FRESHWATER PRAWNS

Proceedings of the National Symposium on Freshwater Prawns (*Macrobrachium* spp.) held at Kochi, by the Faculty of Fisheries, Kerala Agricultural University during December 12 to 14, 1990.

Editor

E.G. Silas

Joint Editors

M.J. Sebastian
D.M. Thampy
P. Rabindranath
P.M. Mathew
C. Mohanakumaran Nair
B. Madhusoodana Kurup

KERALA AGRICULTURAL UNIVERSITY

FOREWORD

Freshwater prawns constitute an important entity of the living aquatic resources. Although the capture fishery of this group is now showing a declining trend, there has been a renewed interest world over to augment the production of freshwater prawns by farming.

The Kerala Agricultural University took up the task of organizing the Symposium on *Macrobrachium* to highlight the need for a greater focus on an important resource which has not received its due share of recognition in this Country. We have a national policy giving high priority for shrimp farming in coastal aquaculture in view of its importance in the domestic and export markets. *Macrobrachium* is in no way less important and has formed subsistance fishery and an export product - 'scampi'. Its potential has been well recognised as will be evident from the spectacular increase of production of *M. rosenbergii* in aquaculture in Thailand and to some extent also in other South East Asian Countries such as Malaysia, Indonesia and Philippines. It could be cultured in freshwater and brackishwater, and in fact, low salinity is needed for breeding some of the species such as *M. rosenbergii*. The stocking of *Macrobrachium* in the reservoirs in Thailand, has been found to considerably increase the total reservoir production of economic species as indicated by high recovery rates, with those for *Macrobrachium* being higher than those for common carp. *Macrobrachium* has likewise been successfully cultured in the seasonal tanks in Sri Lanka in polyculture with carps.

In India, at CIFA, CICFRI and CIFE, the ICAR Insitutes, *Macrobrachium* has been bred and cultured in monoculture as well as in polyculture systems. Yet, at the national level, I should say, there has been no impact. The technologies are well known, to be successfully practised even as backyard hatcheries and broodstock and growout systems by homestead farmers in the suburbs of Bangkok, Thailand, and in other countries. We are lagging. Today monosex culture of *Macrobrachium* - production of only males for culture is a possiblity. What is so significant about this? An increase of biomass production by 60% to 70%. Structurally, I feel the institution linkages, between ICAR institutes and the State Development Departments and the industry may need strengthening for better cooperation and coordination. The fisheries sector, particularly aquaculture, could take a lesson from the type of extension services for the dissemination of package of practices and technologies as in Agriculture.

At the College of Fisheries of Kerala Agricultural University at Panangad, Dr. M.J. Sebastian and some of his colleagues have been breeding and propagating *Macrobrachium rosenbergii* during the last two and a half years, with increasing success. It is also heartening that we have two or more backyard hatcheries in operation around Cochin, with keen interest by

many for developing such units. This is also the logical trend for successful development. Kerala is endowed with plenty of fresh and brackishwater spreads and holds immense scope for a decentralised homestead or small unit systsms of hatchery-broodstock and growout system to be developed. "Konchu" as it is locally known contributed to a lucurative fisheries in the Vembanad Lake and other such water bodies in the State, forming also an important component of shrimp exports during the fifties and early sixties. Today the natural resources are badly depleted due to over fishing, effects of man-made engineering works such as the Thanneermukkom Bund, and aquatic pollution especially the run off of pesticides from the plantations and rice fields. No precise assessments are available. The situation can be remedied only through planned aquaculture of the species.

Immediately, Seed, Feed and Funds are constraints and Research and Development in the first two are necessary; also in aspects such as water quality and health care. The technologies we have are good enough to attract institutional financing.

We are today confronted with finding avocations for educated unemployed giving better income generation in the broad area of Agriculture. *Macrobrachium* culture offers an excellent scope for both and I hope this Symposium has acted as a catalyst to trigger such awareness and action. Research could go hand in hand with extension and development. There is need for more Fish Farmers Development Agencies (FFDAs) in the States which could channelise and advise more specifically for such development.

An important step will be to revive the *Macrobrachium* fishery of Vembanad Lake and its contiguous watersheds through a massive ranching programme. The revival of the fishery could benefit a multitude of people, especially thousands of subsistance fisherman families, as well as produce a quality product for our consumption as well as export.

I hope the Proceedings of the Symposium now being brought out will be a useful publication in the field of Aquaculture and will help in generating greater interest in freshwater prawn farming in this part of the world.

E.G. Silas,
Vice-Chancellor,
Kerala Agricultural University.