



*Dr. S. Ayyappan, Secretary, DARE and Director General, ICAR addressing the gathering,*

## Golden Jubilee Celebrations at CIFE, Mumbai

*In this issue...*

The Golden Jubilee function of CIFE was celebrated on 6<sup>th</sup> June, 2011. Dr. W. S. Lakra, Director, while welcoming the guests recalled the contributions of all previous directors and staff members in shaping the institute to its present status. Dr. S. Ayyappan, Secretary, Department of Agricultural Research and Education Government of India and Director General, ICAR, while rededicating the Central Institute of Fisheries Education, Mumbai on the completion of 50 years of its existence, emphasised on the

journey from the simple beginning as a training Institute in 1961 to a vibrant, premier national research and educational institute in fisheries sector in the country. He emphasised upon the great advances made by the Institute not only in the area of education, but also in fisheries research and extension particularly in aquaculture revolution in Andhra Pradesh, shrimp farming in inland saline soils and reclamation of degraded areas in Maharashtra through aquaculture.





## Tenth Convocation

Tenth Convocation of CIFE was held on April 9, 2011. Dr. M. S. Swaminathan, Hon'ble Member of Parliament and Chairman, M. S. Swaminathan Research Foundation, Chennai was the Chief Guest and delivered the convocation address. Dr. Anil Kakodkar, Chairman, Rajiv Gandhi Science & Technology Commission was the Guest of Honour. Dr. W. S. Lakra, Director/Vice-chancellor welcomed the distinguished guests and recipients of degrees, awards and medals. In his welcome address Dr. Lakra mentioned that CIFE is in the forefront of Human Resource Development (HRD) in fisheries, where more than 5100 students have completed their studies from the institute including around 130 foreign nationals from Bangladesh, Egypt, Iran, Kenya, Laos, Malaysia, Myanmar, Nigeria, Philippines, Sri Lanka, Sudan, Syria, Tanzania,

Turkey, Vietnam, Yemen, etc. Two eminent scientists Dr. K. V. Devaraj, Former Vice-Chancellor, University of Agricultural Sciences, Bangalore and Prof. T. J. Pandian, Former National Professor ICAR, New Delhi were conferred with D.Sc. (Honoris causa) for their outstanding contributions to fisheries sector. A total of 86 Masters in Fisheries Sciences and 29 Ph.D. students were awarded degrees in different disciplines of fisheries science by Dr. W. S. Lakra, Director/Vice-Chancellor of the institute. 15 students of CIFE have been selected in Agricultural Research Service as Scientists in the disciplines of Fish and Fishery Science and Post Harvest Technology. Hiralal Chaudhuri Gold Medal was presented to students who topped in different disciplines of M.F.Sc.

## Meetings



### **The second meeting of the planning commission Sub-Group**

The second meeting of the planning commission Sub-Group on 'Improving Production and Productivity and Value Addition in Fisheries' of the Planning Commission 'Working -Group on Agricultural Research and Education (DARE)', for XII Plan was held at the Central Institute of Fisheries Education, Mumbai on 24th September 2011. The meeting was chaired by Dr. W.S. Lakra, Director/Vice Chancellor, CIFE, Mumbai. The meeting was attended by Dr. M.V. Gupta, World Food Laureate, Dr. K.K. Vass, Ex-Director CIFRI, Barrackpore, Dr. Sarangi, Ex-Director, CIFA, Bhubneshwar and several other experts in the field of aquaculture and fisheries. The meeting was aimed to further consolidate and prioritize the research activities and strategies to enhance the production and productivity. The recommendations of the meeting will be communicated to planning commission.

## Research



### Pen Culture in Dimbhe Reservoir, Maharashtra

Central Institute Fisheries Education, Mumbai has developed and demonstrated pen culture technique for rearing fry to fingerlings *in situ* for stocking of Dimbhe reservoir for the first time. Four pens measuring 0.57 ha, 0.8 ha, 0.66 ha and 0.48 ha were constructed at four different locations of the reservoir i.e. Baindherwadi, Savarli - I, Savarli II and Digad, respectively. When sufficient water entered in the pens (2 - 3 m depth) in October, fry of Indian major carps (catla, rohu, mrigal) measuring 45 to 60 mm (5-7g) were stocked in the pens with a stocking density of 60,000, 1,30,000, 77000 and 60,000 numbers respectively. After rearing the fry in the pens for a period of 54 days, due to release of water through the dam (for

irrigation), when the reservoir water level started receding, the fingerlings were harvested in December 2010, and stocked into the reservoir. During their culture of 54 days, fingerlings attained an average length of 100.32 mm (14.37g), 101.40mm, (16.62g), 104.63mm (15.80g), 103.57 mm (15.43g) in the four pens, respectively. Overall 57,600, 1, 08,000, 64,000 and 56,000 fingerlings were harvested from Baindherwadi , Savarli-I, Savarli-II and Digad pens respectively and stocked in the Dimbhe reservoir. These pens were erected in draw down lands of agriculture farmers, who volunteered their lands for raising fingerling using pen culture technique, for stocking of the reservoir.



