



ICAR-CIBA- a nodal R&D agency working in brackishwater aquaculture for the past three decades with a vision of environmentally sustainable, economically viable and socially acceptable aquaculture technologies, system interventions, technology backstopping and policy inputs by the institute, contributing to economic benefits of the sector which has already recorded annual export revenue of Rs. 20,000 crores apart from domestic consumption.

MANGROVE RED SNAPPER

Lutjanus argentimaculatus

The mangrove red snapper *Lutjanus argentimaculatus* (Forsskål 1775) is a euryhaline species occurring in Indian ocean, Indo & West Pacific Ocean and eastern Mediterranean Sea. It is the most important species of the family Lutjanidae composed of 17 genera and 103 species of mostly reef associated marine fishes. Among all the snapper species, the mangrove red snapper is considered as the fast growing species and can attain a body weight of 1.0 kg in a culture period of 6-8 months. In the nature, juveniles and young adults occur in mangrove estuaries, the lower reaches of freshwater streams and tidal creeks. Adults are often found in groups around coral reefs. Red snapper is carnivorous and predate on fish, crustaceans and molluscs. Red snappers are excellent brackishwater candidate species due to its euryhaline nature and it can be farmed both in the ponds and in cages. Mangrove red snapper is one of the most preferred food fishes globally due to its white tender meat.

Research and technology development of hatchery seed production of mangrove red snapper has been underway in SEAFDEC and some of the south east Asian countries since 1980's on experimental and semicommercial scale. In India, attempts to develop techniques for captive reproduction of red snapper was initiated during 2016. Development of aquaculture of red snapper in India is limited by the consistent availability quality seed for stocking in nursery and grow-out systems. Therefore, ICAR-CIBA has given a high impetus to develop a complete hatchery technology of red snapper including broodstock development, captive maturation, induced breeding and larval. ICAR-CIBA has completed the production of fry of red snapper in captivity and hatchery produced snapper seeds were supplied to the farmer for the grow out culture.



Salient features

- Red snapper are high value brackishwater finfish species exhibiting fast growth rates.
- Gonochoric batch spawners with an extended spawning season.
- They are euryhaline and can be cultured in diverse grow-out culture systems
- Potential brackishwater aquaculture species exhibiting fast growth rates

The Technology

- ICAR-CIBA has standardized captive broodstock development in tank and pond systems.
- Standardization of hormonal treatment for induced breeding of broodfishes reared under captivity.

- Larval rearing protocol was standardized using combination of live feeds, phytoplankton *Nanochloropsis oculata*, rotifer *Brachionus plicatilis*, copepods, *Artemia* nauplii and high-quality larval feeds.

Technology Benefits

- The present milestone achieved in captive maturation and seed production will be backbone for mass scale hatchery based red snapper seed production in forthcoming years.
- Cage and pond based aquaculture of this fast-growing high value fish will be popularized among farmers and stakeholders.



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