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**Artificial Reproduction of Asian Green Catfish (*Mystus nemurus*):
Trials to Obtain High Quality Sperm from Alive Males**

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Abstract

The Asian Green Catfish (*Mystus nemurus*) is a native species to South East Asia. Due to its excellent taste and dietary merits the species represents a new aquaculture candidate with a production of about 700 t/a. Although other steps of cultivation seem to be practicable methods of getting sperm for artificial reproduction needs to be optimised. For artificial reproduction of the Asian Green Catfish ripe eggs can easily be stripped from live females, whereas sperm has to be collected from dissected testis of killed males. Getting adequate sperm from living males would be a benefit especially for selective breeding programmes, because paternal influences could be calculated and utilised to increase the breeding progress. Therefore the aim of this study was to evaluate practicable methods to obtain sperm from live male Asian Green Catfish. The male reproductive system of Asian Green Catfish was anatomically and morphologically examined. The testes and seminal vesicles were composed of numerous lobes connected to the posterior part of the vas deferens. Furthermore the testes lie deep in the body and are covered by other organs. This seems to physically inhibit the stripping of large quantities of milt. The GSI (mean: 0.44) from milt of different dissected testes, the percentage of motile sperms (mean: 98%), the duration of motility (mean: 4 min) and the sperm density (mean: 1.465×10^{10} sperms/ml) were examined. To provide the best possible preconditions for artificial stripping of testes, the influence of injections with different dosages of LHRHa (15–60 μ g/kg BW) in combination with domperidone (5–20 μ g/kg BW) on GSI and sperm density was monitored. An upward tendency of GSI in the case of increasing hormone dosages could be shown, nevertheless this trend was not significant. No significant influence of hormone dosages on sperm density could be found. Treated males (20 μ g LHRHa/kg BW and 5 μ g domperidone/kg BW) were artificially stripped. In half of the males a mean of 0.5 ml milt with a mean sperm density of 3.97×10^7 sperms/ml could be stripped whereas in the other half stripping remained unsuccessful.

Keywords: Aquaculture, artificial reproduction, catfish