



मत्स्य प्रौद्योगिकी समाचार

Fish Technology Newsletter



CONTENTS

Awards and Recognitions	1
News from the Research Front	4
Training Programmes	6
Outreach Programmes	7
Exhibitions	7
Awareness Programmes	10
Golden Jubilee Celebrations	13
Personnel News	15
Personalia	16

मत्स्य विज्ञान के लिए, स्वास्थ्य के लिए, रोजगार के लिए



FISH FOR HEALTH, WEALTH & EMPLOYMENT

GOLDEN JUBILEE YEAR
CENTRAL INSTITUTE OF FISHERIES TECHNOLOGY

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CIFT Bags Outstanding Institute Award के मा प्रौ सं को उत्कृष्ट संस्थान पुरस्कार मिला

CIFT, Cochin bags the 'Sardar Patel Outstanding ICAR Institution Award - 2006'. The award is instituted by ICAR, New Delhi to recognize the agricultural research institutions which makes outstanding contributions for the growth and development of agricultural sciences and technology and to promote excellence in broad fields of agricultural research, education and training.

CIFT, Cochin is the only Institute in the entire ICAR system comprising of more than 70

के मा प्रौ सं, कोचिन ने भा कृ अनु प, नई दिल्ली द्वारा स्थापित 'सरदार पटेल उत्कृष्ट भा कृ अनु प पुरस्कार-2006' को प्राप्त किया। कृषि विज्ञान और प्रौद्योगिकी की वृद्धि और विकास के उत्कृष्ट योगदान और कृषि, अनुसंधान, शिक्षा और प्रशिक्षण के व्यापक क्षेत्र में श्रेष्ठता की उन्नति करने वाले कृषि अनुसंधान संस्थानों की मान्यता के लिए भा कृ अनु प द्वारा इस पुरस्कार की स्थापना की गई है।

70 से ज्यादा संस्थानों से युक्त संपूर्ण भा कृ अनु प प्रणाली में केवल के मा प्रौ सं, कोचिन ही ऐसा संस्थान है जिसे दूसरी बार यह सम्मान प्राप्त किया है। पहले वर्ष 2000 में



Dr. Devadasan, Director receiving the Sardar Patel Award from Shri Sharad Pawar, Union Minister for Agriculture in the presence of Shri Kantilal Bhuria, Minister of State for Agriculture and Dr. Mangala Rai, DG, ICAR

Institutes, which was awarded this honour for the second time. Earlier in 2000 the Institute received the Sardar Patel Award and as per rules the same Institution can be considered for the award only after a gap of five years. Exactly after this period CIFT is again getting the award. The award for 2006 carries a Citation and a cash prize of Rs. 5 lakhs. The award was received by Dr. K. Devadasan, Director, CIFT in the function held on 16th July, ie. the Foundation Day of ICAR. Shri Sharad Pawar, Hon'ble Union Minister for Agriculture gave away the award.

संस्थान को सरदार पटेल पुरस्कार मिला था और नियमों के अनुसार यह पुरस्कार किसी संस्थान को दूसरी बार पांच वर्ष के अंतराल के बाद ही दिया जाता है। बिलकुल ठीक इस अवधि के बाद फिर से यह पुरस्कार के मा प्रौ सं को प्राप्त हुआ। वर्ष 2006 के इस पुरस्कार में एक प्रशस्ति पत्र और रु. 5 लाख नगद है। भा कृ अनु प में अपने स्थापना दिवस 16 जुलाई को संपन्न कार्यक्रम में डॉ. के. देवदासन, निदेशक, के मा प्रौ सं द्वारा यह पुरस्कार प्राप्त किया गया। श्री शरद पवार, माननीय कृषि मंत्री, भारत सरकार द्वारा इस पुरस्कार दिया गया।

मछली तन के लिए, गांवों के लिए

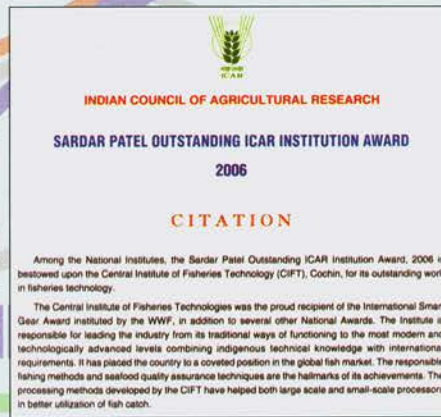
During the X Plan period CIFT executed Institute-based, sponsored and consultancy projects in harvest, post-harvest and product and process development. Special projects were implemented for the backward regions and weaker sections, especially women. Seven villages were adopted under the village adoption scheme. The Institute conducted two workshops and 14 Field Level Demonstrations, in which 800 participants were benefited. There were three major breakthroughs and eight technologies transferred/commercialized during the period. CIFT generated revenue to the extent of Rs. 457.92 lakhs. It undertook 30 consultancy assignments, conducted 408 training programmes for 1,632 beneficiaries, published 174 books/folders, answered 1,715 technical queries, analyzed 10,165 products, conducted 74 exhibitions and participated in 16 media campaigns. The X Plan achievements include:

Harvest

- Low cost and durable substitutes for conventional craft
- Energy saving concepts in trawling
- Eco-friendly trawls for semi pelagic resources
- Low energy and eco-friendly harvest technologies
- Popularisation of large mesh gillnets in Lakshadweep islands

Products

- Ready-to-consume fried mussel in flexible retortable pouch
- Battered and breaded products
- Processed jelly fish and squalene
- Fish powder incorporated cookies
- Good quality cattle/piggery/poultry feed from ensiled fish wastes



वर्ष X वीं योजना के दौरान, के मा प्रौ सं प्रग्रहण, पश्च-प्रग्रहण और

उत्पाद और प्रक्रिया विकास में संस्थान-आधारित, प्रायोजित और परामर्श परियोजनाओं को निष्पादित किया है। पिछड़े क्षेत्र और कमजोर वर्ग, विशेषकर महिलाओं के लिए विशेष परियोजनाएं कार्यान्वित किए गए। ग्राम अभिग्रहण योजना के अधीन सात ग्रामों का अभिग्रहण किया गया। यह संस्थान दो कार्यशालाएं और 14 क्षेत्र स्वर निदर्शन का संचालन किया जिस से 800 प्रतिभागी लाभ उठाए। तीन प्रमुख सफलताएं थे और इस अवधि के दौरान आठ प्रौद्योगिकियों को स्थानांतरण/वाणिज्यीकरण किया गया के मा प्रौ सं रु. 457.92 लाख तक का राजस्व पैदा किया है। 30 परामर्श का कार्यभार लिया गया 408 प्रशिक्षण कार्यक्रम 1,632 लाभभागियों के लिए संचालित, 174 पुस्तक/फोल्डर प्रकाशित किए गए, 1,715 तकनीकी पूछताछ का समाधान किया गया, 10,165 उत्पादों को विश्लेषित किया गया, 74 प्रदर्शनीयाँ संचालित किए गए और 16 मीडिया अभियान में प्रतिभागिता किया गया। X वीं योजना की उपलब्धियाँ में शामिल है:

प्रग्रहण

- परम्परागत यान के बदले में कम-कीमत और टिकाऊ यानों को प्रतिस्थापित करना
- ट्रॉलिंग में ऊर्जा बचत की धारण
- अर्ध-वेलापवर्ती संपदा के लिए पर्यावरण अनुकूल ट्रॉल
- कम ऊर्जा और पर्यावरण अनुकूल प्रग्रहण प्रौद्योगिकी
- लम्बे मेश क्लोम जालों को लक्षद्वीप में लोकप्रिय बनाना

