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Artificial Fertilization Technique for Mass Seed Production in *Mystus armatus*

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Abstract

The synthetic hormone ovaprim was injected to sexually mature male and female *Mystus armatus* at a dosage of 0.5 ml/kg of fish intramuscularly. The eggs were stripped out from the female spawners by gently pressing their abdomen after 6hrs of hormonal administration. The male fish was sacrificed and the testes were dissected and milt was ground in a glass homogenizer using saline solution. The sperm was directly added to the egg mass and the egg mass were fertilized by adding an equal volume of water and the fertilization was started after one minutes later. The hatchlings were transparent yellow in colour and measured 2.7-2.9 mm and the size of the yolk sac was 0.9 ± 0.1mm. After 20 days of rearing the larvae reached the fry stage.

Keywords: Ovaprim, hormone, artificial fertilization, *Mystus armatus*

Short Report

Freshwater catfishes are preferred edible fish due to their flesh quality, taste and flavour. Among the freshwater catfishes *Mystus* species are medium to large size fish and are suitable for culture practices. In India 18 species of *Mystus* have been reported, the *M. armatus* commonly known as "Keleru" in Tamil Nadu and "Koori" in Kerala. It breeds naturally during monsoon in rivers and ponds. But monsoon failure often limits the seed production of *M. armatus*. To overcome that, in the present study artificial fertilization was attempted in *M. armatus* under laboratory conditions.

The sexually matured *M. armatus* were collected from rivers and associated wetlands of Kerala. They were maintained in the rearing tank and the healthy brooders were selected by morphological features. The synthetic horomone ovaprim was injected at a dosage of 0.5 ml/kg of fish intramuscularly in the dorsal muscle follwed by the brooders were kept in separate tanks. The eggs were collected from the female broodes by gently pressing their abdomen, the matured eggs ooze out easily from the genital vent. The eggs were round, adhesive and yellowish in colour. The diameter of the eggs ranged between 1.1 and 1.3 mm. The male fish was sacrifized to collect the testes and the testis was immediately cut into small pieces and ground in a homogenizer using 0.9 % physiological saline solution. The homogenized testis was directly added to the eggs followed by an equal volume of water was added. Subsequently, the fertilization was taken place and the eggs were kept for incubation. The fertilized eggs were adhesive and yellow in colour and were ranging from 1.1 to 1.3mm in diameter. Hatching was occurred 26-28 hr after fertilization, the hatchlings were transparent and 3.2-3.5 mm in size. After 20 days of rearing in fibre tanks, the hatchlings were reached to the the fry stage (17.5 to 19.3 mm) and 60% survival was achevied.

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