

*Proceedings of the Interactive workshop
on
'CIFA-GI Scampi: The Genetically improved and fast-growing
strain of scampi for higher production and income'*

Venue: Conference Hall, Office of Commissioner of Fisheries,
Vijayawada, Andhra Pradesh.

04 May 2022



**ICAR- Central Institute of Freshwater Aquaculture,
Kausalyaganga, Bhubaneswar, Odisha -751002**

The interactive workshop on ‘CIFA-GI Scampi: The Genetically improved and fast-growing strain of scampi for higher production and income’ was organized under the PMMSY CS scheme on ‘Scaling up of Genetic Improvement Program of Freshwater Prawn *Macrobrachium rosenbergii* (Scampi)’ sanctioned to ICAR-CIFA in 2021. The workshop was held on 04 May 2022 in the conference hall of the Office of Commissioner of Fisheries, AP. The objective of the interactive workshop was to discuss the way forward to increase scampi farming in Andhra Pradesh and Telangana states, and also to come out with a road map for smooth supply of GI scampi seed by the selected multiplier scampi hatcheries in Andhra Pradesh to farmers across the country.

The fisheries officials from the states of Andhra Pradesh and Telangana, three of the selected multiplier scampi hatchery operators of CIFA-GI Scampi, few progressive farmers, officials from AP Fisheries University, NFDB, feed industry and colleagues from RRC-CIFA along with Dr. B. R. Pillai, PI of the PMMSY Scampi project and convener of the workshop, and Co-PIs from ICAR-CIFA HQs Dr. P.K. Sahoo, National Professor and Dr. K.D Mahapatra, Principal Scientist and Co-Conveners attended the one-day interactive workshop.

Inaugural Session

- Dr. Ramesh Rathod, Senior Scientist, RRC, ICAR-CIFA, Vijayawada welcomed all the Guests, Scientists, State department officials, Multiplier hatchery operators of GI Scampi and farmers participated in the workshop.
- Dr. B. R. Pillai, Principal Scientist and HoD, PI of GI Scampi of PMMSY project, ICAR-CIFA, Bhubaneswar in her welcome address briefly gave an introduction of CIFA-GI Scampi, its present status and scope, road map for the development. She explained the present scenario of scampi production in the country and mentioned that lack of quality seed was a major problem for expansion of culture.



- Dr. S. Anjali, Addl. Director of Fisheries, Dept. of Fisheries, Govt. of Andhra Pradesh in her opening remarks congratulated ICAR-CIFA for the development of GI Scampi strain. She has explained about the scampi culture, its past and present scenario in the Andhra Pradesh. She also elaborated the initiative taken by fisheries department for promotion of scampi culture and the ongoing schemes where scampi farming is promoted.



- Dr. Murali Krishna, Joint Director of Fisheries, Telangana, gave a detailed account of the present status, scope and demand of scampi seed requirement in Telangana. The state has taken initiative to stock scampi in open water bodies. They also interested to promote GI scampi in poly culture along with IMC.
- Dr. O. Sudhakar, OSD, AP Fisheries University, elaborated his past experiences on Scampi brood stock development and culture practices at CFSC, Nellore with the collaboration of ICAR-CIFA under NFDB project.
- Dr. Vijaya Kumar Yerangal, Executive Director, NFDB, Hyderabad emphasized that diversification in aquaculture in India is need of the hour and given brief account on scampi farming and export in India.

Technical Session:

The inaugural session was followed by Technical Session. The Scientists, State department officials, Multiplier Hatchery operators of GI Scampi and farmers from Andhra Pradesh and Telangana participated in the technical session.

- Dr. S. Sudhakar, Dy. Director, Dept. of Fisheries, AP made a presentation on the Status of Scampi Culture in Andhra Pradesh. At present the area under scampi farming is estimated at about 500 ha in the state. Due to lack of quality breeders and seed availability, many hatcheries

