higher weight class and 6 fish per tank for lower one) and were kept for 8 weeks. HCT and MCHC at lower weight class and RBC, MCV and Neutrophil at higher weight class were significantly different between treatments.

Keywords: *Oxygen, Hematology, Great sturgeon, Huso huso.*