INTRODUCTION

At the 2nd Workshop of the TMMP, we had the pleasure of listening to a guest lecture by Dr K.A. Narasimham who presented an overview of mollusc culture in India. After the workshop all participants visited the Research Centre of CMFRI at Tuticorin, where Dr. Narasimham is Officer-in-Charge. He guided us through the facilities where edible oysters, pearl oysters and holothurians are cultured at the moment. He kindly had demonstrations arranged for us on a technique developed in India: how pearls are cultured, i.e., the tissue grafting technique, implantation of pearl nuclei, etc. in the pearl oyster Pinctada fucata.

Pearl Culture

After a year of experimental research, a significant breakthrough in developing pearl oyster culture took place in 1973 at the Central Marine Fisheries Research Institute (CMFRI) at Tuticorin. The technology for making spherical pearls based on insertion of nuclei in pearl oyster was tested and proved successful. Research on pearl oyster culture continued at Tuticorin, and available information was compiled and issued by Alagarswami (1987). The publication gives a comprehensive coverage of pearl oyster distribution, ecology of pearl oyster beds, morphology and physiology of pearl oyster, spat collection, pearl oyster farming and management, techniques of pearl production and quality of the pearls, sea farming, transfer of technology, problems and prospects of pearl culture in India, and finally an annotated bibliography on pearl oysters on the Indian coasts.

Finally, in 1991 an international training course in pearl oyster farming and culture was arranged at Tuticorin in cooperation with FAO/UNDP. A total of 26 trainees from 10 Southeast Asian countries were trained for one month. To the present author this training course was an incredible event. I have seen how the Japanese scientists guard their knowledge of spherical pearl culture with the highest degree of business protection. But in India they invited the neighbours, i.e., probably competitors in the future pearl market and taught them every bit of technology they had achieved during more than a decade of research. This is south-south cooperation which in my opinion must be termed unusually altruistic. The culture technique for pearls was published by James et al. (1992).

Edible Oysters

Scientists at the Central Marine Fisheries Research Institute at Tuticorin also have achieved remarkable success in regard of breeding and farming of edible oysters. It has taken about a decade to develop suitable techniques for oyster farming and hatchery production of oyster spat. In other words, the stage is set for commercial farming of edible oysters as well as other mollusc resources in India. A summary report was published by Nayar & Mahadevan (1987). This publication contains the taxonomy of Indian oysters, the ecology of oyster beds, natural oyster resources along the Indian coastline, the biology of Crassostrea madrasensis, hatchery techniques, oyster farming, seed production, techniques for spat collection in nature, post-harvest technologies, economics of oyster culture, problems of pests and predators in oyster farms, and an overview of thrusts required, if oyster culture is to become a commercial reality in India.
Problems in India

After the lecture by Dr Narasimham and the visit to the research facility at Tuticorin it occurred to the TMMP participants that the only real problems in regard of aquaculture of molluscs in India seemed to be extension and marketing. Fishermen in India (as in all other countries to my knowledge) are hunters by nature. As long as they can catch wild oysters in nature, they do not like to sit on top of an oyster bed and wait for the time to harvest. Be it edible oysters or pearl oysters. It is the same problem. Fishermen like to have a daily income and daily spending. Whether this income is high or low, it is spent the same day the money is made. The fact that sophisticated and guaranteed technology is available can not easily change this behaviour. In consequence, the human factor can not be ignored in attempts to promote aquaculture in India.

The other important factor is the home market for mollusc products. The middle class which in Europe is willing to pay a high price for edible oysters will not do the same in India. It is not customary or fashionable to eat oysters, for many reasons. It is questionable whether this attitude can be significantly changed by product promotion, and without a stable home market it is very difficult to establish and secure an export market. If aquaculture depends on export only, any trade difficulty caused by dumping prices, increased import duty, or detection of bacteria in the product by foreign health authorities can make the sea farmers go bankrupt over night.

In conclusion: Attempts to make marine mollusc aquaculture economically remunerative should have emphasis on extension and marketing.

REFERENCES


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