were shifted to vannamei seed production. AP department of Fisheries is now promoting scampi under two ongoing schemes. One of the scheme is APIIATP project with World Bank Assistance. In 2022-23 about 243 MI tanks of 8801 ha of EWSA were selected for stocking scampi juveniles at 1000/ha. The requirement of juveniles is 88 lakhs. During the year 2021-22, 1.46 Lakh Juvenile Prawn were stocked in 12 irrigation tanks with an extent of 146 Ha @ 1000 No. per ha (Srikakulam and Vizianagaram Districts). MSR hatchery has provided them with GI scampi seed for the project. Under the project Pure Line Breeding & Establishment of Brood Bank of improved varieties are planned. For GI scampi, the brood bank will be established at the Govt. FSF, Somasila, SPSR Nellore Dist. with a project cost of 250.00 Lakhs. The department requested technical collaboration with CIFA for Site inspection and rearing brood stock and supply of brooders to hatcheries. The department has prepared an action plan for scampi development (given in Annexure 1). As per the plan the state is planning to bring 2250 ha of area under scampi farming with a target production of 2250 tonnes. The seed requirement for this plan would be 35.50 million. The second scheme is APILIP-II under JICA Assistance. Under this scheme 78 minor irrigation tanks with a EWSA of 2,824 ha will be stocked with scampi juveniles at 1000 nos./ha and the requirement will be 28 lakhs. He also informed that the state is implementing the seed act, which is recently introduced in the state for the benefit of the farmers. Under this act, they regularly monitor seed quality of different fish species.



- Dr. S. Murali Krishna, Joint Director of Fisheries, Telangana informed that Telangana is the only state that has a state scheme with 100% support to enhance the scampi production through stocking in natural water bodies like minor irrigation tanks and small reservoirs and the state plans to stock 10 crore (100 million) juveniles in 2022. The JDF suggested to conduct some demonstrations of ‘CIFA-GI scampi’ culture in Telangana to convince the farmers about the potential of scampi polyculture. Dr. K.D. Mahapatra however, discouraged the stocking of GI scampi in natural water bodies to avoid genetic pollution of natural stock. Dr. B.R.Pillai agreed to conduct the multi-location trials (MLT) of GI scampi in Telangana but she suggested that the

state dept. need to identify suitable progressive farmers and link them with the subsidy scheme of PMMSY. Dr. Rathod will plan the MLT in consultation with the state department officials she said.



- Dr. Bindu R. Pillai, Principal Scientist, Head, APED & Principal Investigator, PMMSY Scampi project, ICAR-CIFA gave a presentation on ‘CIFA-GI Scampi the genetically improved, fast growing strain of scampi for higher production and income’. She detailed the development process of improved breed and the plan for dissemination of CIFA -GI scampi across India through multiplier scampi hatcheries of GI scampi. She advised the state fisheries departments to promote polyculture of IMC and scampi as it will help in enhancing production as well as income of farmers with minimum inputs. She also requested the state department of fisheries to identify the potential districts in the two states and select few progressive farmers for on-farm demonstration. The input subsidy scheme of PMMSY need to be linked with the on-farm demonstration. She explained the scope and importance of scampi, global scenario and aquaculture production, reasons for declining production of scampi in India. She also explained development of GI Scampi at ICAR-CIFA and demonstration of GI scampi on farm trails in Odisha, Andhra Pradesh and West Bengal. She revealed that dissemination plan to promote CIFA-GI Scampi under PMMSY scheme and promote scampi farming in India.
- Dr. S. Anjali, Addl. Director of Fisheries, Andhra Pradesh presented a success story of Sri Hari Raju-Polyculture farmer from Patavala, Thallarevu, Kakinda and detailed the success of scampi – IMC polyculture undertaken by the farmer with or without vannamei, and its economics.
- Dr. Kanta Das Mahapatra, Principal Scientist, ICAR-CIFA, highlighted role and responsibility of Hatchery operators for the maintaining purity and standards of CIFA-GI Scampi and stressed the importance of proper implementation of breeding protocols advised by the NBC to get the desired results.



- Dr. P.K. Sahoo, National Professor, ICAR-CIFA gave a presentation on disease and health management issues in scampi hatchery and farming. He provided a list of transboundary viral pathogens infecting scampi and their detection in neighbouring country China. He cautioned the farmers to protect the farm with biosecurity measures considering the recent incidences of spreading viral diseases.



