

## ICAR-CIFE Commemorates National Fish Farmers Day 2022: A Report

**10<sup>th</sup> July** is a red letter day for Indian fisheries. 65 years ago, on this day in 1957, two ICAR scientists Dr. Hiralal Chaudhuri and Dr. K.H. Alikunhi achieved a breakthrough in induced breeding of carps. This pioneering work helped mass scale production of quality fish seed and sowed the seeds of blue revolution. India has made great strides since then, making India the second largest aquaculture producer in the world. To mark this milestone event, 10<sup>th</sup> July is commemorated as **National Fish Farmers Day** since 2001.

Saluting the countless fish farmers and fishers, who toil to provide nutritious and affordable fish for all, ICAR-CIFE Mumbai and its Regional Centres at Kolkata, Kakinada, Rohtak and Powarkheda celebrated the day with enthusiasm and exuberance with participation of nearly 250 farmers, fishers, staff from DoF, KVK, ICAR experts, and industry representatives. CIFE recognized and honoured the contribution of 21 innovative farmers, fishers and aquapreneurs including women and tribal farmers from across India. Be it the biofloc based tilapia aquaculture or innovative live fish marketing and value addition in Maharashtra and Jharkhand or the entrepreneurial shrimp farming in salt-affected areas of Punjab, Haryana and Andhra Pradesh or successful fish seed production and rearing in the interiors of Madhya Pradesh and West Bengal, they are all stories of success and hope.



Befitting the zeal of Azadi Ka Amrit Mahotsav and the spirit of International Year of Artisanal Fisheries and Aquaculture (IYAFA) 2022, CIFE organised four farmer-centric workshops were organized to make ICAR's R&D and outreach activities more responsive to primary producers' needs.

### ***Fish from farm ponds: Developing strategies for Maharashtra (CIFE Mumbai)***

**Dr. Ravishankar C.N.**, Director, CIFE presided over the function while **Dr. Vijay Mahajan, Director**, Directorate of Onion and Garlic Research, Rajgurunagar was the Chief Guest. Dr. N.P. Sahu, Joint Director and Dr. S. N. Ojha, HoD, FEES chaired the technical sessions. A study tour of 45 tribal farmers from Nandurbar district was also organised. Fish farmers shared their stories of



success first hand highlighting their initial failures, subsequent struggles in sourcing the right information, quality seed and feed and as well as finding a marketing solution that ensured a good price.

The stakeholder workshop focused on identifying challenges and finding ways to tap the nearly 3.7 lakh farm ponds in constructed for protective irrigation in Maharashtra to rear fish and diversify farm enterprises. Farmers from Satara, Pune and Ahmednagar districts have demonstrated that aquaculture in farm ponds not only reduced risk but more than doubled their income, achieved the goal of 'more crop per drop' and meets the local demand for fish. The workshop identified the absence of awareness and a custom-made aquaculture package of practices for the unique farm pond resource (varying size, depth and polythene lining) as primary hurdles in large scale adoption and limited success rate. Many farmers cited the unavailability of quality fish seed and feed and as being cheated by unscrupulous middlemen/traders. CIFE has promised to develop a technological package as well as IFS / aqua-tourism models in collaboration with ICAR institutes, and work with development departments and KVKs to promote aquaculture in farm ponds. Dr. Shivaji Argade, Dr. Ankush Kamble and Dr. Ananthan P.S. coordinated the program.

### ***Small is Big: Enhancing productivity in small scale aquaculture (CIFE Kolkata Centre)***

**Swami Shivapurnanandaji Maharaj**, Ramakrishna Mission Vivekananda Educational and Research Institute, Narendrapur was the Chief Guest. **Dr. G.H. Pailan** (OIC), scientists and staff from ICAR institutes, KVK and the Fisheries Dept. along with 40 farmers participated in the event.

Inaugurating the event and the workshop Swamiji emphasized on the skill and knowledge-based farming to enhance the fish productivity by small and marginal farmers. He urged the farmers to prosper through a community based development by adoption of scientific methods. Importance of



integrated farming systems for livelihood improvement, fusion of traditional knowledge with modern technologies, adoption of improved methods of water recycling and harvesting were emphasized by experts.

