



Study on the effect of decrease in water temperature on the end of rearing period of female *Huso huso* breeders and its effect on quantity and quality of artificial propagation and caviar removal

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Abstract:

Suitable understanding of biotic indices and managing of sturgeon breeders can lead to improvement of production process, raise of economical yield, increase in artificial breeding and high quality caviar removal. This study, investigates on the effects of decrease in water temperature at the end of rearing period on sexual maturation time in Beluga breeders and quantity and quality of eggs for caviar removal and artificial propagation. This study carried out on Shohaday-e-Kheibar Abkenar Sturgeon rearing and propagation Complex. In this regard, 30 pieces of female *Huso huso* pre-spawners have been studied in two 15 specimen groups. The first group maintained in vans with 16-21° c water temperature up to final maturation stage and hormone injection or caviar removal. The second group of breeders transferred to vans having 8°c decrease in temperature at the end of stage III of sexual maturation. The results showed that decrease in water temperature at the end of rearing period caused to decrease in feeding rate, reduction of body and sexual growth and longer time of sexual maturation between 4 to 6 months, but decrease in water temperature at least at final year of rearing and in the last maturation time leads to 30% reduction of ovarian fat and higher consistency and strength of removed caviar up to 50%. Also, after hormone- therapy, ovulation was 0% in the first group and 70% in the second group.

Keywords: Sturgeon breeders, Sexual maturation, Water temperature, Beluga (*Huso huso*), Propagation and rearing