उत्पाद

- नम्य रिटोर्ट पाउच में उपभोग केलिए तैयार तला मसल
- बेटेड और ब्रिडेड उत्पाद
- संसाधित जेली मत्स्य और स्व्वालीन
- भोजन में सम्मिलित मत्स्य चूर्ण
- साईलेज किए मत्स्य रद्दी से अच्छी गुणता का मवेशी/सुअर/मुरगा-मुरगी का चारा
- आदर्श बाहिःसाव उपचार संयंत्र

- Model effluent treatment plants
- Eco-friendly fish drier
- Meat bone separator
- Multiple blade machine for cutting mollusk shells
- Kit for rapid detection of WSSV in shrimp

Packing

- Extruded products in thermoformed containers
- Sausages in edible casings
- Curries in retort pouch

XI Plan priorities of CIFT include:

- Use of nanotechnology, bio technology and bio informatics in product development
- Need-based special programmes in the northeast and the islands
- Special facility for testing of commercial samples
- Design and construction of tuna long liner
- Testing tank facility for craft and gear testing
- Establishment of National Accreditation Centre for testing and certification of fishing vessels
- Establishment of Vessel Design Centre
- Establishment of a full fledged boat building yard
- Special programmes for women and weaker sections
- Modernization of Library and Documentation Centre and ARIS cell
- Human Resource Development
- Creation of a Technical Advisory Centre for the fish processing industry
- Creation of Hydro-acoustic and ethology laboratory
- Establishment of a Centre of Excellence in food safety and risk assessment with modern facilities and manpower.

- पर्यावरण अनुकूल मत्स्य शुष्कक
- मांस हड्डी सपरेटार
- मोलुस्क कवच को काटने के लिए बहु ब्लेड मशीन
- झींगों में डब्ल्यू एस एस वी के तीव्र खोज के लिए किट

संवेष्टन

- थारमोफार्मड डिब्बों में निष्कासित उत्पाद
- खाद्य वेष्टन में कबाब
- रिटोर्ट पाउच में कढ़ियाँ

XI वी योजना में के मा प्रौ सं की प्राथमिकताएँ:

- उत्पाद विकास में नानो प्रौद्योगिकी, जैव प्रौद्योगिकी और जैव सूचना की प्रयुक्ति
- उत्तरपूर्व और द्वीपों में आवश्यकता - आधारित कार्यक्रम
- वाणिज्यिक नमूनों के परीक्षण के लिए विशेष सुविधा
- ट्यूणा लम्बी डोरी का अभिकल्प और निर्माण
- यान और गिअर परीक्षण के लिए परीक्षण टैंक सुविधा
- मत्स्यन जहाजों के परीक्षण और प्रमाणीकरण के लिए राष्ट्रीय प्रत्यायन केन्द्र की स्थापना
- जहाज अभिकल्प केन्द्र की स्थापना
- संपूर्ण सुविधाओं के साथ यान निर्माण यार्ड की स्थापना
- महिला और कमजोर वर्ग के लिए विशेष कार्यक्रम
- पुस्तकालय और प्रलेखन केन्द्र और एरीस सेल का आधुनिककरण
- मानव संसाधन विकास
- मत्स्य संसाधन उद्योग के लिए तकनीकी परामर्श केन्द्र का सृजन
- जल-ध्वनि और मानवजाति विज्ञान प्रयोगशाला का सृजन
- आधुनिक सुविधा और जनशक्ति के साथ खाद्य सुरक्षा और संकट मूल्यांकन श्रेष्ठता केन्द्र की स्थापना।

NABL Accreditation for CIFT Laboratories

के मा प्रौ सं के प्रयोगशालाओं को एन ए बी एल प्रत्यायन

The Laboratories of CIFT, Cochin is awarded the prestigious NABL Accreditation as per ISO 17025 by National Accreditation Board for Testing and Calibration Laboratories, New Delhi. The NABL Accreditation provides further authenticity of the test reports furnished by CIFT in India as well as abroad by importing countries. NABL Accreditation is an international approval with linkages to testing and calibration agencies like Asia Pacific Laboratory Accreditation Conference (APLAC) as well as International Laboratory Accreditation Conference (ILAC) operating under the auspicious of United Nations.

CIFT though by mandate is engaged in Research and Development activities in harvest and post harvest technology in fisheries, is also catering to testing various commodities like fish and fishery products,

केन्द्रीय मात्स्यकी प्रौद्योगिकी संस्थान, कोचिन स्थित प्रयोगशालाओं को राष्ट्रीय प्रयोगशाला परीक्षण और अंशांकन बोर्ड, नई दिल्ली द्वारा आई एस ओ 17025 के अनुसार प्रतिष्ठात्मक एन ए बी एल प्रत्यायन प्रदान किया गया। यह एन ए बी एल प्रत्यायन भारत के साथ आयातित देशों द्वारा विदेशों में के मा प्रौ सं द्वारा प्रस्तुत परीक्षण रिपोर्टों की ओर भी प्रामाणिकता उपलब्ध करता। संयुक्त राष्ट्र संघ के तत्वावधान में परिचालित एशिया प्रशान्त प्रयोगशाला प्रत्यायन सम्मेलन (ए पी एल ए सी) के साथ साथ अंतर्राष्ट्रीय प्रयोगशाला प्रत्यायन सम्मेलन (आई एल ए सी) जैसी एजेन्सीस का परीक्षण और अंशांकन अनुबंध के लिए यह एन ए बी एल प्रत्यायन एक अंतर्राष्ट्रीय अनुमोदन है।

हालाँकि के मा प्रौ सं के लिए अधिदेश मात्स्यकी में प्रग्रहणन और पश्च प्रग्रहण प्रौद्योगिक में अनुसंधान और विकास क्रियाकलाप में लगे रहने के साथ विभिन्न पदार्थों जैसे मत्स्य और मत्स्यन उत्पाद, विविध

miscellaneous food items, water, ice, food additives, sanitizers and disinfectants, fishing gear, fishing boat and a number of other items. The Institute is already a recognized Centre by European Union, USFDA, Export Inspection Council of India and many other regulatory agencies. The current NABL Accreditation will be a further boost for the analytical services extended by CIFT. The NABL Accreditation scope of CIFT covers three major areas of testing namely Chemical, Biological and Mechanical. A total of 130 tests are coming under the approved scope and all these tests are performed by well qualified and trained Scientists and Technical Officers using latest test methods and testing equipments.

