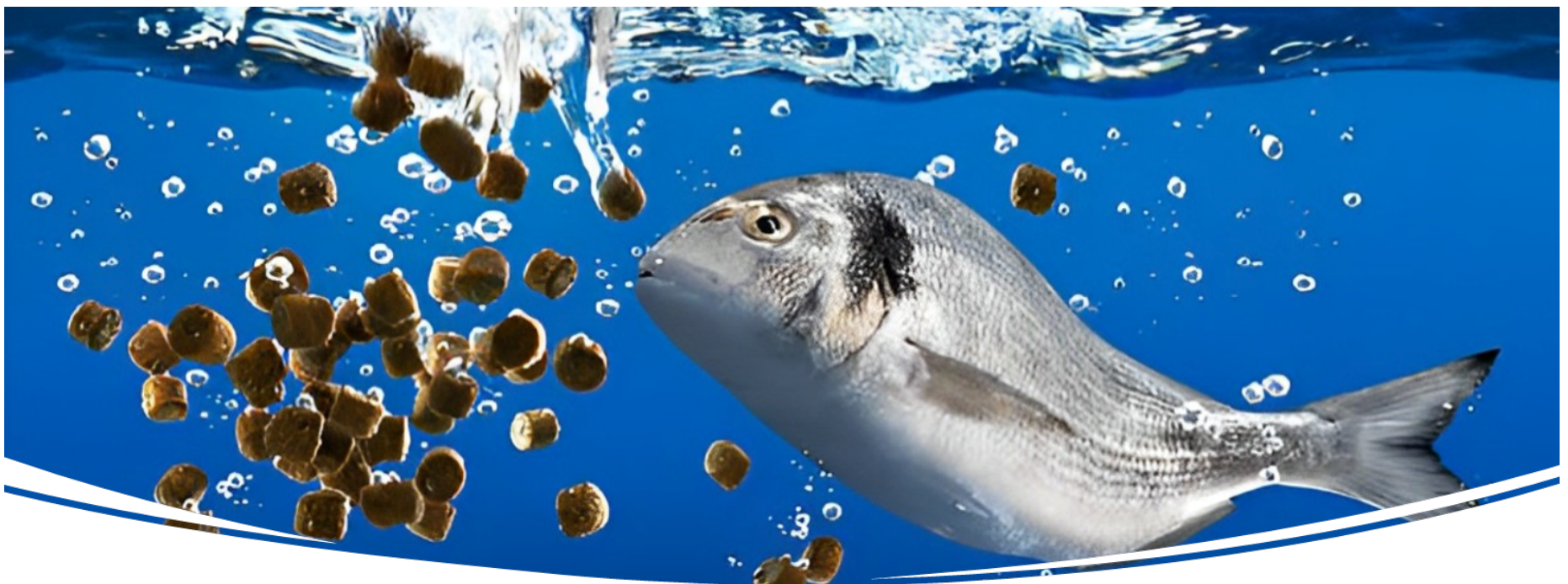


Short course
on
**ENTREPRENEURSHIP DEVELOPMENT IN FISH FEED
MANUFACTURING AND FEEDING MANAGEMENT**

(10 NOVEMBER TO 09 DECEMBER, 2025)



ICAR-CENTRAL INSTITUTE OF FISHERIES EDUCATION
(Deemed University), Kolkata Centre
32-GN Block, Sector-V, Salt Lake City, Kolkata-700091



ICAR-CENTRAL INSTITUTE OF FISHERIES EDUCATION

ICAR-Central Institute of Fisheries Education (CIFE) is a leading Fisheries University having a distinguished heritage and has nurtured many illustrious scholars and leaders over the years. In over 50 years of existence, CIFE has emerged as a Centre of excellence for higher education in fisheries and allied disciplines. The Institute was established on 6th June 1961, under the Ministry of Agriculture, Govt. of India with assistance from FAO/UNDP. It came under the administrative control of Indian Council of Agricultural Research (ICAR) on 16th April 1979 and subsequently, the scope and mandate have been widened to include education, research and extension.



Recognizing the pivotal role played by CIFE in human resources development in fisheries, the institute was conferred the status of Deemed-to-be-University on 29th March 1989. Encouraged by the new status, the University grew by leaps and bounds. Building professional capabilities and competencies of more than 4000 State fisheries extension and development personnel since 1961, the emphasis has always been on quality education. Now CIFE is a knowledge powerhouse and a brand name in fisheries higher education.

From a modest beginning in 1961, CIFE is now located in a new campus with state-of-the-art facilities and is looking forward to the future with great optimism and excitement. As a leading university, CIFE seeks to innovate and adopt best practices in educational and research programmes that prepare students to be leaders in the respective domains. CIFE has created an ecosystem of teaching and research excellence making it a preferred destination of students. The breadth of disciplines and collaboration among constituent institutions give unparalleled opportunity to students to cross departmental boundaries and explore different horizons.

