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Induced Breeding of Neolissochilus hexagonolepis Using Pituitary and Synthetic Hormone under the Agro-Climatic Condition of Meghalaya, India

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Abstract : Chocolate Mahseer (Neolissochilus hexagonolepis) is one of the Mahseer species inhabiting the North-eastern region of India and is a native species to the state of Meghalaya since it can adapt and grow well under the agro climatic conditions of the region. The natural population of this fish has been declining over the years from this part of the country. The natural population of this fish has been declining over the years from this part of the country. The fish is considered as one of the endangered species of the Mahseer group, which is having tremendous scope for culture, sports and tourism. But non-availability of quality seed is a hindrance for the culture of this fish. Thus induced breeding of the fish by hormonal administration with pituitary gland and synthetic hormones is the only reliable method to procure the pure seed of the fish. Chocolate Mahseer was successfully bred at the Hatchery Complex, St. Anthony's College, Shillong, Meghalaya by using pituitary extract and synthetic hormone viz. ovaprim, ovatide and gonopro-FH. The dose standardized is @ 4mg/kg body weight to both male and female as 1st dose and @ 7.9 mg/kg body weight only to female as 2nd dose for pituitary extract and single dose @ 0.8 ml/kg body weight to female and @ 0.3 ml/kg body weight to male of both ovaprim and ovatide, while a single dose @ 0.9 ml/kg body weight to female and @ 0.3 ml/kg body weight to male of gonopro-FH. The doses are standardized after a series of trial and error experiment performed. The fecundity of the fish was 3500 eggs/ kg body weight. The final hatching percentage achieved was 60%. The survival rate of hatchling was 50% up to fry stage. The use of synthetic hormone and positive response of the fish to the hormone will go in long way for production of quality seed of the fish which in turn help in culture of the species as the fish can be a very good candidate species for the culture in the state. This study will also help in the ranching of the fish in the natural habitat leading to conservation of the species. However, the study should be continued further for the large scale production of seeds.

Keywords : chocolate mahseer, induced breeding, pituitary extract, synthetic hormone
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