खाद्य पदार्थ, जल, बर्फ, खाद्य योज्य, सैनिटीजर और रोगानुनाशक, मत्स्यन गिअर, मत्स्यन यान और कई अन्य पदार्थों का परीक्षण भी प्रदान कर रहा है। इस संस्थान को पहले से ही यूरोपीयन संघ, यू एस एफ डी ए, भारतीय निर्यात निरीक्षण परिषद और कई अन्य नियंत्रण एजेन्सीस की मान्यता प्राप्त है। यह चालू एन ए बी एल प्रत्यायन के मा प्रौ सं द्वारा प्रदात विश्लेषणात्मक सेवाओं की ओर भी उन्नति कर सकता है। के मा प्रौ सं के एन ए बी एल प्रत्यायन कार्यक्षेत्र में रासायनिक, जैविक और यांत्रिक परीक्षण के तीन प्रमुख क्षेत्र हैं। अनुमोदित कार्यक्षेत्र के अधीन कुल 130 परीक्षण आते हैं और इन परीक्षणों का निष्पादन कुशल योग्य और प्रशिक्षित वैज्ञानिक और तकनीकी अधिकारी नवीनतम परीक्षण पद्धतियाँ और परीक्षण उपकरणों की प्रयुक्ति से करते हैं।

News From The Research Front

Influence of size variation on the physico chemical characteristics of muscle proteins

Proteins represent an important class of functional ingredients exhibiting a wide range of functionality and shows versatility during processing. A protein manifests functionality by interacting with other components within the food system involving solvent molecules, solute molecules, other protein molecules or substances that are dispersed in the solvent such as oil or air. Generally, proteins exist in the lowest kinetically attainable state of free energy. The structure of protein is highly dependent upon the environment and protein assumes different conformation as the environmental conditions change. The pH, temperature, dielectric constant, ionic strength and the presence of other molecules including air, fat, denaturants, etc. are some of the important factors contributing to this. The proteins lower their free energy through the removal of hydrophobic groups from its surface. The hydrophobic bonds are very sensitive to changes in temperature and dielectric constant and therefore changes in these parameters can have large influences on protein structure.

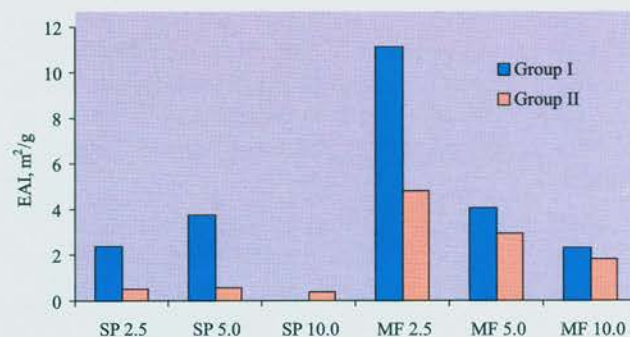
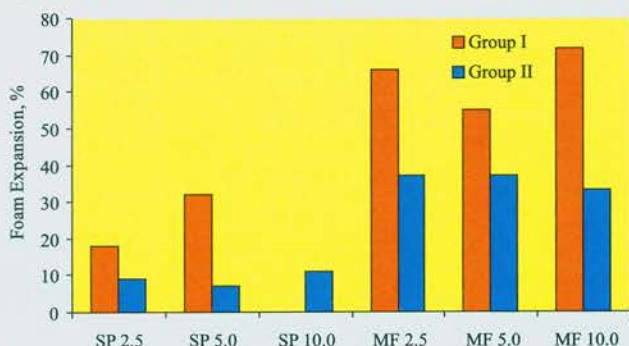
Myosin and Actin constitute the basic functional component of the myofibrillar proteins. Myosin accounts for about 50% of total myofibrillar proteins and thus contributes significantly to the characteristics of muscle foods. Understanding physico chemical

characteristics is of utmost importance as it is directly related to the final quality of products like surimi, sausages and battered products. Changes in biochemical composition of fishes in relation to their size is available in plenty. But the information available on the influence of size on the functionality of fish protein is scanty and the same was attempted taking Barracuda (*Sphyraena jello*) as a candidate species.

Besides the composition of the two different sized fishes, the physico chemical properties like surface hydrophobicity, reactive sulphhydryl group and Ca^{2+} ATPase activity were studied. Emulsion, Viscosity, Foaming, Gelation, Water Holding Capacity etc. were the functional properties studied.

The higher Ca^{2+} ATPase activity of Group II fishes with size of over 1000 g and the lower reactive sulphhydryl content of Group I fishes of about 500 g indicates the negative conformation of the major myofibrillar protein Myosin. Group I fishes showed more surface hydrophobicity and viscosity compared to Group II fishes. These conformational properties correlated well with the solubility characteristics of proteins from these fishes.

The extractability of sarcoplasmic and myofibrillar fractions were 107 mg/g and 158.40 mg/g for Group I



and 167.18 mg/g and 203.08 mg/g for Group II fishes, respectively. Surface hydrophobicity, the measure of the non-polar amino acids, on the surface of a myofibrillar protein, was higher for Group I fishes by 28%. The myofibrillar proteins expressed by Group I fishes might contain more hydrophobic amino acids on its surface in native structure which could be the factor causing increased surface hydrophobicity and hence the decreased solubility. The average hydrophobicity of amino acid residues and the charge frequency of amino acid residues determine the solubility of the protein. The lower the average hydrophobicity and higher the charge frequency, higher is the solubility.

The concentration of reactive sulphhydryl groups in native myofibrillar protein from Group I fishes were 43% less compared to the Group II which very well correlated with the higher solubility and low hydrophobic nature of muscle proteins in Group II fishes. The Ca²⁺ ATPase activities of the myofibrillar proteins were 0.29 and 0.65 μ moles Pi/mg Protein/min for Group I and Group II fishes respectively. The higher Ca²⁺ ATPase activity in the Group II fishes could be attributed to the higher percentage of Myosin in the actomyosin of this fishes.

- Kum Dhanya Ramachandran, Shri Mukund Mohan and Dr. T.V. Sankar,
Biochemistry & Nutrition Division, CIFT, Cochin

(Work carried out as part of the ICAR Ad-hoc scheme, 'Functional properties of proteins from marine, brackish water, fresh water and deep-sea fish of India')

In Group I, at a protein concentration of 5 mg/ml, viscosity increased by 2 times and at 10 mg/ml the increase was more than 3 times than the Group II fishes. This increased viscosity of MFP of Group I fishes goes well with the increased gel strength and water holding capacity of this group. The EAI was higher for Group I fishes compared to Group II and concentration of 2.5 mg/ml and 5 mg/ml which decreased with increasing protein concentrations. The water holding capacity for Group I fishes were slightly higher compared to that of the Group II fishes. Group I fishes had better gel strength than the Group II fishes.

The Group I fishes which have more hydrophobic patches in its native structure could form better gelling functionality. The viscosity of the Group I fishes which are on the higher side can also contribute to gel strength imparting internal friction or viscous flow of the sample.

The Group I fishes showed better functionality of proteins, especially foam expansion, foam stability, emulsion activity and emulsion stability and more importantly gel strength. This conforms that Group I fishes with average weight of 500 g can be considered as candidate species for the purpose of value addition especially for surimi related products.

Ready-to-eat 'Fish-Kure'

In order to improve the utilization of underutilized fisheries resources, such as Jew fish, Perches, Breams, Ribbon fish, Sole, Barracuda, Lizard fish, Lesser Sardine, Catfish etc. there is a need to develop innovative processing technologies for human use. One such technology, which will be suitable for utilization of low value fish, is "extrusion technology". Use of fish mince with cereals for extrusion process will enable production of shelf-stable products at ambient temperature. Extrusion cooking is used in the manufacture of food products such as ready-to-eat breakfast cereals, expanded snacks, pasta, etc.

The raw material in the form of powder at ambient temperature is fed into the extruder at a known feeding rate. The material gets compacted and then softens and gelatinizes and melts to form a plasticized material, which flows down the extruder channel. The gelatinized material is then forced out through a set of dies to the desired form and shape.



The advantages of extrusion process are:

- The process is thermodynamically most efficient.
- High temperature and short time enables destruction of bacteria and anti-nutritional factors.
- One step cooking process thereby minimizing wastage.
- Destruction of fat hydrolyzing enzymes during extrusion cooking.

