



Determination of artificial propagation biotechnique of *Rohu rohita* in order to increased production and species diversity in the warm water fish system Hamilton, 1822

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Abstact

Rohu (*Rohu rohita*) is one of the species of Indian major carp that has rapid growth and distributed the parts of freshwater rivers of northern India, Pakistan, Bangladesh and Burma. This project carried out determining of artificial propagation techniques of rohu (for mass production. In this study, a number of 20 female broodstock with mean (\pm SD) weight and length 3183 ± 76.01 kg and 568.33 ± 1.05 cm respectively. The suitable temperature was 29-29.5. The amount of ovaprim injection was 0.4ml/kg weight of fish. Injection was intramuscular (I.M) and one step. The male broodstock injection take 2 hours after female's injections with a dose of 0.2 ml/kg. Spawning success was 100% in broodstock. Latency period was 7.2 ± 0.9 h. Rohu has non-stickness eggs, number of ova per gram and cc was $1345/66\pm 33/19$ and $1300/33\pm 56/5$ respectively. The mean egg in broodstocks was recorded 581.33 ± 52.62 gr. Size of the non-fertilized egg, fertilized egg and water-absorbed egg was $1196/3\pm 16/54$, $1434/03\pm 23/43$ and $3023/06\pm 52/78$ micron, respectively. The fertilization rate, hatching rate and larval survival rate were $75.83\pm 3.04\%$, $67\pm 1.83\%$ and $66\pm 3.7\%$, respectively. The period of incubation of rohu egg was 16 h 29 min in the 29-29.5°C. Total length newly hatched larva was 4.92 ± 0.08 mm.

Keywords: *Rohu rohita*, propagation, hypophysis, broodstock