Prospects of using Ulva faciata extract in diet as an immunostimulant for shrimp

Laboratory and farm trials were undertaken on the use of Ulva faciata for disease management and growth enhancement in Penaeus monodon. Crude extract of *U. faciata* incorporated in feed @ 1g/kg shrimps using gelatin as binder improved the total haemocyte count, agglutination titre, bacterial clearance, bacterial activity and phagocyte rates. In the farm trial, shrimps fed *u*. incorpo-rated diet showed improved growth rate, an increase of about 9g average body weight compared to control shrimp.

Record size oil sardine landed

Sardinella longiceps TL 272 mm

The largest oil sardine (*Sardinella longiceps*) ever recorded from Indian waters was netted by a purse seiner off Malpe at 30m on 8th September. The fish measured 272 mm in total length and weighed 159 g in wet condition.

Mullet harvest from IVLP farms

Results obtained from the demonstration farms carrying out scientific monoculture of *Mugil cephalus* under the IVLP programme clearly showed that scientific culture yield more profit than the traditional methods. The gross return per hectare is estimated to be around Rs. 4,65,000 with an average yield of 4,050 kg/ha. The fish attained an average weight of 450 g in 10 months.

Campaign launched on 'Responsible Fisheries'

A campaign conceived as a series of co-learning workshops to make the fisherfolk aware about responsible fisheries management, undertaken under the NATP/CGP project 'Designing and validation of communication strategies for responsible fisheries - A co-learning approach' has been initiated. The first workshop in the series was conducted for 48 persons representing different stakeholders from the fisheries sector at Kozhikode during 12-14 August. The workshop in which scientists from CMFRI and CIFT acted as facilitators was organized in association with the NGO, MCITRA.

Damselfishes bred

*B. aruanus*

Broodstocks of the three spot damsel, *B. tricinctus* and the humbug damsel *D. aruanus* were developed at the Vizhinjam Research Centre. Both species are dioecious. Spawning was noted during morning hours and eggs were attached either to the sides of the tank or on the earthen pots provided inside the broodstock tanks. The average length of newly hatched larva of *D. tricinctus* was 2.5mm and that of *D. aruanus* was 2.4 mm.

TRANSFER OF TECHNOLOGY

Training for practicing farmers

Krishi Vigyan Kendra of CMFRI at Narakkal imparted training to 501 persons by conducting 26 training courses. The number of courses and beneficiaries are as follows: Fisheries: 6-120; Agriculture: 9-169; Home Science: 11-212.

Collaborative training programmes were conducted in association with three *grama panchayats*, two co-operative societies and two government agencies in preparation of shrimp pickle, cleaning powder, integrated pest management in vegetables, kitchen gardening and jasmine cultivation.

Training for rural women

1. Molluscan Fisheries Division conducted a one-day training course on 'bivalve farming' for the benefit of Shree Sokthi groups at Kottuvallikkadu of Ernakulam District on 2nd August. 105 women attended the programme.

2. Brackishwater Fish Farmers Development Agency, Kollam and Molluscan Fisheries Division of the Institute jointly conducted a one day training course on 'edible oyster farming' at Kollam for the benefit of 120 women representatives of various Shree Sokthi groups of Kollam Corporation area on 23rd August.

Income generating unit established

The Self Help Group of Edavanakkad Grama Panchayat Karikkonna Kurumthala Shree unit which was imparted training and technical guidance by KVK, Narakkal in the preparation of value added products from shrimp and fruits has started a small scale unit. Sales of the pickles and jam prepared by the unit was inaugurated by Shri T.A. Asokkhan, Vice-President of the Grama Panchayat on 31st July.

Training for entrepreneurs and officials

Three short term courses were conducted by the 'Trainers' Training Centre of the Institute on the following topics:

1. Ornamental Fish Culture: A six-day programme was conducted at Cullout for 14 entrepreneurs and 2 officials from Sate Fisheries Department on the breeding, rearing and management practices of ornamental fishes. The demand for the programme is by and large increasing as ornamental fish culture offer employment opportunity with limited expenditure and little land holding ensuring quick returns.

2. Feed culture: A ten-day course was conducted at the Mandapam Regional Centre of the Institute for 7 personnel from Madurat Kamaraj University and one shrimp farmer. Training was imparted on all aspects of culture practices and maintenance of phytoplankton and zooplankton organisms commonly used as live feed for shrimps and fish.

Histopathology of finfish and shellfish: A ten-day course was conducted at the Institute Headquarters by the Physiology, Nutrition and Pathology Division for 4 officials from MPEDA and one entrepreneur in practice, processing and staining of fish and shrimp tissues. The participants were trained at international standards to identify and differentiate normal tissues and tissues from disease affected organisms.

Training for scientist probationers

As part of the 76th FOCARS Training of National Academy of Agricultural Research Management (NAARM)
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