Extrusion cooking technology has limitless application in the processing of cereal based foods and other materials. Ready to serve and ready to cook processed foods that can be stored at room temperatures without refrigeration are the products that have very good potential worldwide. Value addition is the most talked about word in the fish processing industry these days because of the increased realization of foreign exchange and high unit value for such products. In today's affluent society, people prefer to buy ready-to-cook and ready-to-serve convenience products from

supermarkets rather than buying raw fish, which is cumbersome to prepare for the table. Cereal-based extruded products are now getting more and more importance and popularity in the market. A few extrusion studies have indicated the possibility of producing puffed snack foods products from rice, other flours and fish muscle blends using various extruders. They are very crisp. Besides the inclusion in breakfast cereals, the products can be used to boost the healthful content of snack mixes, backed products and salad toppings. Extruded products can supply good quality nutritional foods convenient for use in the modern life. More over by catches and low cost fishes can be utilized properly by which fishermen get more profit for their effort.

As cereal flours are poor source of protein, so a product comprising only of cereal flours will not be a wholesome food product. In order to overcome this drawback the addition of animal protein has been suggested by various workers. In this context CIFT has worked on the production of extruded products by incorporating fish mince with cereal flours. One such popular combination that has been accepted by the people is the combination of Japanese threadfin bream (*Nemipterus japonicus*) mince with rice flour and Bengal gram flour. The fish mince is mixed with cereal flours, spices and vegetable oil and extruded using a twin-screw extruder. The product obtained is finally coated with Chaat masala to provide a mouth-watering snack that has been christened as "Fish Kure".

- Dr. T.K.Srinivasa Gopal, Dr. C.N. Ravishankar, Shri Jones Varkey and Shri C.K. Kamalakanth
Fish Processing Division, CIFT, Cochin

Training Programmes

Cochin

- i. Microbiological analysis of fish and fishery products (1 April - 31 May)
- ii. Pesticide residue analysis (2-16 April & 4-12 June)
- iii. Analytical techniques in food microbiology (26 March - 7 April)
- iv. Fish processing technology (20 March - 3 April, 1-15 May, 7-19 May, 17 May & 1-16 June)
- v. Quality control aspects in fish processing (9-21 April)
- vi. Seafood quality assurance and modern analytical techniques (16-28 April)
- vii. HACCP concepts (17-20 April, 7-10 May & 28-31 May)
- viii. Demonstration and packaging of different fish and fish products (23-25 April)
- ix. Bacteriological techniques for the analysis of fish and fish products (7-19 May & 22 May - 5 June)

- x. PCR technique for detection of white spot syndrome virus (WSSV) (8-10 May)
- xi. Seafood quality assurance (14-26 May & 11-23 June)
- xii. Modern analytical techniques in biochemistry (14-26 May & 18-30 June)
- xiii. Isolation of bacteria, its culture and assay of enzyme activity (14-26 May)
- xiv. Isolation and culture of *Staphylococcus aureus* and assay of enzyme profile (15 May - 7 June)
- xv. Biochemical analysis of fishery products (1-16 June)
- xvi. Food analysis and hygiene (11-30 June)

Visakhapatnam

- i. Seafood quality assurance (14-28 May)
- ii. Laboratory methods for microbial examination of seafood (14-28 May)



Training on Seafood quality assurance at Cochin



Training on Seafood quality assurance at Visakhapatnam

Golden Jubilee Training at Udaipur

As part of the Golden Jubilee Celebrations of CIFT, a training programme on 'Harvest and post harvest technology of fish' was organized at the College of Fisheries, Maharana Pratap University of Agriculture & Technology, Udaipur during 2-5 April. Dr. Pratap Singh, Director of Research, MPUAT chaired the inaugural function of the training programme on 2 April. The training programme was formally inaugurated by Dr. K. Devadasan, Director, CIFT. Dr. H.C.L. Gupta, Dean, College of Fisheries welcomed the

gathering while Dr. L.L. Sharma, Head of Aquaculture proposed the vote of thanks. Shri P.K. Vijayan, Principal Scientist, CIFT also spoke on the occasion.



Inaugural session of the training programme

The training was conducted as forenoon lecture class and afternoon practical demonstration session. Twenty three participants consisting of PG students, research scholars, faculty members of College of Fisheries, officials from Rajasthan State Fisheries Department attended the

training programme.

Golden Jubilee Training at Visakhapatnam



Participants and faculty of training on Maintenance of fish quality

Training programme for the benefit of traditional fisherwomen directly involved in selling of fish/fish trade in local fish markets on "Maintenance of fish quality and its marketing" was conducted at Visakhapatnam Research Centre on 26th June, 2007 as part of the Golden Jubilee Celebrations of the Institute. The fisherwomen from Pudimadaka, Kadapalem, Kondapalem and Pedajalaripeta fishing villages participated in the programme. Shri Arjali Dasu, Secretary and Shri Perla Appa Rao, Community Organizer of the District Fishermen Youth Welfare Association also participated in the programme.

Training in Harvest Technology

The Visakhapatnam Research Centre of CIFT conducted a training on 'Square mesh codends and responsible fishing practices' at Kakinada for two batches each consisting of 20 fishermen members of Swarna Andhra Mechanized Boat Owners Welfare Association and another 20 members of New Dolphin Mechanized Fishing Boat Operators Welfare Association on 3rd and 4th April. Apart from explaining the advantages of square mesh codends, trainees were taught about the diversification in fishing practices like adoption of semi-pelagic and mid water trawling and tuna long lining not only to minimize fuel consumption but also to reduce fishing pressure on shrimp resources.



Training on Square mesh codends and responsible fishing

Participation in Exhibitions

The Institute participated in the following exhibitions during the quarter:

i. Organic Kerala - 2007, Cochin (23 April)

ii. Techno-Expo Trade Fair held as a part of International Coconut Summit, Cochin (7-11 May)

Training on TED and BRD



Onboard training on Fabrication of TED/BRD

Training programmes on 'Fabrication of Turtle Excluder Devices (TED) and By-catch Reduction Devices (BRD)' in two batches of 20 fishermen members of Dolphin Boat Operators Association and 20 members of A.P. Mechanized Fishing Boat Operators Association, Visakhapatnam was conducted onboard the Departmental vessel CIFTECH-I on 11th and 12th April. The training was aimed to create awareness among traditional mechanized fishing vessel operators about the importance of adopting by-catch reduction devices to eliminate huge quantity of non-target fish species.

Training on Hygienic Handling of Fish

Crew members of fishing vessels were given training on Hygienic handling of fish and silage preparation on board the vessel. The training was in two batches of two days duration at Kakinada fishing harbour on 3rd and 4th April and onboard CIFTECH - I at Visakhapatnam fishing harbour on 11th and 12th April. Demonstration of fish ensilage preparation was also conducted for effective utilization of trash fish/low value fish during wet seasons which render unsuitable for regular fish drying process.



Onboard training on Hygienic handling of fish

Trainers' Training Programme

The Burla Research Centre of CIFT conducted a four day's trainers' training cum demonstration programme on 'Advances in fish processing technology and employment of eco-friendly gears for sustainable fisheries' at Directorate of Fisheries, Govt. of Orissa, Cuttack during 16-19 April. Shri Arjun Charan Naik, Addl. Director of Fisheries, Govt. of Orissa inaugurated the programme in the presence of Dr. K. Devadasan, Director, CIFT. Dr. M.M. Prasad, SIC, CIFT, Burla presided over the function and delivered the key note address. Dr. T.K. Thankappan, Principal Scientist, CIFT, Cochin delivered the welcome address and the programme came to a conclusion with vote thanks by Shri M.P. Remesan, Scientist (SG), CIFT, Cochin.