An open-house saw a spirited discussion, experience sharing and exchange of advisories among farmers and experts leading to better understanding on utilizable know-how on enhancing productivity in aquaculture. Five progressive farmers and aquapreneurs were felicitated who shared their stories of hard earned success. Two leaflets on Fish Pickle Preparation, and Calendar



of Fish Diseases & Management were released on this occasion. An exhibition and a plantation program were organized in the institute campus for the benefit of farmers. Dr. G. Biswas, Senior Scientist coordinated the program.



## **Responsible Growth is Sustainable Growth: Regulating Chemicals Usage in Aquaculture** **(CIFE Kakinada Centre)**

**Dr. P. Koteswara Rao**, Principal & Additional Director, State Institute of Fishery Technology, Kakinada was the Chief Guest on the occasion. Dr. Muralidhar P. Ande, OIC and other staff with 40 farmers participated in the program. **Mr. S. Balaji**, State Coordinator, NaCSA flagged the concerns over growing number of aqua chemical products in market (estimated to be nearly 6000 chemicals/ drugs), their indiscriminate usage in aquaculture and the resultant effects on the industry including development of anti-microbial resistance (AMR) and adverse health effects. The emergence of highly intensive aquaculture systems seems to have led to the usage of chemicals in every step of fish/shrimp culture (pond preparation chemicals, piscicides, herbicides, water treatment chemicals, disinfectants, nutrient modifiers, feed additives & diseases regulating drugs, preservatives and adulterants.



The workshop identified the need for a concerted national campaign to educate the farmers to guard against misleading info/ads that aid unnecessary and excessive use of chemicals, resulting



in higher costs and crop losses. Sensitization about FSSAI regulations on permissible limits of various chemicals/drugs in fish and fishery products to prevent export rejections and consumer health shall be part of such a campaign. Promotion of BMPs, widespread adoption of pre-harvest check-up, monitoring for presence of spurious and restricted chemicals in market, etc. shall integral to this.

## **Biofloc for Blue Growth: Promoting Small Scale Aquaculture in Inland Salt-affected Areas** **(CIFE Rohtak Centre)**

**Mrs. Asha Hooda**, DFO, Haryana was the Chief Guest on the occasion while **Dr. Babitha Rani**, OIC Chaired the proceedings. The feasibility as well as the benefits of biofloc technology in terms of water and space requirement, reduction in feed cost, profitability, etc. in inland saline shrimp aquaculture were highlighted. Recognising the role being played by CIFE Centre in providing technological support and training in the region that is transforming farmers' livelihoods, farmers expressed the need for training and demonstrations on biofloc based shrimp aquaculture.



The process to set-up the biofloc unit, inoculum preparation, selection of suitable candidate species, ammonia management, stress management, and do's & don'ts in biofloc based aquaculture were illustrated to the farmers during the workshop. The progressive farmer-entrepreneur and a success story of CIFE, Mr. Raj Kumar shared his experience and the benefits by adopting nursery rearing technology for shrimp farming using biofloc technology as it reduces

days of culture and controls disease occurrence in earlier stages. Interaction session with farmers helped clear many queries. Workshop drew attention towards discharge of the aquaculture waste water and possibilities to their reuse after settling of solids and treatment in a designated area, as it might affect sustainable expansion of aquaculture in salt affected areas. Awareness about various State schemes and PMMSY was also created among farmers. Dr. Sreedharan K and Dr. Pankaj Kumar coordinated the event.



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### *Seed for Growth: Driving Aquaculture development in Central India (CIFE Powarkheda Centre)*

**Shri U.S Tomer**, Joint Director of Fisheries (Retd.), Madhya Pradesh graced the occasion as Chief Guest. Progressive farmer Mr. Atul Chandel shared his experience with farmers about the challenges fish farmers face in central India and the ways to address them. In addition to the shortage of quality fish seed in Madhya Pradesh, concerns over farmers getting misguided by social media and incurring losses were flagged. **Dr. S. K. Nayak**, OIC gave a lecture on hatchery operation of D-85 for cohort breeding of Indian major carps while Mr. Dhalongsaih Reang explained on breeding of Magur and seed production to encourage species diversification. The workshop created awareness about the various schemes on aquaculture under PMMSY and state government besides experience sharing and doubt clearance during scientist-farmers' interaction.

