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Czech Journal of Animal Science

Induction and advancement of ovulation in wild Arctic grayling (*Thymallus arcticus arcticus*) using D-Tle⁶,Pro⁹,NEt-mGnRHa Lecirelin

Švinger V., Hansen T., Shadrin Y., Policar T., Kouřil J.:

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The effect of single and double injections of D-Tle⁶,Pro⁹,NEt-mGnRHa (Supergestran®) on advancement and induction of ovulation in Arctic grayling was assessed. Sexually mature wild

Arctic grayling females (most 2–4 years old) were caught in the Yenisey River at the beginning of May 2010. After a 4-day acclimatization, the females were randomly divided into four groups and intramuscularly injected as follows: group A, control group, treated with physiological saline only; group B, treated with a single injection (SI) of Supergestran® at 25 µg/kg body weight (BW); group C, injected twice (DI) with 25 µg/kg BW 3 days apart; group D, injected twice with 10 µg/kg BW 3 days apart. After stripping, the pseudo-gonadosomatic index was calculated, and an eggs sample from each female was fertilized. Only fish in the groups treated with DI protocols ovulated. No differences between the two groups were found in the timing of ovulation, ovulation rate, or mean time to ovulation. No females in either group A or B ovulated, since the experiment had to be prematurely terminated due to technical problems at the field hatchery. The DI of 10 µg/kg proved sufficient to induce and advance ovulation in Arctic grayling. Hormone treatments seem to be a promising tool to obtain viable eggs of Arctic grayling in a

short time window and thereby to ensure satisfactory numbers of fry for restocking programs.

Keywords:

salmonids; reproduction; single injection; double injection; GnRHa

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