Economic empowerment of SHGs through Pearlspot Seed Production Technology

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Pearlspot being recognized as the state fish of Kerala. The seed production technology of Pearl spot ensures an avenue for the livelihood enhancement of fisherfolk through farming. The ICAR-Central Marine Fisheries Research Institute (CMFRI), plays a vital role in disseminating the seed as a part of the project entitled "Empowerment of Scheduled Caste Fisherfolk through Entrepreneurial Capacity Building of Self-Help Groups in Marine Sector" funded by the Department of Science & Technology (DST), New Delhi under the Scheduled Caste Sub-Plan (SCSP) programme setup a Pearl spot seed production unit in Vallarpadom, Ernakulam district, Kerala. Self Help Groups (SHGs) were mobilized with the assistance of the Krishi Vigyan Kendra (KVK) of ICAR-CMFRI and women participation as the essence of the gender mainstreaming was ensured.

A pragmatic and utilitarian combination of extension research and practical extension was adopted for conducting this study. The project team of ICAR-CMFRI visited the Vallarpadom location twice a month for two years and conducted communication conclaves and interaction programmes for the fisherfolk on Pearlspot seed production units. A series of farmer collaboration conclaves were organized for these SHGs. The technical assistance was provided by the professionals from KVK of ICAR-CMFRI, who played a fundamental role in the practical implementation of the project. Interaction meetings for imparting awareness among fisherfolk beneficiaries were organized on the site, and training programmes, including broodstock release and feeding, were successfully carried out. A training pamphlet in vernacular was distributed to the SHG members as a ready reckoner for convincing the seed production

Pearlspot seed production unit operating in Vallarpadam

technology of pearl spot.

A pond of 50 cent area was prepared primarily, and 200 pearl spot brooders were stocked in the pond and looked after till the fish attained appropriate marketable size within a couple of months. The linkage established gave the benefit of the provision of a pump set from KVK of ICAR-CMFRI. Stage by stage video documentation in the various segments of activities of SHG in seed production was done. The practical extension part for the present study consisted of Awareness & Entrepreneurial Capacity Building (ECB) Training programmes systematically executed, and then the extension research part focused on socio-economic surveys with a pre-tested and structured data gathering protocol with standardized scales and indices. The participation profile, decision making, gender need analysis, economic feasibility analysis, assessment of performance level of SHG, empowerment index calculation etc., were undertaken.

The male and female counterparts of the families were separately interviewed to assess the gender mainstreaming aspects in terms of equity and equality for access to resources, participation profile, decision making aspects, gender need analysis etc. The extent of involvement in various phases of the entrepreneurial activity was

Training of SHG for Pearlspot seed production

Pearlspot seed collection for marketing

quantified and expressed. Maximum participation of the members and families was observed during pond preparation, fertilization of pond, feeding, maintenance of juveniles, oxygen filling and packing of fish seed, marketing, account and record-keeping, arrangement of other inputs, etc. Though the majority of activities such as pond preparation, fertilization of the pond, broodstock collection/purchase, transportation of broodstock, the introduction of broodstock, fixing of egg-laying surfaces and water management are male-dominated, the female counterparts of the households also played a definite role in the activities like feeding, maintenance of juveniles, oxygen filling and packing of fish seed, marketing, account and record-keeping and arrangement of other inputs. The opinions of men and women in the above aspects were found to be similar without any significant difference. However, differential gender response was observed among SHGs.

The Economic Feasibility Analysis of the Pearlspot seed production units of SHGs was undertaken using the data collected for the last four years on cost and earnings of the farming activities and by using indicative economics. The economic feasibility indicators such as average operating cost, average net returns, break-even point (BEP) and payback period (PBP) of these enterprises were worked out. For a production unit of 50 cent, in 12 months, the Break-Even Point was estimated to be 8,008 seeds at the rate of ₹10 per seed. The payback period, the amount of time taken to recover the cost of investment of the venture, was computed as within one year. The enthusiasm exhibited by the Scheduled Caste fisherfolk boosted their confidence to such an extent that they enhanced the seed production unit further to 2 acres. The harvest results brought bumper output, and the juveniles were sold at ₹11.50 per piece. The first sale was accomplished amid the acute COVID-19 pandemic and associated lockdown period. The social and economic empowerment dimensions and capacity building aspects achieved the highest score in the Empowerment Index analysis. The Benefit-Cost Ratio for the pearl spot seed production technology was 2.5. Two more SHGs have established similar seed production units as subsequent ventures under the DST project in Narakkal and Karumaloor locations. The success case study elucidated can be used as case model and practical manual for promoting group action for mobilizing SHGs on a sustainable basis.

The commercial viability of the seed production unit of Pearlspot, the State fish of Kerala is a major aspect determining its adoption in the selected location. The seed production technology of pearl spot is found to be economically viable, technically feasible, ecologically sound, environmentally friendly, socially acceptable and hence a sustainable one. The technology can play a significant role in enhancing fish production stock replenishment, providing an alternative livelihood option, creating employment opportunities for fisher youth, improving the fishers' income and effective utilization of hitherto underutilized water resources. The documentary can be used as manual for mobilizing similar SHG ventures on a sustainable basis.