## Research

### *Grow-out culture of tiger shrimp (*Penaeus monodon*) using inland-saline waters*



*Haul of tiger shrimp at the Rohtak centre of CIFE*

The grow-out culture experiments of tiger shrimp (*Penaeus monodon*) using inland-saline water have been carried out at CIFE Rohtak Centre with an objective to produce two crops in one year. The first crop had been successfully harvested by the last week of June and a total production of 1680 kg/ha in 96-days with a net survival of 82% was obtained at a stocking density of ten numbers per square metre. The production obtained was at par with the production obtained in the commercial culture of coastal areas at the same stocking density. The second crop was harvested by the second week of November, 2010 and a total production of 650 kg/ha was obtained with a net survival of 60% in 90 days of culture

period at six numbers per square metre stocking density. This production rate can further be increased through higher stocking densities and better management. Even though the experiments for the last three years have been repeatedly proved the technical viability of our technology, the present experiments have indicated that the economic viability of the technology can be increased with a net profit margin of Rs. 1.3 lakhs per crop. Thus, the farmers whose lands have become saline and resulting in nil to poor agricultural productivity can now earn a sizeable income by utilising such degraded land and waste saline areas for the cultivation of tiger shrimp.

## National Fish Farmers' Day celebrated

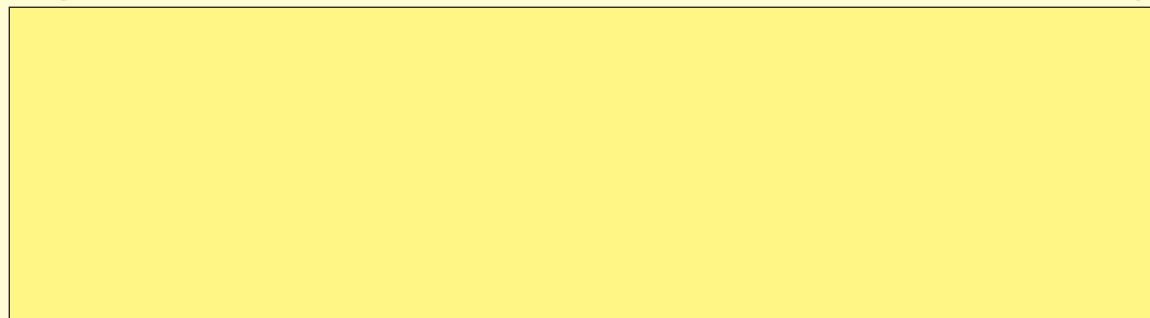


National Fish Farmers' Day was celebrated by the Central Institute of Fisheries Education, Mumbai. Every year this day is celebrated as Fish Farmers' day through out the country in recognition of the outstanding research contribution by Dr. Hiralal Chaudhuri and Prof. K. H. Alikunhi to the induced breeding of carps under controlled conditions. In order to create greater awareness and popularize the potential of aquaculture among farmers through

on- field demonstration, this year Dr. W. S. Lakra, Director & Vice-Chancellor of the institute proposed to organize the programme at Karad, Satara district instead of Mumbai Head Quarters. A Farmers' Meet under NAIP sub-project entitled "A value chain on fish production in fragile agricultural lands and unutilized aquatic resources in Maharashtra" to create awareness among the farmers of Western Maharashtra about the utilization of salt affected sugarcane fields for aquaculture. The results obtained in the demonstration programmes undertaken under NAIP sub-project were discussed with the farmers. The farmers involved in the NAIP sub-project shared their experiences and explained the benefits and productivity enhancement in their fields through the project. Booklets on "Fish Culture-at a glance" in Marathi language (Matsya Sanvardhan Ek Drishtikshep) were distributed during the Meet. 261 farmers from different parts of Maharashtra participated in the National Fish Farmers' Day and five progressive fish farmers were felicitated on this occasion.

### Workshop on

## Higher Fisheries Education & Human Resource Planning



Workshop on Higher Fisheries Education & Human Resource Planning was organized on 5<sup>th</sup> June, 2011 in view of CIFE Golden Jubilee celebration. There were three Technical Sessions as follows, Technical Sessions I on Fifty Years of Fisheries Education in India: Retrospections & Reflections, Technical Session II on Fisheries Education in Global Era: Towards Innovations and Excellence and Technical Session III on Next Fifty Years of Fisheries Education: Vision 2061.

