About ICAR-CIFE

ICAR-CIFE the premier institute for fisheries education in the country was established in 1961 as an in-service training centre and came under the administrative control of ICAR in 1979. CIFE got the Deemed-to-be university status by UGC in 1989. Following this scope and mandates have been widened to accommodate education and research. Now it has become a premier research institute in fisheries science and first deemed university of the country and south - west Asia as well. ICAR-CIFE institute is located about 9km away from the domestic and international airports, 20km from Dadar and 5 km from Andheri Railway station. Mumbai being the financial capital of India is well connected by road, rail and air with all the cities of India. The climate is pleasant during December.

> Course Director Dr. Gopal Krishna

Director & Vice-Chancellor

Course Co- Director Dr. N. P. Sahu

Principal Scientist and Head Fish Nutrition biochemistry and physiology Division

> CAFT Coordinator Dr K. Pani Prasad Principal Scientist

Course Coordinators Dr. Ashutosh D Deo Senior Scientist

Ms.Shamna N
Scientist

Format of application form
CAFT Training program on
Utilization of proteins extracted
from leaves and non-edible seeds
for preparing fish feed
(15-25 November 2017)

- 1. Full Name (in Block letters):
- 2. Designation:
- 3. Present Employer & Address:
- 4. Corresponding Address (in block letters) with E-mail ID:
- 5. Permanent Address:
- 6. Date of Birth:
- 7. Gender (Male / Female):
- 8. Marital status:
- 9. Professional Experience:
- 10. Mention if you have participated in any training course during the previous years:
- 11. Academic Records:

Certify that the information furnished above is correct to the best of my knowledge and my records

Date:

Place:

Signature of the applicant

12. Recommendations of forwarding Institute:

Signature with seal

Designation:

All future correspondence may kindly be directed to the address below

Director

ICAR-Central Institute of Fisheries Education

Panch Marg, Off Yari Road Versova, Andheri West, Mumbai 400061 Tel: 022 26361446/7, Fax:022 26361573 director@cife.edu.in, npsahu@cife.edu.in



Utilization of proteins extracted from leaves and non-edible seeds for preparing fish feed 15-25 Nov. 2017

The rapid development of aquaculture in the recent past has resulted in a high demand for feed leading to acute shortage of feed ingredients. Besides the limited availability, the price of the commonly used ingredients is rising continuously due to competition for the same ingredients with other animal feed industries. Further presence of anti-nutritional factors and toxic compounds limit the utilization of plant based ingredients in agua feed and the detoxification methods followed are not cost effective and user-friendly. Hence, an alternative to costlier protein rich ingredients is inevitable. In this context. the preparation of protein concentrates and isolates from non-edible seeds and potential leaves appears to be a viable approach for aquafeed development, where protein requirement is comparatively higher than the terrestrial animals. The concept of protein concentrates/isolates has attracted the attention of many researchers in fish nutritional research. Both concentrate and isolates are rich source of protein, where the later contain higher protein than the former. The most refined form of protein products with high digestibility and low dietary fibre is considered as isolates. As a human diet supplement, isolates are developed from a variety of legumes among which are soybean, peanut, canola, cashewnut, almonds, sesame, pinto and navy beans. The preparation of isolates from nonedible

seeds and protein rich leaves will be a better option for aquafeed preparation. Leaf protein concentrates can be a better option because leaves are available in plenty and many of them contain high protein. There are several methods available to extract protein from these raw materials like isoelectric precipitation, alkaline extraction, enzymatic extraction etc. In our lab we have prepared protein concentrates from jatropha seed cake and rubber seed cake. The protein content of jatropha protein concentrate was 87-89% while that of rubber seed protein isolate was 90%.

In this backdrop present CAFT training program on "Utilization of proteins extracted from leaves and non-edible seeds for preparing fish feed" is being organised at ICAR-CIFE, Mumbai from 15-25 November 2017. We hope this training program will be of much useful for the beginners to initiate the research in this line.

Important areas to be covered:

- Introduction to Protein concentrate/isolate
- Methods for preparation of protein concentrate/isolate from non-edible seeds & leaves
- Nutritional evaluation of prepared isolate/concentrate
- Unconventional feed ingredients
- · Methods for the estimation of anti-

nutritional factors (ANFs)

Application of fermentation technique for removing ANFs

Eligibility:

Assistant professor and above/scientists/extension personnel/researchers who are employed in SAU/CAU/ICAR Deemed universities/Institutes are eligible for this training programme. The applications must be forwarded by the head of the institution. The total no. of seats will be 20(twenty) only and it will be allotted on first come first serve basis.

Course-fees and TA and DA:

There is no course fee for the training program. To and fro II AC train fare, by the shortest route will be reimbursed on production of tickets (both way) by the organisers. TA will be paid only for the journey period, provided they produce a certificate that they are not being paid TA and DA. Free boarding and lodging arrangements will be made in the ICAR-CIFE campus.

Dates to remember

Last date for submission of application form

30th September, 2017

Communication of acceptance

10th October, 2017