

Bumper Harvest of Asian Seabass *Lates calcarifer* cultured in open sea cage at Chennai



Thiru K. P. P. Samy, Hon'ble Minister for Fisheries, Tamil Nadu and Dr. G. Syda Rao, Director, CMFRI holding up the harvested fish

A demonstration trial on open sea cage culture of the Asian seabass conducted by Madras Research Centre of CMFRI in Chemmencherry village (Kovalam Panchayat), South of Chennai was successfully completed on 3rd August 2010, with a bumper harvest of 3.5 t of seabass at the end of six months of rearing in the open sea cage.

Ten thousand numbers of seabass seed of 2 g average size, (4.2 cm TL) were stocked in August 2009. The seed were transported to the Kovalam Field Laboratory of Madras RC of CMFRI. Nursery rearing was carried out at the Kovalam Field Laboratory in cement tanks with running water system and FRP tanks with closed recirculatory system using undiluted seawater. The survival rate was about 70% and the seed available for stocking was 7000 numbers. The size at the time of stocking in the cage was 17-22 cm (60-100 g).

The seabass juveniles were shifted to the cage in a mildly anaesthetized condition in 200 L High Density Poly Ethylene (HDPE) barrels with a window

cut along the side (20cm x 20cm) and polished edges. 100 L of filtered seawater pretreated with one ppm AQUIS/clove oil was filled in the barrels and the seabass juveniles were transported at densities of 125-150 nos. per trip. Transportation of the fish was carried out with aeration provided by diffusing free oxygen gas through sandstones from compressed oxygen cylinder. The total time for transportation and transfer to cage was one hour and was completed with 100% survival.

The cage was moored in the sea off-Chemmencherry at 12°46.815'N; 080 15.521E in February 2010, about a km from the shoreline. The site being shallow (8 m depth) and with rocky substrates, the cage was modified to have a reduced column height. The circular outer cage net was of 7 m diameter and 4 m depth and the inner cage net was of 6 m diameter and 3 m depth. The nets were suspended as two separate pieces, overlapping at the floating pipe level. HDPE ballast pipe (2 1/2" dia) with 5 mm holes at regular intervals, having three

16 mm steel wires inserted into it is used as sink weight for stabilizing the column structure of the outer cage. Polished marble stones (1-1.5 ft x 0.5 ft) each weighing approximately 15-20 kg, 1 gabion (3x1x1 m) and PP ropes (12 mm and 32 mm) were used for mooring. Indigenous sealed, PUF filled Sintex milk cans were used as buoys. Regular net cleaning and net exchange during the culture period were imperative in order to avert the impact of fouling by other organisms. The cage withstood rough sea conditions, including *Cyclone Laila* in May 2010.

The rearing period was six months. Feed was given twice a day. A combination of different feeds including commercial pellet feeds, fresh shrimp meat and fresh fish meat were given at different stages of the culture phase. The ration size increased as the biomass of the fish inside the cage increased. Periodical sampling was also done to monitor growth and survival of the fish. At the time of harvest, the fishes had attained sizes ranging from 0.8 kg to

1.8 kg weight (25-49 cm total length) with an average weight of 1.3 kg. More than 90% of the fishes were in the weight range of 1.1 to 1.5 kg.

The harvest was conducted at a grand Harvest Mela organized at Chemmencherry on 3rd August 2010. Dr. G. Syda Rao, Director, CMFRI, presided over the function. The harvest was conducted in the presence of the Chief Guest Thiru K. P. P. Samy, Hon'ble Minister for Fisheries, Tamil Nadu State. Dr. A.G. Ponniah, Director, Central Institute of Brackishwater Aquaculture (CIBA), Dr. M. Sakthivel, President, Aquaculture Foundation of India (AFI), Thiru Thillai Govindan, Jt. Director, Tamil Nadu State Fisheries Dept., Thiru S. Janakiraman, President, Kovalam Panchayat, Thiru Fernando, Proprietor, Victoria Sea Foods and other dignitaries and representatives from different R&D organizations and State and Central Departments were also present. The Harvest Mela was inaugurated by Hon'ble Minister, Thiru K. P. P. Samy by lighting the lamp. Dr. G. Mohanraj, Scientist-in-charge, Madras Research Centre of CMFRI welcomed the gathering. Dr. G. Syda Rao delivered the presidential address. Dr. A.G. Ponniah, Thiru Thillai Govindan, Thiru. S. Janakiraman and Thiru Fernando offered felicitations. Thiru K. P. P. Samy in his inaugural address commended the achievement of CMFRI and the active role played by the Madras Research Centre towards promoting open sea cage culture along the Tamil Nadu coast. Dr. Joe K. Kizhakudan, Senior Scientist, Madras Research Centre of CMFRI & Officer-in-charge, Kovalam Field Laboratory proposed Vote of Thanks.

The harvested fish were sold at prices ranging from Rs. 180/- to Rs. 200/- per kg. The sale proceeds from the harvest, amounting to Rs.5,02,000/- were handed over to the fishermen of Chemmencherry by Dr. P. Krishnaiah, Chief Executive, NFDB at a function held at Madras RC of CMFRI, Chennai. On behalf of the fishermen of Chemmencherry, Thiru S. Janakiraman, President, Kovalam Panchayat received the demand draft. Dr. P. Krishnaiah briefed the fishermen on the developmental plans of NFDB for promoting open sea cage culture by the fishermen. He invited suggestions from the fishermen which would help them to take up the activity in due course with financial aid from NFDB and technical support from CMFRI. The function was followed by an interactive session between the fishermen and the Scientists of CMFRI wherein the pros and cons of taking up open sea cage culture, seed availability, rearing techniques, economic feasibility etc. were discussed.

(Madras RC of CMFRI)



Thiru K. P. P. Samy, Hon'ble Minister for Fisheries, Tamil Nadu addressing the gathering at the Harvest Mela organized at Chemmencherry on 03.08.2010



Dignitaries inspecting the harvested fish



Dr. P. Krishnaiah, Chief Executive, NFDB and Dr. G. Mohanraj, SIC, MRC of CMFRI, Chennai, handing over the Demand Draft of Rs.5,02,000/- to Thiru S. Janakiraman, President, Kovalam Panchayat



Harvesting of fish from the cage