

Large scale farming of green mussel in Ashtamudi Lake, Kerala

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Green mussel, *Perna viridis*, farming is spreading fast in the lower stretches of Ashtamudi Lake in Kollam district of Southern Kerala. Huge demand for green mussel in the northern part of Kerala has resulted in significant increase in its price. The price has increased to ₹ 10,000 per gunny bag of 70 kg for medium sized mussel (50-100 mm) whereas larger ones (120 -150 mm) fetch prices as high as ₹ 400 per kg (8 pieces). This has prompted local fishermen to try mussel farming using on bottom method of mussel culture which some farmers practiced earlier with locally available seed.

Seed for the farming is collected and supplied to farmers in Ashtamudi Lake from Kozhikode, Kannur and Thalassery in North Kerala. Seeds and packed in wet jute bags are transported to Kollam by rail which takes about 12 hours and from there it is transported to Kavanad Ferryboat Jetty by van. Consequent to the large scale mussel spat settlement during this year (2016), more than 1800-2000 gunny bags of seeds of green mussel has been bought from northern Kerala, for farming. Each jute bag weighs 70 kg (contains 2.0 lakh seeds) making



Gunny bags of seeds of green mussel

the total seed used from farming during this season around 140 tonnes (t). Average length of green mussel seed was 21 mm. The seed bags were conditioned in the back waters for 2-3 hours. Then bags were cut open and seeds were washed and sold to farmers according to their need. One gunny bag of seed (about 70 kg) was sold at a price of ₹ 3700. The washed seeds are transferred to the boats and covered with wet gunny bags to prevent heating and dehydration during the transport to the farming site.



Sowing of mussel seed

After conditioning, seeds are taken to the place of sowing by boats. During the morning hours seeds are broadcast on the backwater beds which has muddy soil and unpolluted, productive green water. This year seed sowing started early in the month of October and continued till January.

Technical details such as salinity requirements and farming methods were suggested by ICAR-CMFRI scientists to interested farmers. Farmers also showed keen interest in using hatchery produced seed and provided brood stock free of cost for conducting the hatchery trials. Sites selected were mostly sandy-clay areas with least disturbances by navigation and fishing activity. Usually they prefer areas adjacent to their homes or where they can entrust someone who can take care of the stock. In some places they use net pens to demarcate the area for additional protection against poaching.

During the month of October, the water temperature was 29-30 °C, Salinity 32 ppt and pH 8.2. Within a week after the seed are spread out, mussels form clumps of 20 to 30 numbers which helps to prevent their sinking into the mud. The mussels grow fast on the bottom and are usually harvested by May.

Profile of fishermen/farmers involved in mussel farming in the Ashtamudi Lake was studied. In some



Clump formation of green mussel seed

areas farmers residing close to the lake are doing mussel farming with the help of local fishermen who helps in procuring the seed, sowing and harvest. In other areas, fishermen invest the money and local families guard the stock and share the harvested mussels. Farming may extend more than one year but peak harvesting is during the Ramzan period during which the demand from the northern Kerala is high and good price can be got. Harvested mussels are transported live to places like Kozhikode, Thalassery and Kasargod in north Kerala for making "Arikadukka" a local delicacy prepared using mussel.

Large scale mussel farming is done in areas such as Thekumbhagam, Dalavapuram, Kallada, Vellimon, Koyivala, Aravila, Pampa, Kureepuzha, Prakulam, Pallapu, Kadavoor, Sampranikudi, St. Thomas island, St. George Island and Fatima Island. The production of mussel from Ashtamudi Lake is expected to increase to an estimated 2800 t. Demand for mussel seed is also expected to increase manifold in the coming years. Erratic mussel spat fall can adversely affect the farming of activity. ICAR-CMFRI is making efforts to produce mussel seed and supply it to the farmers. Field trials using hatchery produced spat are being conducted at Ashtamudi Lake with the help of local farmers. If this is successful, mussel farming will reach new heights in the near future.