

# CMFRI bulletin 44

Part Three

FEBRUARY 1991



## NATIONAL SYMPOSIUM ON RESEARCH AND DEVELOPMENT IN MARINE FISHERIES

**MANDAPAM CAMP**

16-18 September 1987

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Papers Presented  
Sessions V, VI & VII

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CENTRAL MARINE FISHERIES RESEARCH INSTITUTE  
(Indian Council of Agricultural Research)  
P. B. No. 2704, E. R. G. Road, Cochin-682 031, India

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## EXTENSION SERVICE FOR PRAWN FARMING

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## ABSTRACT

The technology of prawn culture in India is still traditional and extensive called trapping-cum-holding in brackishwater ponds, but adoption of improved extensive prawn culture technology is claimed to be picking up fast in several places notably in West Bengal, Kerala, Andhra Pradesh and Orissa. The production from such culture practices is estimated at 15000-17000 tons/year, accounting for about 5% of the total prawn production in India. The technology of scientific prawn culture is now available. Though steps are being taken to motivate, and encourage the fish farmers to take up prawn culture on scientific lines to increase their income, lack of an appropriate extension network is felt to be a major handicap in the field. This paper attempts to review the various extension services available for taking up prawn culture by the fish farmers, identifies the pitfalls and proposes a working fisheries extension programme for prawn culture in India.

## INTRODUCTION

The word extension conveys the sense of stretching out to the villagers and workers in their respective field beyond the four-walls of conventional school and college systems. It is a method by which people are motivated through appropriate approaches. However, extension is a discipline by itself involving both art and science. Science, because it involves technology to impart better and more knowledge than what is existing on the subject in a most efficient and effective way and, art, because of its attractive way of presentation and passing on the information to others. Therefore fisheries extension could well mean disseminating information on fisheries in a effective and efficient way.

HISTORY OF FISHERIES  
EXTENSION IN INDIA

As early as 1928, the Royal Commission of Agriculture recommended modernisation of fishing to be brought about through research, extension and co-ordination of various departments related to Agriculture. The development of fisheries was included under integrated production programme in the year 1950 in order to augment fish production. In 1952, the Krishnamachari Committee recommended setting up of countrywide extension services in the field of agriculture. The first fishery extension organisa-

tion was set up in 1950 in the CIFRI as a nucleus of an extension service unit. Later, in the Second Five Year Plan more units were added under the Ministry of Agriculture and in the Vth plan budget an allotment of Rs.1512.40 million was made. In the VIth plan, an amount of Rs.3711.40 million (1980-85) and in the VIIth plan (1985-90) a sum of Rs.4991.90 million were allotted, which are little compared to developed countries like the USA which spent an estimated amount of \$ 1200 million on extension activities.

Simultaneously from IIIrd Five Year Plan onwards the State Governments made conscious efforts towards fisheries extension by allocating funds for the purpose of their annual plans. Unlike dairy or poultry development, natural resources for fisheries development are varied and land limitation is not a constraint. The scope for development is virtually limitless.

The National Seminar on Fisheries Extension held at Cochin from December 8-10, 1980 has observed in most unequivocal terms that the existing extension service is, "totally inadequate and ill-equipped to utilise opportunities for enhancing fish production and improving rural economy". Since then fisheries extension was accorded importance and priority at various levels and now every organisation involved in fisheries education, research or development has an extension wing. However, this system still remains unorganised with no co-ordination at all.

They are insufficiently manned and it is not uncommon to see this area being given last priority and least importance. There are instances wherein extension service was thrust upon some officers as an act of punishment. Budget allocations in several state fisheries departments for extension services were insignificant because of the attitude that investment in extension is unproductive because it does not directly result in production. Therefore, it may not be incorrect to conclude that the present status of fisheries extension in the country is totally inadequate.

#### EXTENSION FOR PRAWN FARMING

Predominance of frozen prawns in the Indian marine products exports, since their introduction to the international market, made several organisations concerned with prawn farming to undertake extension activities. Since frozen prawn continued to be the main item of export, accounting for a share of 57.32% (49203 tonnes) in terms of quantity and 82.03% (Rs. 377.93 crores) in terms of value against the total Indian marine products export of 85843 tonnes fetching Rs.460.67 crores during 1986-87, prawn farming received a fillip from the MPEDA which got itself involved in prawn farming in a big way. It has in fact, for the first time, taken organised and co-ordinated efforts to establish an extension service for prawn farming. It has established a Regional Centre for prawn farming in every maritime state for development of prawn farming. The activities of each Regional Centre can be broadly classified as follows:

1. Survey of brackishwater areas and finding their suitability to prawn farming.
2. Preparation of plans and estimates for construction of prawn farms.
3. Issuance of feasibility reports for developing new prawn farms.
4. Extension of technical assistance to prawn farmers.
5. Supply of inputs like prawn seeds, fish poison, filter screen etc., at cost price.
6. Conducting prawn seed resource surveys and identifying such collection centres.
7. Demonstration of commercial viability of prawn farming in farmer's ponds.
8. Demonstration of advanced farming techniques.
9. Conducting training courses to farmers and entrepreneurs in prawn farming.

