**Format of application form**

**Workshop cum Training on**
**Biofloc Technology: Basic concepts,**
**Benefits and Application in**
**Aquaculture**
**September 15-17, 2016**

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

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<th>Year of passing</th>
<th>Class/Rank</th>
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10. Particulars of course fee/DD 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

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**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. 4,000 + tax per person. The charges include course fee, course material, working lunch and refreshments. The fee does not include travel, lodging, conveyance and other personal expenses.

**Course Director**

Dr. K.K.Vijayan, Director, CIBA, Chennai

**Course Co-ordinator**

Dr. A. Panigrahi, Project Investigator, CCD, CIBA, Chennai

**Course Facilitator**

Dr. Gopal, Head, CCD, CIBA

**For more details contact:**

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Sponsored by
National Fisheries Development Board, Hyderabad, AP
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 necessitate to make awareness among farming communities about various components in biofloc like type and source of carbon for optimum manipulation of C:N ratio, autotrophic 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 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, 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. Candidates will be selected based on their exposure and interest.

The last date to receive filled in application is 5th September, 2016
Selected candidates will be intimated through email...