

Effects of Different Oxygen Level on Growth and Muscle Composition in Two Weight Groups of Great Surgeon *Huso Huso*

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Abstract

The aim of the present study was to evaluate water oxygen concentration on growth and muscle composition of great sturgeon, *Huso huso*, in two weight groups (initial weight 280.9±49.2 and 1217.9±138.1). Oxygen treatments including hypoxia (2-3 mg/l), normoxia (5-6 mg/l) and hyperoxia (9-10 mg/l) were prepared by adjusting inflowing water and utilizing equipments for providing hyperoxygenation (pure oxygen injected). Fish were acclimated to experimental tank for one week, then each group were randomly distributed in 9 tanks (3 fish per tank in higher weight group and 6 fish per tank for lower one) for 8 weeks and then growth parameters were determined. There were significant differences between treatments for Wt, WG, BWI, FI and SGR in both groups and CF in higher weight group ($P<0.05$). Muscle composition analysis showed no significant differences among the treatments in lower weight group ($P>0.05$) but wet and fat showed significant differences between treatments in higher weight group ($P<0.05$). Results indicate that high oxygen level has a direct effect on growth performance of great sturgeon, so it is recommended for great sturgeon.

Keywords: oxygen, *Huso huso*, growth, Muscle composition

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