#### **Application form**

## Training on Biofloc Production Technology 1-4<sup>th</sup> May 2023

- 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.

#### Date:

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. 6490/- 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 Co-ordinator**

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

#### Course Facilitator

**Dr. M. Jayanthi** SIC & Principal Scientist CCD, ICAR-CIBA

#### For more details contact:

#### Dr. A. Panigrahi

Principal Scientist, CCD ICAR-Central Institute of Brackishwater Aquaculture 75, Santhome High Road, R.A. Puram Chennai - 600 028. Tamil Nadu Phone: 044 – 2461 8817/ +919025739499 Fax: 044 – 2461 0311 Email: apanigrahi2k@gmail.com



# Training on BIOFLOC PRODUCTION TECHNOLOGY

 $1\text{-}4^{th}\,May\,\,2023$ 



## 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 growth performance, disease resistance and rate of return over investment compared to conventional farming. Though biofloc based farming is widely being practiced by shrimp farmers across the world, this 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 practicals. Some of the broad areas covered for the course are as follows:

## Theory

- Introduction to innovative eco friendly culture practices in Indian scenario
- Application of biofloc, biomimicry 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 of feed reduction, various carbon sources
- 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 will be given preference. 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 25 candidates will be selected based on their exposure and interest.

The last date to receive filled in application is 25th April, 2023. Selected candidates will be intimated through email.