- Dr. Vijaya Kumar, Executive Director, NFDB, Hyderabad, mentioned that species diversification will help to increase aquaculture production from natural water bodies. PMMSY Scheme has more provision to develop potential resources and enhance the aquaculture productivity in India. He detailed the NFDB schemes that can be used by farmers, he agreed that scampi has good potential now and observed that there is a need for demonstrations to convince the farmers. NFDB is willing to support any initiative to promote

scampi farming. He further told that there is a need for standard operating procedures for hatchery. Also guidelines for responsible culture of scampi need to be framed. States need to identify the potential areas for scampi farming and an action plan for seed supply need to be worked out.



- Dr. Manas Sinha, Senior Executive & OIC, NFFBB, Kausalyganga, Odisha explained about the role of NFFBB in disseminating improved varieties. NFFBB is maintaining five improved varieties viz., Jayanti rohu, Improved catla, Improved magur, CIFA-GI Scampi and Amur carp. He shared his experiences on scampi seed production and suggested to draw a road map to promote GI scampi with complete field data in a scientific manner.

Interactive session with Multiplier hatchery units, farmers, exporters and entrepreneurs:

- Sri. Bijumon M.S., Partner of BKMN hatchery, Nellore provided a brief account of experiences of GI scampi farming and seed production. He informed the house that they started seed production of GI scampi. However, he is facing issues like lower output of zoea larvae from berried females compared to unimproved stock, longer duration of larval rearing and lower conversion rate of larvae to PL. Dr. Bindu Pillai suggested to look into water quality issues of the hatchery. However, she agreed to look into the problems more critically during the production of current generation at CIFA. BKMN demanded 50,000 seed from new generation of GI scampi for brood raising.
- BKMN also raised concern about NFFBB having separate MOU with scampi hatcheries for GI scampi broodstock supply. They were of the opinion that they have invested heavily on GI scampi seed production by removing all local stock and maintaining brood ponds for good quality seed production. If many hatcheries will be supplied with GI scampi brood stock without proper verification of the credentials, they may be able to produce seed at much cheaper rates and will compete with the CIFA registered scampi hatcheries causing economic loss to the latter. CIFA team agreed that there is genuine reason to be concerned about the

issue and advised OIC, NFFBB to give priority to multiplier scampi hatcheries of CIFA-GI scampi while supplying GI scampi brood stock. BKMN suggested that the sale price of GI scampi seed need to be kept at Rs.2/- per piece. CIFA team informed that the seed price should not be greater than 20% of the prevailing market price. It should be priced at a maximum of 20% above that of local seed.

- Sri. N. Srinivasa Raju, MD, Vasista Marine, Bhimavaram mentioned that the growth of scampi was satisfactory. He informed that they will start seed production in June as at present the water quality at their location is not suitable for seed production. He stated that they already have about 3000 good quality GI brood stock that will be used for seed production. He being an exporter of seafood stated that there is very good export market demand especially from USA for large size scampi of 10 count (100 g size). The price for this size group can be up to Rs.600/kg. He also requested CIFA to inform all state departments about the selection of Vasista Marine as the multiplier scampi hatchery of GI scampi. He also demanded 50,000 seed from new generation of GI scampi for brood raising.
- Sri. M. Venkata Ramana, owner, MSR Aqua Private limited, Kakinada revealed that seed production of GI scampi was started in the hatchery and they are not facing any issues mentioned by BKMN during seed production of GI scampi. The survival up to PL is about 60%. They are getting about 15,000 PL per animal. Larval duration is about 18 to 21 days. They have produced about 2 lakhs seed and supplied to Dept. of Fisheries AP during 2021-22. MSR also demanded 50,000 seed from new generation of GI scampi for brood raising.
- Dr. P. Haribabu, Rtd. Professor, CFSc, Nellore and consultant to industry shared his experiences on scampi farming practiced by farmers in Nellore. He congratulated ICAR-CIFA for the development of new strain of scampi.



- Sri. V. Rambabu, Director, Royale Marine Impex Pvt. Ltd., Bapatla and Secretary, East Godavari Aqua Farmers Association, AP has informed that at present, vannamei farmers in AP are making losses and only about 10% are only making profit. The cost of production has increased to Rs.300/kg while farm gate price is now only Rs.260 to 300/kg. He informed that now there is a huge scope for scampi in domestic and international market. They need sufficient quantity to export scampi to the other countries.
- Dr. B.S. Giri, Principal Scientist & SIC, RRC, ICAR-CFA, Vijayawada summarized entire workshop with past experience with respective to scampi culture. He expressed his gratitude and vote of thanks to all the participants.