## Mini Symposium

### 'Farmers as Stakeholders in Commercial Aquaculture



During the CIFE Golden Jubilee celebration, Social Sciences division of CIFE conducted a Mini Symposium on 'Farmers as Stakeholders in Commercial Aquaculture On 30<sup>th</sup> April, 2011. Dr. B. S. Bisht, Former ADG, ICAR, New Delhi and Director CIPHET, Ludhiana, Bhopal and the present Vice-Chancellor, G. B. Pant University of Agriculture and Technology, Pantnagar presented their views on this occasion. Many speakers like Shri Manoj Sharma, Mayank Aquaculture Pvt. Ltd., Surat; Shri Abhiram Seth, AquaAgri Processing Pvt. Ltd., New Delhi; Dr P. Elancheran, Farm Fed Ltd., Nellore and Shri Saji Chacko, Onaway Industries Ltd., Surat gave their views where they stressed the need of public private partnerships in commercial aquaculture to achieve the aqua-production goals in XII Five Year Plan.

### “ Recent Advances in Aquaculture “



A Mini symposia “ Recent Advances in Aquaculture “ was organized by the Aquaculture Division on 19<sup>th</sup> May ,2011 at CIFE, Mumbai

## Phytochemical studies of *Polygonum spp.* and biological assay of various extracts of the weed against fish pathogens

Preliminary phytochemical screening and antibacterial assay of petroleum ether, chloroform, ethanol and water extracts of *Polygonum glabrum* and *Polygonum hydropiper* was carried out. Antibacterial assay was done against *Aeromonas hydrophila*, *Aeromonas caviae* and *Edwardsiella trada* and carried out by well diffusion assays. *Polygonum glabrum* was found to be more potent than *P. hydropiper*. In *P. glabrum*, ethanol and petroleum ether extract were found to be more effective on the tested bacteria. 200g dry powder of *Polygonum glabrum* was refluxed with distilled water (3x1000 ml) and the extract was tested against the ornamental fish Sword tail. Median lethal concentration of this extract on Sword tail was found to be 694 ppm. Experiment was conducted in aquaria below 1/14<sup>th</sup> of the LC<sub>50</sub> values and disease infected Sword tail showed good recovery in aquarium having concentration of 37 ppm of the above extract.



## Fulbright-Nehru Senior Research Scholarship

Dr. K.V. RAJENDRAN, Principal Scientist, was awarded the Fulbright-Nehru Senior Research Scholarship by the United States-India Educational Foundation for the year 2010-11. He was on deputation (15<sup>th</sup> Feb. to 14<sup>th</sup> October, 2011) to carry out the research under the Fulbright programme at the Fish Molecular Genetics and Biotechnology Laboratory, Department of Fisheries and Allied Aquacultures and Program of Cell and Molecular Biosciences, Aquatic Genomics Unit, Auburn University, Auburn- USA. He has carried out his research on pathogen recognition receptors (PRRs) in channel catfish, the primary aquaculture species in the United States. During the period, extensive research work has been carried out to analyse the RNA-seq and genome database of channel catfish and identified several members of the three families of PRRs such as Toll-like receptors (TLR), NOD-like receptors (NLRs) and Retinoic acid-inducible gene-like receptors (RLRs), apart from confirming some of the already reported genes in these families. Phylogenetic relationships of the members of these three important groups of PRRs are mapped and the expression profiles of selected genes in various tissues have been investigated. The temporal expression patterns of a few selected TLR and NLR genes in different tissues of experimentally infected catfish with Gram-positive bacterium, *Edwardsiella ictaluri*, and *in vitro* analysis of expression of RLR genes in channel catfish ovarian cells infected with channel catfish virus were also elucidated. Prof. Zhanjiang (John), Liu, Alumni Professor and Associate Dean, College of Agriculture and Director, Aquatic Genomics, Auburn University, was the Faculty Associate for the Fulbright programme.



# Awards

## ICAR Award

Dr. S. Dam Roy, HOD, Aquaculture Division was honoured by Dr. Rajendra Prasad award 2010 for writing a book in Hindi entitled “ North Bay Andaman Munga Chattano Ke Javbibidhita” under technical book in Hindi in Agricultural and allied sciences.



## Aquaculture without Frontiers

Shri Dasari Bhoomaiah, Technical Officer, PME Cell was honoured as Volunteer-Designer by Aquaculture without Frontiers, USA for his outstanding contributions to the organization. The Appreciation Certificate was given on 6 June 2011 on the occasion of CIFE golden jubilee function by Chief guest by Dr Ayyappan, DG, ICAR

## ICAR Award

Shri Dasari Bhoomaiah, Technical Officer, PME Cell was honoured by “Outstanding services to ICAR” for designing the logo for The Agriculture Centre. He was felicitated by Dr.Ayyappan, Secretary, DARE and DG, ICAR on 15 July 2011 at New Delhi



# Kolkata Centre News

## **Final evaluation of the 3<sup>rd</sup> PDP Certificate course on Professional Development Programme**

The Trainees of the 3<sup>rd</sup> batch of Professional Development Programme Module I (Capture and Enhanced Fisheries) and Module II (Aquaculture) appeared for the Final written examination conducted on 29.08.2011 and viva-voce examination on 30.8.2011.