The extension and development programmes of the Regional Centres have helped the farmers to bring in more brackishwater areas under prawn culture as well as to conduct the farming operations successfully. For example, during the past five years, the Regional Centre(RC), Machilipatanam has surveyed (Micro Level) over 6700 ha for their suitability to prawn farming. After a detailed survey (micro-level) of 908.0 ha the R.C has prepared project feasibility reports for 785.56 ha of prawn ponds. It has located new prawn seed collection centres in Krishna and West Godavari Districts. Technical assistance for conducting prawn farming on scientific lines has been extended to over 228 registered farmers having 583.10 ha of prawn ponds. The R.C has so far conducted eleven training courses and trained 232 farmers in prawn culture. Further, it has supplied inputs like prawn feed, fish poison, filter meshes and ice boxes to prawn farmers. The result being that the area under prawn farming in Andhra Pradesh is likely to exceed 2000 ha and the production of pond-raised prawns has increased from a mere 1.5 tonnes in 1981-82 to 354 tonnes in 1986-87.

During the 7th Five Year Plan, the MPEDA has introduced new promotional schemes for the development of prawn farming:

- 1) Financial assistance (subsidy) to develop new prawn farms.
- 2) Financial assistance for setting up of prawn hatcheries and seed banks.
- 3) Supply of subsidised prawn feeds.

Another important agency involved in extension activities for prawn farming is the B.F.D.A. The B.F.D.A's are prominent in Orissa. However, regarding their role in prawn farming, it is claimed that, they have not achieved the targets set under departmental schemes like brackishwater development, fishery publicity, training of farmers and even in the case of Fishermen Group Accident Insurance Scheme they have done pretty badly under the beneficiary-oriented programmes executed through the agency of D.R.D.A. particularly in the anti-poverty sector.

The constraints to the development of extension service for prawn farming are:

- 1) Lack of trained personnel to man the extension units.
- 2) Lack of understanding and co-ordination or horizontal linkage among various agencies involved in executing comprehensive development programme leading to improper im-

plementation, wastage of funds and poor results.

- 3) Lack of adequate funds to implement extension programmes.
- 4) The development programmes do not reflect the felt needs of the target group and our technological findings are not based on feed-and-feed back system.
- 5) It is claimed that there were leakages and malpractices in the administration of subsidy and loan due to ignorance of the beneficiaries.
- 6) The major handicaps were the poor scale of financing which was too low to generate adequate income, reluctance of banks to extend loan facilities to weaker sections, and inadequate institutional support for supply of raw material, inputs and infrastructure.
- 7) The number of beneficiaries are fixed on uniform basis per block without considering the population size or extent of poverty in the block or availability of local resources or felt needs of the target groups hence social justice is not ensured.

#### STRATEGIES FOR DEVELOPING EXTENSION SERVICE FOR PRAWN FARMING

A six point strategy is suggested for strengthening extension service for prawn farming.

- 1) Horizontal linkage among all governmental and non-governmental agencies involved in the fisheries sector should be ensured. This would facilitate identification of issues of priority basis, elimination of duplication of efforts, effective and efficient utilization of the scarce funds, availability of sufficient number of extension personnel and realisation of set targets ultimately.
- 2) Non availability of trained technical personnel is another problem that merits our attention. Fisheries training at every level should include extension courses also. Graduates despatched from various Fisheries Colleges could be picked up to man the extension services as they have right blend of fisheries science and fisheries extension sciences. In many Indian fisheries research institutes, agricultural extension officers are handling this job. Such positions should be filled in with Fisheries Graduates (specialised in Fisheries Extension). The various fisheries training programmes given to department staff should also include fisheries extension courses adequately.
- 3) The budget allocations to extension wing at various levels have been meagre and paltry. This is because of the attitude that investment in extension is unproductive because it does not directly result in production. This attitude should change and adequate budget allocations should be made.
- 4) Provision of necessary working facilities like field kits, vehicles, audio-visual equipments etc to the extension staff is necessary.
- 5) Regular meetings between the various governmental and non-governmental agencies involved in fisheries extension should be conducted to ensure exchange of information. This should be of immense help to all of them and facilitate a sustained growth for every one of them. The communication gap could as well be narrowed down if not bridged.
- 6) The various governmental and non-governmental agencies, involved in this field may try to obtain assistance and aids available from several international/regional aiding agencies or development organisations.