Inauguration of training in Advances in fish processing technologies

Department of Fisheries of different districts of Orissa and Executives of NGO's who are actively involved in harvest and post harvest aspects of both fresh water and marine fisheries sectors were trained under this programme. The training programme contained lectures on various aspects of fishing technology by

using eco-friendly gears, fish processing technology right from the stage of harvest till the fish reaches plate for immediate consumption and bacteriological, biochemical, physical and sensory characteristics were dealt in detail. The demonstrations included various designs of gear, development of value added fish products by scientific means with a stress

on hygiene, superior quality, catering the animal protein requirement of the population and generation of sustainable income to the fishermen community.

A total of 36 Field Extension Officers of the

Training on Packaging of Fishery Products

A training cum demonstration on 'Packaging of fish and fishery products' was conducted at Imphal, Manipur in collaboration with ICAR Research

Complex for NEH Region (Manipur Centre) during 23-25 April. The training programme was inaugurated by Shri Lakhar, IAS, Commissioner of Fisheries,

Manipur. The meeting was presided over by Dr. Ngachan, Joint Director, ICAR Research Complex, Imphal. Shri Sharat Kumar, Director of Fisheries, Govt. of Manipur offered felicitations. Dr. C.N. Ravishankar, Senior Scientist, CIFT introduced the training programme and its contents to the gathering. Dr. Mousumi Ray Choudhary, Senior Scientist, ICAR Research Complex, Imphal proposed vote of thanks.



Participants and faculty of training on Packaging of fish

Seventy six participants from various organizations like KVKs, NGOs, Self Help Groups, State Fisheries Department, fish farmers, Fishermen Welfare Association and fish processors attended the programme. After the inauguration a talk was given on the introduction to packaging of food products. This was followed by demonstration of various packaging materials, products, packaging systems, etc. On the

second day products like fish pickle, cutlets, balls etc. were prepared from rohu and packaging requirements for many value added products were discussed. Demonstration of can seaming and canning of fish products was done. On the third day condiment incorporated dry fish, shrimp and chutney powder were prepared and packaging of these products was taught. This was followed by lectures on packaging of dry fish, smoked fish, pickle and machinery required for production of value added fish products. After the completion of training, group discussion was held and the doubts were cleared. Finally a valedictory function was held in which, Father Vergheese, Director, DSSS (an NGO) and Shri M. Singh, former Minister of Fisheries, Govt. of Manipur spoke and highlighted the benefits of the training.

Skill Upgradation Training/ दक्षता उन्नति प्रशिक्षण

The Burla Research Centre has conducted a Training-cum-demonstration programme entitled, "Skill upgradation training in hygienic preparation of smoke cured fish" during 7-13 May at Sonutikra near Burla. The programme benefited the fisherwomen of the Self Help Groups of four fishing villages of Dhankauda block, Sambalpur dist., namely Sonutikra, Balbaspur, Mohamadpur and Jugipalli. Out of the 47 trainees, six were SC, 25 ST and 16 OBC comprising 13%, 53% and 34% respectively.



Skill upgradation training in progress

The programme financed by DRDA, Sambalpur was meant for the fisherwomen of the same village where the Burla Research Centre has successfully installed the Community Fish Smoking Kiln with financial help of the Project Director, DRDA, Sambalpur.

In the programme the participants were trained in the preparation of value added products such as fish pickle, fish wafer, fish cutlet and fish pakoda. The most successful aspect of the training was that, 25% of the trainees were able to demonstrate their ability to repeat preparation of all value added products from fish without any help.

The trainees were also taken to various villages as part of field exposure visit. The field exposure visit

बुरला अनुसंधान केन्द्र द्वारा 'धूम अभिसाधित मत्स्य की स्वास्थ्यकर तैयारी में दक्षता उन्नति प्रशिक्षण' के शीर्षक विषय पर प्रशिक्षण सह-निर्देशन कार्यक्रम 7-13 मई के दौरान सोनूटिक्रा में आरंभ-बिन्दु के रूप में संचालित किया गया। धानकौडा खंड, साम्बलपुर जिले के चार मत्स्यन गाँव सोनूटिक्रा, बालबस्पुर, माहम्मदपुर और जूगीपली नामक स्वसहायता समूह के मछुवा माहलाएं इस कार्यक्रम से लाभ उठाएँ। कुल 42 प्रशिक्षणार्थी छः अनुसूचित जाति, 25 अनुसूचित जनजाति और

16 अन्य पिछड़े वर्ग क्रमानुसार 13%, 53%, और 34% से युक्त थे।

यह कार्यक्रम डी आर डी ए, साम्बलपुर द्वारा वित्तकृत था और परियोजना निदेशक, डी आर डी ए, साम्बलपुर की वित्तीय सहायता से बुरला अनुसंधान केन्द्र द्वारा सफलतापूर्वक समुदाय मत्स्य धूम भट्टी स्थापित गाँव की मछुवा महिलाओं के लिए था।

इस कार्यक्रम में मूल्यजोड़ उत्पाद जैसे मत्स्य अचार, मत्स्य वेफर, मत्स्य कटलेट और मत्स्य पाकोडों की तैयारी में प्रतिभागियों को प्रशिक्षित किया गया। इस प्रशिक्षण का अत्याधिक सफलता पहलू था कि, बिना किसी सहायता के मत्स्य से सभी मूल्यजोड़ उत्पाद की तैयारी को 25% प्रशिक्षणार्थी निर्देशित करने में योग्य थे।

विषय की प्रथम प्रस्तुति के दौरे के रूप में विभिन्न गाँवों को भी प्रशिक्षणार्थियों को ले जाया गया। अपने गाँवों में समुदाय मत्स्य धूम

helped not only the trainees but also other fisherwomen who belonged to the respective villages in operation of the community fish smoking kiln and preparation of smoke cured fish by using fishes of different sizes and varieties. The beneficiaries were also given training on use of eco-friendly fishing gears for sustainable fisheries and operation of simple gill nets, frame nets and trammel nets. Improved fishing gears were demonstrated to them and training was imparted on maintenance and repair of fishing gears and fishing crafts.

भट्टी के परिचालन और मत्स्य के भिन्न आकार और जातियों की प्रयुक्ति से धूम अभिसाधित मत्स्य की तैयारी से संबंधित, मछुवा महिलाएं इन क्षेत्र प्रथम प्रस्तुति दौर से सहायता प्राप्त किए। संभाल मात्स्यिकी के लिए पर्यावरणानुकूल मत्स्यन गिअर की प्रयुक्ति और सरल क्लोम जाल, फ्रम जाल और ट्रमेल जाल के परिचालन पर भी प्रशिक्षणार्थियों को प्रशिक्षण दिया गया। सुधारित मत्स्यन गिअरों को उन्हें प्रदर्शित किया गया और अनुरक्षण और मत्स्यन गिअरों की मरम्मत और मत्स्यन यानों के अनुरक्षण पर प्रशिक्षण प्रदान किया गया।

छली तन के लिए, धन Awareness Programme on Responsible Fishing

जिम्मेदार मत्स्यन पर अभिज्ञा कार्यक्रम

In connection with the Golden Jubilee Celebrations, CIFT is conducting several training, awareness and demonstration programmes in different parts of the country for the benefit of marine and inland fishermen.

