

# Demonstration and successful harvest of cage farmed marine fishes under NFDB scheme in Malabar, North Kerala

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*Lates calcarifer*, commonly known as seabass has been commercially cultivated in freshwater and brackish water ponds and marine cages, mostly in Southeast Asia. One of the most sought after table fish in Kerala it commands good market value. Hence imparting training and on-field demonstration of the scientific cage farming of marine fishes for encouraging the beneficiaries in adopting small-scale cage culture operations at Malabar, North Kerala was initiated. Under the ICAR-CMFRI-NFDB Direct Benefit Transfer (DBT) scheme on “Open water cage culture in selected Districts in Kerala and Karnataka” Calicut Regional Station of ICAR- CMFRI organised on-field demonstration and training on “Sea Cage Farming”

for 50 fishermen beneficiaries at Atholi, Kozhikode (29-05-2019 to 31-05-2019) and Punjakkad, Kannur (07-08-2019 to 09-08-2019). As part of the NFDB Skill Development Programme, Hands-on training in cage fabrication and installation and lectures on site selection, species selection, feed management, disease management, stocking of fingerlings in cages and cage maintenance were delivered by resource persons from ICAR-CMFRI.

Following this, a total of 13 galvanized iron (GI) cages of 4×4 m with a depth of 3 m were installed at selected locations in January, 2020. It comprised 9 cages at Kawayi backwaters of Kannur and 2 cages each in Malappuram



On-field practical demonstration on GI cage fabrication



GI cages installed at Punjakkad, Kannur

and Kozhikode districts. Under the scheme, women and SC beneficiaries were provided 60 % subsidy (approximately ₹148,000) and 40% subsidy (approximately ₹98,000) to the general category to meet the expenditure of cage culture operations. Thousand numbers of hatchery-produced seabass fingerlings and 200 pearl spot (*Etroplus suratensis*) fingerlings with an average initial size of 10 cm were stocked in the square GI cage during January 2020 and fed with low-value fishes during the culture period.

The outbreak of COVID-19 pandemic a few months later, created operational challenges for the 13 farmers. Among

the 13 beneficiaries, only nine carried out the culture for the entire 180 days as planned. Due to the COVID-19 lockdown, the farmers faced difficulties in feeding fishes due to scarcity of low value-fishes and the increase in the cost of the available low-value fishes. Six months culture recorded an average individual weight of 700-1450 g for seabass and 300-500g for pearl spot. Survival rate of 65% for seabass and 95% for pearl spot were observed in cages. The salinity recorded during the culture period ranged between 0 and 28 ppt. Seabass and pearl spot were sold at ₹600 and ₹550 per kg respectively. The harvested of seabass (260 kg) and pearl spot (40 kg) generated an income of ₹178,000. The culture carried out only for 4 months indicated about 80% survival of seabass and 90% survival of pearl spot stocked. The harvest of seabass (150 kg) and pearl spot (30 kg) generated an income of ₹ 1,06,500. During the lockdown, the farmed fish had a huge market demand due to restricted fishing activities and resulting scarcity of marine fish landings. Even though the harvest volumes were low, the cage culture carried out during the COVID 19 lockdown was a strong economic support to the farmers. These results indicate the prospects of mixed culture of seabass and pearlspot in cages in coastal waters of Kerala to meet the demand for food fish.



Women beneficiary feeding trash fish for seabass