Rapporteurs:

Dr. Ramesh Rathod, Sr. Scientist, RRC, ICAR-CIFA, Vijayawada

Dr. Ajit Keshav Chaudhari, Scientist, RRC, ICAR-CIFA, Vijayawada

Annexure 1

S.No	Name of the District	Target Area (Ha) Culture area & public water bodies	Target production in MT	Target beneficiary	Seed demand per annum in Millions	Source of Seed
1	Srikakulam	200	200	200	2.00	Approved scampi hatcheries
2	Visakhapatnam	100	100	100	1.00	--
3	East Godavari	800	100	800	20.00	MSR Aqua Pvt.Ltd.,
4	Krishna	1000	1000	1000	10.00	Other District Hatcheries
5	Guntur	50	50	50	0.50	Approved scampi hatcheries
6	Nellore	100	100	100	2.00	Approved scampi hatcheries
	Total	2250 Ha	2250 Tons	2250	35.50	

Interactive workshop
on
***CIFA-GI Scampi: The Genetically improved and fast-growing strain of scampi
for higher production and income***

04 May 2022

Vijayawada, Andhra Pradesh

Program Schedule

Inaugural Session (10.00-10.30)		
10.00-10.05	Welcome address	Dr. Bindu R. Pillai, Principal Scientist & HoD, ICAR-CIFA
10.05-10.15	Address	Sri. K. Kannababu, IAS Commissioner of Fisheries, AP
10.15-10.25	Address	Dr. S. Murali Krishna, Joint Director of Fisheries, Telangana
10.25-10.30	Address	Dr. O. Sudhakar, OSD AP Fisheries University
Technical Session (10.30-14.00)		
10.30-11.00	Status of Scampi farming in Andhra Pradesh	Dr. P. Shankar Rao Joint Director of Fisheries, AP
11.00-11.30	Status of Scampi farming in Telangana	Dr. S. Murali Krishna, Joint Director of Fisheries, Telangana
11.30-12.00	'CIFA-GI Scampi' The genetically improved and fast-growing strain of scampi for higher production and income	Dr B. R. Pillai, Principal Scientist & HoD, ICAR-CIFA
12.00-12.30	Role and Responsibilities of Multiplier hatcheries in GI scampi dissemination	Dr. Kanta Das Mahapatra, Principal Scientist, ICAR-CIFA
12.30-13.00	Importance of health Management in GI scampi breeding and culture	Dr. P.K. Sahoo, National Professor, ICAR-CIFA
13.00-13.10	BKMN AQUA, Nellore	Sri. M.S. Bijumon
13.10-13.20	MSR AQUA PVT. LTD, Kakinada	Sri. M. Venkata Ramana
13.20-13.30	ASR Hatchery, Nellore	Sri. A.V. Sreedhar Kumar
13.30-13.40	VASISTA MARINE, Bhimavaram	Sri. N. Srinivasa Raju
13.40-13.50	Maharaja Aquatics, Nellore	Sri. Ch.Srikanth
13.50-14.00	Feedback from MLT farmers	
Lunch Break (14.00-15.00)		
Interaction Session (15.00-17.00)		
15.00-15.15	Views of NFDB on promotion of scampi farming Dr. Vijay Kumar, Executive Director, NFDB, Hyderabad	
15.15-15.30	Experience of National Freshwater Brood bank in dissemination of improved varieties Dr. Manas Sinha, Senior Executive & OIC, NFFBB	
15.30-16.50	Question Answer Session - all participants & visiting team from ICAR-CIFA	
16.45-17.00	Vote of Thanks by Dr. B.S.Giri, Principal Scientist & SIC, RRC, ICAR-CIFA Vijayawada	
Rapporteurs:		
Dr. Ramesh Rathod, Sr. Scientist, RRC, ICAR-CIFA Vijayawada, Dr. Ajit Keshav Chaudhari, Scientist, RRC, ICAR-CIFA Vijayawada		

**Organized by PMMSY CS Scheme on 'Scaling up of Genetic Improvement Programme of Freshwater Prawn
Macrobrachium rosenbergii (Scampi)'**

Department of Fisheries, Gov. of India & ICAR-Central Institute of Freshwater Aquaculture