

Examine the Appropriate Ovulation Time to Determine Latency Period of Golden Tinfoil Barb (*Barbonymus schwanenfeldii*) Using OvaprimTM

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Fertility of the Golden Tinfoil Barb is very low when they are subjected to induced breeding practices. The research was carried out to determine the appropriate ovulation time for maximizing the fertility rate of Golden Tinfoil Barb, *Barbonymus schwanenfeldii*. Induced spawning of *Barbonymus schwanenfeldii* was conducted at different Ovaprim (sGnRHa and Domperidone) dose and latency period combinations to observe the appropriate ovulation time to increase the fertility. For the purpose, three doses of Ovaprim (0.4, 0.6 and 0.8 mL/kg of body weight) and three latency periods (4, 6 and 8 hours) were considered in nine combinations. Males were injected with half of dosage from female. Induced of breeding was carried out in the hatchery and same water source was used for maintaining the equal condition. After the injection, biopsy tests were performed for all the females after 4, 6 and 8 hours from the injection to detect the moment of ovulation. After eight hours, mean egg diameter was 982.81 ± 48.49 μ m, germinal vesicle had broken down, follicle had already removed and ovulation had occurred. When ovulation was observed, hand stripping and then artificial fertilization was carried out. One hour after fertilization, between 40 and 60 eggs of three samples were taken from the hatching jar for each dosage and eggs were counted to calculate percentage of fertilization. Although all ovulation times were recorded in approximately eight hours after the injection, the recorded fertility rates were different. 4% fertility rate was recorded with the 8 ± 2.0 hours in 0.4 mL/kg, while it was 80% with the 8 ± 0.5 hours in 0.6 mL/kg of Ovaprim and fertility rate was 52% when 8 ± 0.5 hours in 0.8 mL/kg. The highest fertility rate was recorded in 0.6 mL/kg of dosage. Although 8 ± 0.5 hours ovulation time was recorded in 0.6 mL/kg and 0.8 mL/kg of body weight of female, their fertility rates were different.

Keywords: Fish breeding, Egg diameter, Hand stripping, GnRH, Fertility rate