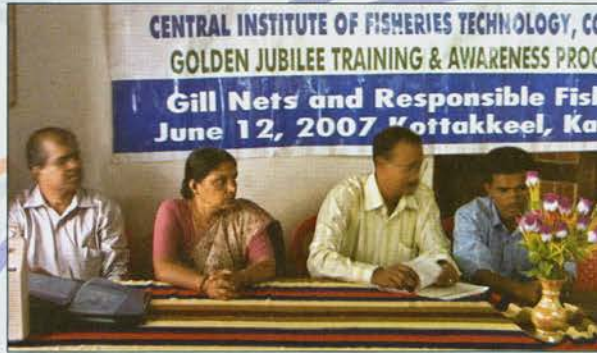
As part of this an awareness programme on 'Sustainable gillnet fishing in inland waters' for gillnet fishermen was held on 12 June, 2007 at Kottakeel, Ezhome Panchayat, Kannur district, North Kerala.

The programme was inaugurated by Dr. B. Meenakumari, HOD, FT, CIFT. In her inaugural address she explained the need for maintaining the fishery resources for the present and future generations by resorting to responsible fishing. She also explained the reasons for the declining catches and the remedial measures in the light of the Code of Conduct of FAO. Dr. S. Balasubramaniam, HOD, EIS offered felicitations and earlier Shri P.K. Vijayan, Principal Scientist welcomed the gathering.

Twenty five inland gillnet fishermen belonging to Pattuvam Inland Fishermen Co-operative Society participated in the programme. Classes on fabrication and operation of different types of gillnets and the technological advances taken place in the entire aspects of gear was conducted by Shri M.P. Remesan, Scientist (SG). Dr. P. Pravin, Senior Scientist explained sustainable fisheries and impacts of small mesh gillnets and other destructive fishing gears and methods.

Demonstration on fabrication of improved gillnets was also held for the benefit of the fishermen. Distribution of floats and sinkers in the net to achieve correct shape for the net and optimum mesh opening etc. were also demonstrated. Fishing net materials were also distributed among the participants.

स्वर्ण जयंती समारोह के सिलसिले में के मा प्रौ सं द्वारा कई प्रशिक्षण, अभिज्ञा और प्रदर्शन कार्यक्रम देश के विभिन्न भागों में समुद्री और अंतःस्थलीय मछुवारों के फायदों के लिए संचालित किए जा रहे हैं। इस अभिज्ञा कार्यक्रम के भाग के रूप में "अंतःस्थलीय जल में संभाल क्लोम मत्स्यन" पर क्लोम जाल मछुवारों के लिए 12 जून, 2007 को कोट्टकिल, इन्होम पंचयत, कन्नूर जिला, उत्तर केरल में किया गया।



Inauguration of awareness programme

इस कार्यक्रम का उद्घाटन डॉ. बी. मीनाकुमारी, डि अ, म प्रौ, के मा प्रौ सं द्वारा किया गया। अपने उद्घाटन भाषण में वे जिम्मेदारियाँ मत्स्यन उपायों द्वारा वर्तमान और भविष्य की पीढ़ी के लिए मत्स्यन संपदा के अनुरक्षण की आवश्यकता को समझाया गया। वे शिकार की कमी के कारणों की और एफ ए ओ, आचार-संहिता को दृष्टि में रखकर उपचारात्मक उपायों की जानकारी भी दी। डॉ. एस. बालसुब्रमणियम, डि अ, वि सू सां ने आशीर्वचन प्रदान किए और इस से पहले श्री पी.के. विजयन, प्रधान वैज्ञानिक सभी उपस्थित का स्वगत किया।

इस कार्यक्रम में पत्तुवम अंतःस्थलीय मछुवा सहकारिता सोसाइटी से संबंधित पच्चीस अंतःस्थलीय क्लोम जाल परिचालन करने वाले मछुवारों प्रतिभागिता किए। श्री एम.पी. रमेशन, वैज्ञानिक (व वे) द्वारा क्लोमजाल के विभिन्न प्रकारों की संरचना और परिचालन और गिअर के संपूर्ण पहलू में हुए प्रौद्योगिकीय उन्नति पर कक्षाओं का संचालन किया गया। डॉ. पी. प्रवीन, वरिष्ठ वैज्ञानिक ने संभाल मात्स्यिकी और छोटे मेश क्लोमजाल का प्रभाव और अन्य विनाशकारी मत्स्यन गिअर और पद्धतियों की जानकारी दिया।

मछुवारों के फायदों के लिए सुधारित क्लोमजाल की संरचना पर निदर्शन भी किया गया। जाल में प्लव और निमज्जकों के फैलाव से जाल सही आकार प्राप्त करता और अनुकूलतम मेश खुलाव आदि को निदर्शित किया गया। प्रतिभागियों के बीच मत्स्यन जाल सामग्री को भी वितरित किया गया।

Distribution of Inputs Under HRD Programme

The Visakhapatnam Research Centre had organized a programme for distribution of inputs for hygienic handling of fish under HRD programme at the Institute premises on 5 May, 2007. Inputs such as Ice boxes (to keep the fish fresh without spoilage), drying mats and folding cots (for hygienic drying of fish), plastic sheets (for hygienic display of fish at markets and fish landing centres) and meat mincers



Distribution of inputs like Ice box

(for preparing ready to fry fish products) were distributed to fisherwomen belonging to Pedajalaripeta, Pudimadaka, Mangamaripeta, Nehru Bazar, Poorna market, Kancharapalem and Marrisipalem fish markets. The inputs were distributed by Dr. K.R. Prasad, President, Forum of Fisheries Professional, Visakhapatnam and Shri J.V. Dixitulu, Editor, Fishing Chimes.

NAIP Stakeholders Workshop

एन ए आई पी पाणधारियों की कार्यशाला

The Stakeholders' workshop for the development of the project "Responsible harvesting and utilization of selected marine small pelagic and freshwater fishes" under National Agricultural Innovation Project (NAIP) was held at CIFT, Cochin during 30-31 May, 2007. The meeting was attended by the following Core Consortium partners:

- Chellanam Kandakadavu Fishermen Development and Welfare Co-operative Society, Cochin
- Karnataka Fisheries Development Corporation, Bangalore
- Truptisagar Society for Fishermen Ltd., Jafarabad, Gujarat
- Peninsular Aquaculture Division, CIFA, Bangalore
- College of Fisheries, Mangalore
- Chellanam Panchayat SC/ST Service Co-operative Society Ltd., Cochin

The following Associated Consortium partners also attended the workshop:

- Kerala Fishermen's Federation (MATSYAFED), Thiruvananthapuram
- Gandhi Smaraka Grama Seva Kendram, Alleppey
- Mata Amritanandamayi Charitable Trust, Kollam
- Raj Fisheries, Malpe, Karnataka
- Kottapuram Integrated Development Society (KIDS), Kodungalloor, Kerala
- Blue Acre Foods, Chennai
- Department of Fisheries, Govt. of Kerala

The meeting began with an inaugural session

राष्ट्रीय कृषि नवाचार परियोजना के अधीन 'उत्तरदायी प्रग्रहण और समुद्री छोटे वेलापवर्ती और स्वच्छ जल मात्स्यिकी' परियोजना के विकास के लिए पाणधारियों की कार्यशाला केन्द्रीय मात्स्यिकी प्रौद्योगिकी संस्थान, कोचीन में 30-31 मई, 2007 के दौरान संपन्न हुई। इस बैठक में निम्नलिखित महत्वपूर्ण सहायता संघ के साझेदारों द्वारा प्रतिभागिता की गई।