## **The 4<sup>th</sup> PDP Certificate course on Professional Development Programme commences**

The 4<sup>th</sup> batch of PDP commenced on 1<sup>st</sup> Oct, 2011 and 06 students have enrolled for the same.. Orientation programme and theoretical aspect has been completed and field attachment started from 14<sup>th</sup> Nov, 2011.

## **EDP Certificate course on Entrepreneurship Development Programme**

The Final Evaluation of the 3<sup>rd</sup> EDP Certificate course on Entrepreneurship Development Programme on “Fish Processing and Trade” which started on 17<sup>th</sup> January, 2011 has been completed on 22.08.2011. Trainees were attached to different European Union approved fish processing units for hands on attachment for a period of two months from 21<sup>st</sup> May, 2011 to 21<sup>st</sup> July 2011.

## **Exposure visits**

CIFE, Kolkata Centre organized the following exposure visits

1. 5 days Exposure Visits cum training programme during 24-28 June, 2011 for 20 students from IFTC, Manipur, Imphal.
2. 3 days Exposure visits cum training programme on during 23-25 July, 2011 for the trainees from Inland Fisheries Training Institute, Chennai.
3. Visit of officials from Department of Fisheries, G.B. Pant Agricultural University & Technology, Uttaranchal on 16 July, 2011.

## **Hindi Diwas at CIFE, Kolkata Centre**

**Hindi Diwas** was celebrated at CIFE, Kolkata Centre on 21<sup>st</sup> September, 2011. All the staff members of the Centre attended the programme. Various competitions like poetry, extempore lecture, songs, antakshari *etc.* were organized during the Hindi Diwas.

## **Fish Farmer's Day at Kolkatta**

Fish Farmer's Day was celebrated on 10<sup>th</sup> July, 2011 at CIFE, Kolkata Centre.

## **Mass Media Coverage**

Dr. B. K. Mahapatra, Principal Scientist & OIC Kolkata Centre participated as a resource person in AIR, Kolkata on “Recommendation in Fish culture for fish farmers of West Bengal affected with heavy rain or flood (In Bengali)” which has been broadcasted on 30.08.11 in “Krishi Kathar Ashar” at 6.40 pm.

# Kakinada Centre News

## Field training programme of MFSc students at CIFE Centre, Kakinada

The M.F.Sc students from the various disciplines were exposed to different fish culture activities starting from one ha. culture area to 150- 200 acre area ponds. Different culture practices of Catla, Rohu, Pangasius, Scampi and Tiger prawn culture (in low saline areas) were demonstrated. They interacted with the farmers on various culture aspects. In addition to this, they studied the feasibility of Pangasius hatchery. They also visited various fish and prawn packing & transportation sites, feed mill plants, other government and private sector units. Trainees were given hands-on training on various aspects of Scampi larval rearing starting from brood stock selection to zoea rearing. They were also trained in preparation of artificial feeds, artemia processing etc. in addition the students were exposed to different aspects of shrimp farming, crab farming and other brackish water fish farming through field visits. They also had exposure to various fisheries organizations such as KVKs, SIFT, MPEDA, CMFRI and NACSA and other private and government Laboratories during their training programme.

## Field training programme for Professional Development Programme (PDP) at CIFE Centre, Kakinada

Two students of Professional development programme (PDP) have completed their field training on Aquaculture module at the centre from 28/6/2011 to 30/7/ 2011. During their training they underwent hands on training on Carp and catfish breeding, *L. vannamei* culture aspects and Scampi breeding. They underwent four days training in commercial shrimp hatchery management. Field visits to various fish and shrimp farms, feed mills, were arranged during which they were exposed to various aspects of fish seed production, transportation, hatcheries, fish nurseries and fish rearing ponds. They also had exposure to various fisheries organizations such as KVKs, SIFT, MPEDA, CMFRI and NACSA and other private and government Laboratories during their training programme.

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## Radio talks

- Mr. P. Rami Reddy has delivered a Radio talk on *L. vannamei* culture in India on 2.5.2011 at AIR, Vizhag.
- Mr. R.R.S. Patnaik delivered a Radio Talk on “*Pangasius chapela pempakan* at All India Radio, Vishakapatnam”
- Mr. R.R.S. Patnaik Technical Officer (T 7-8) delivered a radio talk on “ *Palle karula Jeevano padhi kai peethala pempakam*” at AIR on 6.8. 2011