# **Application form**

Training on Biofloc Based Production Technology,

22 - 25th April, 2024

1.	Full	Name	(Block	Letter)	)
----	------	------	--------	---------	---

- 2. Designation: .....
- 3. Present employer and address...
- 4. Address to which reply should be sent (in block letters).....
- 5. Email, Tel, Fax, Mobile.....
- 6. Date of birth....
- 7. Sex: Male/Female.....
- 8. Working Experience....
- 9. Academic qualification

Exam/ Degreee	Subjects	Year of passing
Bachelor		
Master		
Ph.D.		

10. Particulars of course fee/Online payment through CIBA website enclosed. Certificate: This is to certify that all the information provided here are true to best of my knowledge.

Dat	6	•
Dαι	J.C.	•

Place: Signature of applicant

Recommendation of the forwarding Institute

Signature of the forwarding Authority with Seal and Date

Travelling, Boarding and lodging

Guest house accommodation at ICAR-CIBA is limited and shall be provided at standard rate on first-come-first- serve basis on sharing basis.

#### Fees

The Programme fee is Rs. 8000/- per Person (including GST). The charges include course fee, course material, working lunch and refreshments. The fee does not include travel, lodging, conveyance and other personal expenses.

### **Patron**

**Dr.Kuldeep Kumar Lal,** Director, ICAR-CIBA, Chennai

### **Course Director**

**Dr. A. Panigrahi**, Principal Scientist, CCD, ICAR-CIBA

### **Course Co-Ordinator**

**Dr. C.P. Balasubramanian**, Principal Scientist HOD, CCD, ICAR-CIBA

Dr. M. Jayanthi, Principal Scientist, CCD

**Dr. K. P. Kumaraguru Vasagam**, Principal Scientist, NGBD

Dr. P.S. Shyne Anand, Principal Scientist, CCD

Shri. R. Aravind, Scientist, CCD

### For more details contact:

# Dr. A. Panigrahi

Principal Scientist, CCD ICAR-Central Institute of Brackishwater Aquaculture 75 Santhome High Road, RA Puram Chennai - 600 028 Tamil Nadu Phone: 044 – 2461 8817/ +919025739499

Fax: 044 - 2461 0311

Email: apanigrahi2k@gmail.com





# TRAINING ON BIOFLOC BASED PRODUCTION TECHNOLOGY



22-25th April, 2024

Organized by

ICAR - Central Institute of Brackishwater Aquaculture #75,

Santhome High Road, MRC Nagar, Chennai - 600028, Tamil Nadu Phone: 044 – 2461 8817/ 2461 0565

Fax: 044 – 2461 0311

### Introduction

The biofloc technology is an innovative intervention in modern aquaculture based on the concept of generation of microbial protein as quality natural food for cultured shrimps/ fishes through manipulation of C:N ratio in culture system. This technology is being well practiced and found to be suitable for high density nursery and grow out culture of shrimps and finfishes with minimal/zero water exchange where nutrient retention is maximum. Biofloc based shrimp farming is found to be highly profitable in terms of better performance, growth disease resistance and rate of return over investment compared to conventional farming. Though biofloc based farming is widely being practiced by shrimp the farmers across world, technology is catching up among Indian shrimp farmers. This necessitates to make awareness among farming communities about various components in biofloc like type and source of carbon for optimum manipulation of C:N ratio, auotrophic or heterotrophic community, the effect of integrated periphyton based biofloc systems, nitrifying cycle in floc based system etc.

Based on this background, the present training programme aims to impart knowledge on various theoretical and practical intricacy of BFT like C:N ratio manipulation, identification of autotrophic and heterotrophic microbial flora and its interaction, immunological

or biochemical components in biofloc etc.

Objectives:

- To impart technical know-how to trainees with recent advances eco-based innovative biofloc and periphyton culture technology
- To conduct hands-on training on integrated biofloc and periphyton based shrimp culture system.

### **Course content**

The training will involve both theory and practical sessions. Some of the broad areas covered for the course are as follows:

### **Theory**

- Introduction to innovative ecofriendly culture practices in Indian scenario
- Application of biofloc and periphyton based systems
- Biofloc based nursery system issues and prospects
- Biofloc based grow-out system-Biofloc technology and their tools, advantages, disadvantages, issues and prospects

# Hands on training on

- Biofloc generation and management methods (Natural method, Biological method, Inoculation method, Probiotic method)
- Carbon nitrogen ratio maintenance

- Importance, feed reduction, carbon sources findings
- Measurement of biofloc

  Qualitative and quantitative

  analysis of biofloc
- Water quality parameters
  (Importance water nutrient parameters such as TAN, Nitrate-N, Nitrite-N; Total alkalinity, Calcium, magnesium, total hardness,)
- Microbial dynamics
  (Qualitative and quantitative assessment of heterotrophic bacteria and pathogenic bacteria
- Biochemical and immunological assays
  (Analysis of Protein,
  Carbohydrates, Lipids cellular and humoral parameters)

# **Eligibility**

Graduate in any discipline of science with aqua farming experience. The official language for all purposes of the training will be English. State Fisheries officers, Farmers, Academicians and Research Scholars are encouraged to apply.

# Selection criteria

Applications of those serving in government/private institutions need to get their requests processed through proper channel. Only 20 candidates will be selected based on their exposure and interest.

The last date to receive filled in application is 20<sup>th</sup> April, 2024. Selected candidates will be intimated through email.