- चैल्लानम कंधाकडव मछुवा विकास और कल्याण सहकारिता सोसाइटी, कोचिन
- कर्नाटक मात्स्यिकी विकास कारपोरेशन, बेंगलूर
- त्रुप्तिसागर सोसाइटी फोर फिशरमैन लिमिटेड, जफराबाद, गुजरात
- पेन्नीनसुलार अक्वकल्चर डिवीजन, सी आई एफ ए, बेंगलूर
- कालेज आफ फिशरिस, मंगलूर
- चैल्लनम पंचयत एस सी/एस टी सर्विस सोसाइटी लिमिटेड, कोचिन

निम्नलिखित सहायक संघ के साझेदार भी इस कार्यशाला में भाग लिए

- केरल मछुवा महासंघ (मत्स्यफेड), तिरुवनन्तपुरम
- गाँधी स्मारक ग्राम सेवा केन्द्रम, अलेपि
- माता अमृतानन्दामाई चारीटेबल ट्रस्ट, कोल्लम
- राज फिशरिस, माल्पे, कर्नाटक
- कोटापुरम इंटीग्रेटेड डेवलपमेन्ट सोसाइटी (के आई डी एस), कोडुगलूर
- ब्लू एक्री फूड, चेन्नई
- मात्स्यिकी विभाग, केरल सरकार

डॉ. के. देवदासन, निदेशक, के मा प्रौ सं और परियोजना के सहायता

presided over by Dr. K. Devadasan, Director, CIFT and Consortium Leader of the project. Dr. J.P. Mittal, National Co-ordinator, NAIP, New Delhi presented a brief on the perspective of NAIP. Dr. C. Sriram, NAARM, Hyderabad gave an overview of the role of the NAIP help desk. Consortium Principal Investigator of the project Shri M. Nasser, Principal Scientist, CIFT presented an overview of the project and explained in brief the various issues to be addressed by the project. Dr. M.R. Boopendranath, Principal Scientist, CIFT presented the interventions proposed in the harvest sector. Dr. C.N. Ravishankar, Senior Scientist, CIFT presented the interventions planned in the post harvest sector and Dr. Nikita Gopal, Scientist, Sr. Scale, CIFT presented the interventions in the marketing as well as social aspects of the project. This was followed by presentations of the Core Consortium partners. The value chain mapping of the project was presented by Dr. Nikita Gopal. The budget was presented in the afternoon session and it was discussed in detail.



NAIP Stakeholders Workshop in progress

The meeting on the second day started with a presentation by Dr. Mittal who described the concept and functioning of the NAIP. This was followed by a presentation by the Consortium Principal Investigator on the overview of the project and the proposed value chain for the benefit of the stakeholders. This was followed by detailed discussion with stakeholders. After the discussions, Dr. P.T. Mathew, Nodal Officer, NAIP, CIFT proposed a formal vote of thanks.

संघ के नेता द्वारा उद्घाटन सत्र की अध्यक्षता से इस बैठक का प्रारंभ हुआ। डॉ. जे.पी. मित्तल, राष्ट्रीय समन्वयक, एन ए आई पी, नई दिल्ली ने एन ए आई पी के परिप्रेक्ष्य पर एक संक्षिप्त प्रस्तुतिकरण दिए। डॉ. सी. श्रीराम, रा कृ अनु प्र अकादमी, हैदराबाद ने एन ए आई पी सहायता डेस्क की भूमिका का सिंहावलोकन किए। परियोजना के सहायता संघ के प्रधान अन्वेषक श्री एम. नासर, प्रधान वैज्ञानिक, के मा प्रौ

सं ने परियोजना का एक सिंहावलोकन प्रस्तुत किए और परियोजना द्वारा समाधाय किए जाने वाले समस्याओं के भिन्न मामलों को संक्षिप्त में समझाए। डॉ. एम.आर. भूपेन्द्रनाथ, प्रधान वैज्ञानिक, के मा प्रौ सं ने प्रग्रहण सेक्टर में प्रस्तावित मध्यस्थता को प्रस्तुत किए। डॉ. सी.एन. रविशंकर, वरिष्ठ वैज्ञानिक, के मा प्रौ सं ने पश्च प्रग्रहण सेक्टर में योजित मध्यस्थता को प्रस्तुत किए और डॉ. निकिता गोपाल, वैज्ञानिक (ब वे), के मा प्रौ सं ने विपणन के साथ साथ परियोजना के सामाजिक पहलू में मध्यस्थता को प्रस्तुत किया। इस के बाद महत्वपूर्ण सहायता संघ साझेदारों का प्रस्तुतीकरण था। डॉ. निकिता गोपाल द्वारा परियोजना के मूल्य श्रेणी मानचित्रण को प्रस्तुत किया गया। अपराह्न सत्र में बजट प्रस्तुत किया गया और इस पर विस्तृत रूप में चर्चा की गई।

दूसरे दिन की बैठक डॉ. मित्तल द्वारा प्रस्तुतीकरण से प्ररंभ हुई उन्होंने एन ए आई पी की धारण और कार्य का विवरण दिया। इस के बाद परियोजना के परिदृश्य और पाणधारियों के लाभ के लिए प्रस्तावित मूल्यश्रेणी पर सहायता संघ के प्रधान अन्वेषक द्वारा एक प्रस्तुतीकरण दिया गया। इस के बाद पाणधारियों से विस्तृत चर्चा की गई। विचार विमर्श के बाद डॉ. पी.टी. मथ्यु, नोडल आधिकारी, के मा प्रौ सं ने औपचारिक धन्यवाद ज्ञापित किया।

World Environment Day Celebrations

As part of World Environment Day Celebrations, two programmes were organized at St. Mary's High School at South Chellanam and Puthenthodu Govt. High School on 7th and 8th June regarding the preparation of vermicompost and the protection of environment. About 200 school children participated in the programmes.

Further, demonstrations on waste management with community based vermicompost units were done at two centres at Chellanam for the benefit of about 200 people.



Demonstration of Vermicompost unit

Post Graduate Studies

Shri V. Radhakrishnan Nair, Scientist, Senior Scale attended an eight weeks Diploma course on

'Geoinformatics' organized by Centre for Environment and Development, Cochin

Additional Secretary Visits Veraval Research Centre

अपर सचिव का वेरावल केन्द्र दौरा

Shri A.K. Upadhyay, Additional Secretary, DARE & Secretary, ICAR visited Veraval Research Centre of CIFT on 1 April. He visited the laboratories of the Centre and had discussions with the scientists. He also visited the Departmental fishing vessel MFV Sagarkripa. Dr. M.S. Basu, Director, NRC Groundnut, Junagadh accompanied him.



Visit of Additional Secretary at the Research Centre

श्री ए.के. उपाध्याय, अपर सचिव, डेर और सचिव, भा कृ अनु सं ने के मा प्रौ सं के वेरावल अनुसंधान केन्द्र का दौरा 1 अप्रैल को किया। वे केन्द्र के प्रयोगशालाओं का मुआयना और वैज्ञानिकों से विचार-विमर्श किए। वे विभागीय मत्स्यन जहाज एम एफ वी सागरकृपा को भी देखे। डॉ. एम.एस. बसु, निदेशक, एन आर सी मूँग फली, झुनागढ़ उनके साथ थे।

Andhra Minister Visits Visakhapatnam Research Centre

Shri Mandali Buddha Prasad, Hon'ble Minister of Animal Husbandry, Dairying and Fisheries, Govt. of Andhra Pradesh and Shri N. Narasimha Rao, Commissioner of Fisheries, Govt. of Andhra Pradesh visited the Visakhapatnam Research Centre of CIFT on 16 June. The Minister and other officials visited the research laboratories and were apprised of various technologies and products developed by CIFT.