ICAR-CIFE, KOLKATA CENTRE AT A GLANCE



ICAR-CIFE, Kolkata Centre has historical importance in imparting fisheries education in India. It was established in 1947 as “Inland Fisheries Training Centre (IFTTC)” under Central Inland Fisheries Research Institute (CIFRI), Barrackpore in West Bengal. This Centre was solely responsible for providing trained manpower to fisheries sector in the country as during that time there was no fisheries college or university. It was taken over by CIFE, Mumbai in October, 1967. The CIFE along with its various centres were brought under the aegis of the ICAR in April, 1979. The Centre was shifted to its own new building complex, established at 32-GN Block, Sector -V, Salt Lake City, Kolkata in June, 1997 and started functioning under the name of “CIFE, KOLKATA CENTRE”.

BACKGROUND

Global population is going to reach more than 9 billion by 2050. Thus, nutritional security for this huge global population is one of the most daunting challenges to researchers during the 21st century. Being the fastest growing food production sector, aquaculture will play a pivotal role for supplying the protein rich food to the ever-growing human population. As there is little scope of horizontal expansion, implementation of feed-based intensified aquaculture would be the right approach to meet up the huge demand of fish. Carps have been the mainstay of culture practice in India where three Indian major carps viz. catla, rohu and mrigal together with three exotic carps viz. silver carp, grass carp and common carp contribute over 85% of the aquaculture production of the country. Thus, India is considered as carp country. In India, semi-intensive carp polyculture is prevailing among farmers. In this system, both natural and artificial supplementary feed play pivotal role in improving fish production. Natural food production can be optimized through proper manuring and fertilizing the pond and farm-made and factory-made artificial feed can be used as supplementary feed. As feed alone contributes more than 50% of operational cost in aquaculture, quality of feed should not be compromised. However, out of 2.9 MMT commercial aquafeed in India, very little is available for carp culture. Moreover, most of the farmers especially small and marginal ones are reluctant to use factory made commercial feed due to its high cost. Thus, majority of farmers use low quality farm made feed for carp culture with comparatively less production. Accordingly, about more than 10 MMT farm-made feed remains un-noticed. Moreover, over dependency of Indian aquaculture on carps can be minimized through species diversification. In this direction, singhi, magur, giant freshwater prawn, fast growing GIFT and/or monosex tilapia etc. could be the appropriate species. However, commercially available feed for most of the food fishes as well as ornamental fishes is limited. With these views, ICAR-CIFE, Kolkata Centre has planned to organize a short course on “Entrepreneurship development in fish feed manufacturing and feeding management” for the benefit of various stakeholders especially unemployed educated youth who can initiate a start-up programme for livelihood enhancement and to ensure the supply of fish feed for supporting the feed-based aquaculture. Moreover, after completing this course, the skilled youth will have the opportunity for job in commercial feed companies.

OBJECTIVES:

- To impart knowledge about various methods of aquafeed formulation, manufacturing, and quality control
- To develop skilled manpower or entrepreneurs for aquafeed manufacturing

DURATION: 30 days

TIME ALLOTMENT FOR THEORY, PRACTICAL CLASSES AND FIELD VISITS:

SL. NO.	COURSE	THEORY	PRACTICAL
1	AF 101	20 Hours	18 Hours
2	AF 102	16 Hours	18 Hours
3	AF 103	0 Hours	24 Hours
Total		36 Hours	60 Hours

COURSE CONTENTS

1. AF 101: FISH/SHRIMP FEED FORMULATION

THEORY

- Present status and need of feed-based aquaculture in India
- Potential feed ingredients for aquafeed
- Aquafeed ingredients marketing
- Quality control of aquafeed ingredients
- Storage of aquafeed ingredients
- Anti-nutritional factors in plant-based ingredients: Effects and their remedial measure
- Nutrient requirement of finfish and shellfish
- Food and feeding habits of fish/shrimp
- Digestive physiology of fish
- Feed additives for aquafeed
- Formulation of aquafeed

PRACTICAL

- Laboratory safety and management
- Preparation of standard solutions
- Identification of locally available different feed ingredients
- Proximate analysis of feed ingredients
- Demonstration of aquafeed formulation using different methods



2. AF 102: AQUAFEED PREPARATION AND FEEDING MANAGEMENT

THEORY

- Machineries used for commercial aquafeed preparation
- Preparation methods of aquafeed
- Quality control of aquafeed
- Storage of aquafeed
- Commercial aquafeed marketing
- Feeding strategies in feed-based aquaculture
- Ornamental fish feed preparation and feeding
- Water quality in relation to feed and feeding
- Management of nutritional diseases in aquaculture



PRACTICAL

- Proximate analysis of aquafeed
- Total carotenoid estimation in ornamental feed
- Assessment of water stability of pellets
- Determination of sinking rate of pellets
- Analysis of water quality parameters

3. AF 103: FIELD VISIT AND ATTACHMENT

- Visit and attachment in feed mills
- Visit of feed-based progressive fish farms

EVALUATION

The course will be evaluated for 100 marks. The breakup of the marks would be as follows. Pass marks 60% of total marks.

