

Re-circulatory Aquaculture System for nursery rearing of marine finfish: Development and Demonstration by ICAR-CMFRI

NFDB has accorded sanction to the ICAR-CMFRI project titled “Re-circulatory Aquaculture System for nursery rearing of marine finfish: Development and Demonstration” at a total cost of Rs.49.94 lakhs for a period of 2 years (2020-21 to 2021-22) with 100% Central financial assistance. An amount of Rs.25.12 lakhs has been released as first instalment.

The project aims to assess the technical performance of Marine Fin Fish through the nursery phases by optimizing stocking size and density, feeding protocols and ambient water parameters for culture and determining the best duration of culture and the size of harvest. Also to evaluate the economic performance of nursery rearing with detailed financial indicators and develop the best possible production strategy.

Three treatments in duplicate (6 tanks of each 5 t capacity tank) have been set-up and connected with Re-Circulating Aquaculture System (RAS) for studying the flow rate influence on growth performance of *Trachinotus mookalee* (Indian pompano). Fry of Indian Pompano with average weight of 0.9 g (2.11 cm) was stocked in 6 tanks in duplicate with three flow rate i.e. 1.25, 2.5 and 5.0 t per hour and reared for three months. Various water quality parameters such as dissolved oxygen, pH, carbon dioxide, alkalinity, nitrite, ammonia and nitrate are being measured on weekly basis. An observation was made that the growth and survival was highest in the treatment which was given a flow rate of 5.0 t per hour. The average size of the fingerlings reached to 32.56 g. The fingerlings will be shifted to open sea cage culture for fresh nursery rearing trial.