- Theory and practical exams: 70
- Field report preparation and presentation: 30

JOB OR EMPLOYMENT OPPORTUNITIES

- Aquafeed mill technician/operator
- Quality control inspector/technician
- Aqua farm manager
- Entrepreneur in aquafeed production
- Aquafeed technical sales manager
- Research and development roles
- Supply chain and procurement roles
- Teaching and extension services

ELIGIBILITY FOR THE CERTIFICATE COURSE

Aspiring entrepreneurs, professionals, officials, students, researchers and other engaged in fisheries sector are eligible. Participants should be 10th pass from a recognized board of India. There is no age limit. The selection of the candidates will be based on marks of 10th standard.

COURSE FEE

Course fee of Rs.5900/- (Rs.5000/ + 18% GST) should be paid either in the form of Demand Draft (DD) drawn in favour of **ICAR (CIFE Sub Unit), Kolkata** payable at State Bank of India, Kolkata or to the current account no. 10224931725, IFSC SBIN0009985 or in cash. Payment should be made before start of the training programme.

NO. OF CANDIDATES: 20 candidates will be selected

TRAVEL ASSISTANCE

Participants interested to undergo the certificate course will have to arrange their own TA/DA.

BOARDING AND LODGING

Boarding and lodging for the participants will be arranged in the hostel of ICAR-CIFE, Kolkata Centre. The Hostel fee of Rs.2000/- per person for entire course and food charge will be Rs.200/- per person per day to be borne by the participants.

MEDIUM OF INSTRUCTION: English, Hindi and Bengali

HOW TO REACH

ICAR-CIFE, Kolkata Centre is located in the Sector-V of Salt Lake City, Kolkata. The Centre is well connected with Road, Rail and Air. Netaji Subhash Chandra Bose International Airport at Dumdum is only 16 km away. The distance between the Centre and railway stations of Howrah and Sealdah are 18 and 10 km, respectively. Frequent bus and taxi services are available throughout the day from any part of the city. The Niccopark, Benfish, Meen Bhawan and National Council of Science Museum are located at the vicinity of the Centre. The nearest bus stoppage is Swasthya Bhawan/ Meen Bhawan.

HOW TO APPLY

The applicant has to apply online through CASH Portal (<https://www.cife.edu.in/CASH-Training-Portal/public/index.php/trainees-login>) on or before **31st October, 2025**. The detailed process of online application is mentioned below.

Step-by-Step Guide: How to Apply for Training on ICAR-CIFE CASH Portal

🔗 Step 1: Open the Registration Page

Go to the official portal:

🔗 <https://www.cife.edu.in/CASH-Training-Portal/public/index.php/trainees-login>

👤 Step 2: Register Yourself

- Click on “**Register Yourself**” below the login form.
- Fill in the required details:
 - Full Name in **English and Hindi** (💡 *Ensure spelling is correct—same will appear on your certificate*)
 - Email ID and Mobile Number
 - Date of Birth, Gender, Qualification, Caste, Trainee category, etc.
 - Create your **own password**
- ✓ Click **Submit** to complete your registration.

🔑 Step 3: Login to Portal

- Use your **registered Email ID** and **created Password** to log in.
- If you forget your password, click “**Forgot Password**” – the new password will be sent to your registered email.

🚀 Step 4: Apply for a Program

- After login, click on “**Apply for Program**”
- Browse the list of available trainings.
- Select your **desired training program**.

Step 5: Pay the Training Fee

- Make an **online payment of ₹5900** to the below account:

A/C Name: ICAR (CIFE Sub Unit), Kolkata
A/C No.: 10224931725
Bank: State Bank of India
Branch: Salt Lake Electronic Complex
IFSC Code: SBIN0009985
Type: Current Account

- Save the **payment receipt** (screenshot or PDF).

Step 6: Upload Receipt & Complete Application

- Attach the **payment receipt** in the form.
- Fill in all remaining required fields.
- Review your application details.
- Finally, **submit** the application.

Note: In case of any kind of query related to online application, you may contact at shivaji@cife.edu.in (Dr. Shivaji- 7894252006)



Course Leader

Dr. N.P. Sahu
Director/VC
ICAR-CIFE, Mumbai

Course Director

Dr. T. K. Ghoshal
Principal Scientist & Head
ICAR-CIFE, Kolkata Centre

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