Minister for Fisheries visits laboratories

Participation in Demonstration Programme

The Scientists of the Veraval Research Centre participated in the demonstration programme on tuna long lining organized by Fishery Survey of India and MPEDA at Porbandar on 12 April.



Dr. R. Badonia, SIC, Veraval attending the programme

NAAS Committee Visits Institute

The NAAS Committee constituted by ICAR, New Delhi visited the Institute during 23-25 April to finalize the draft report after discussions.

Fourth Golden Jubilee Lecture Delivered / चौथा स्वर्ण जयंती भाषण

Dr. K. Gopakumar, former Deputy Director General (Fisheries), ICAR, New Delhi delivered the fourth Golden Jubilee Lecture at CIFT, Cochin on 18th June. In his lecture on "Intellectual property rights and TRIPS agreement" he explained briefly the trade related IPR issues with particular reference to fisheries. He emphasized on the need to characterize fish species genetically by DNA



Dr. Gopakumar delivering Golden Jubilee Lecture

डॉ. के. गोपकुमार, पूर्व उपमहानिदेशक (मात्स्यिकी), भा कृ अनु सं, नई दिल्ली ने 18 जून को के मा प्रौ सं, कोचिन में चौथा स्वर्ण जयंती भाषण प्रदान किया। अपने भाषण में वे, "बौद्धिक सम्पत्ति अधिकार और ट्रिप्स करार" पर संक्षिप्त रूप में विशेषकर मात्स्यिकी के संदर्भ में व्यापार संबंधी आई पी आर मामलों की जानकारी दिए। वे डी एन ए अंगुलिछाप द्वारा मत्स्य जातियों को आनुवंशिकतः लक्षण

fingerprinting. He opined that more importance be given to patent IPR under geographical indication claiming indigenosity of fish of Indian origin and should be able to genetically improve the stock and claim IPR rights. Earlier, Dr. K. Devadasan, Director, CIFT while delivering the presidential address expressed his concern over a vast number of technologies under ICAR system being left non-patented. Dr. P.T. Mathew, Principal Scientist proposed a vote of thanks.

वर्णन करने की आवश्यकता पर जोर दिए। हमें भारतीय मूल की देशीय दावे से भौगोलिक सूचक के अधीन पेटेंट आई पी आर करने पर ज्यादा महत्व देना चाहिए। हम भंडार को आनुवंशिकतः सुधार कर सकते हैं और आई पी आर अधिकारों का दावा कर सकते हैं। इस से पहले डॉ. के. देवदासन, निदेशक, के मा प्रौ सं ने अपना अध्यक्षीय भाषण प्रदान करते हुए भा कृ अनु प प्रणाली के अधीन कई प्रौद्योगिकियों को पेटेंट नहीं किए जाने पर चिंता व्यक्त किया। डॉ. पी.टी. मथ्यु, प्रधान वैज्ञानिक ने धन्यवाद ज्ञापित किया।

छली तन

Fishers Visits Research Centre

Around 60 fishers from Mundra, Kutch region, stakeholders of Ujjas Mahila Sangathan, SETU and 'Protsahan', an NGO visited the Veraval Research Centre of CIFT on 22 June. They were explained about the different aspects of post harvest value addition, hygienic handling of seafood, fabrication of eco-friendly trawls and square mesh codends.



Visit of fishers at Veraval Research Centre

NAIP Team Visits Consortium Partners

As part of the drive to elicit views from the stakeholders at grass root level, CIFT decided to conduct stakeholders meetings at consortium partners level for refining the project further to make the proposal more focused. As the first programme, the NAIP team of CIFT visited Chellanam Kandakadavu Fishermen Development and Co-operative Society at Chellanam on 14 June, 2007. This Society organized under the guidance of MATSYAFED has 21 Self Help Groups for men and women with each group containing 10-16 persons



NAIP team interacting at Chellanam

engaged in processing and marketing and activity group with 6-69 members engaged in active fishing. The Society has both in board and out board engine vessels. The NAIP team conducted a discussion with the group leaders (17 nos.) of the active groups and SHGs (24 nos.) of the Chellanam Kandakadavu FDWCS. The

main problems in the fishing industry such as high cost of fuel, low cost of fish and high operational cost were analysed and the interventions proposed were discussed.

Talks Delivered

The following technical talks were conducted at Cochin during the quarter:

- i. Dr. E. Vijayan, ICMR Emeritus Medical Scientist on 'Endocrine brain: From fish to human' (26 April)
- ii. Shri C.R. Nelakantan, Environmentalist on 'Environment and development' (27 April)
- iii. Shri Geroge Ninan, Scientist, Sr. Scale, CIFT on 'Fodder from squid waste' (27 April)

Anti Terrorism Day Observed

The Institute observed Anti Terrorism Day on 21 May. All the staff at the Head Quarters assembled together and took 'Anti Terrorism Pledge'.



Dr. E. Vijayan giving lecture on Endocrine brain

New Research Projects Initiated

The following new research projects were initiated at the Institute during the quarter:

- i. Resource specific large mesh purse seine for large pelagics in EEZ (PI - Dr. B. Meenakumari)
- ii. Innovative materials for fishing craft and gear (PI - Dr. Leela Edwin)
- iii. Development of convenience products from fish and shell fish (PI - Dr. C.N. Ravishankar)
- iv. Assessment of resident time of antibiotics in cultured shrimp by evaluating the metabolites (PI - Dr. K. Ashok Kumar)
- v. Studies on the treatment process and safety of water used in the seafood processing industry (PI - Dr. P.T. Lakshmanan)
- vi. Quality assessment of commercial sold fresh and cured freshwater fish in East and North East regions of India (PI - Dr. M.M. Prasad)
- vii. Quality evaluation and utilization of fishery resources at Maharashtra coast (PI - Dr. R. Chakrabarti)
- viii. Studies on sustainability parameters for Indian fish processing industry and the forward and backward linkages (PI - Dr. V. Geethalakshmi)

ली तन

Personnel News

Participation in Seminars/Symposia/Workshops etc.

- ❖ **Dr. K. Devadasan**, Director - Meeting of the Directors of ICAR Fisheries Research Institutes to discuss the XI plan proposal, CMFRI, Cochin (28 May)
- ❖ **Dr. K. Devadasan**, Director - Interaction meeting of National Fisheries Development Board, CMFRI, Cochin (4 June)
- ❖ **Dr. K. Devadasan**, Director - Meeting of Directors' of ICAR Fisheries Research Institutes, S.V. University, Tirupati (9-10 June)
- ❖ **Dr. K. Devadasan**, Director and **Dr. P.T. Lakshmanan**, Principal Scientist - Meeting of the Task Force on Fish processing and marketing (Govt. of Kerala), Thiruvananthapuram (8 May)
- ❖ **Dr. D. Imam Khasim**, Scientist Incharge, VRC of CIFT, Visakhapatnam - Programme to distribute school uniforms, bags and books organized by 'Action Aid', Moolavanipalem (23 June) (As Chief Guest)
- ❖ **Dr. M.K. Mukundan**, HOD, QAM - Inter departmental conference of CPWD, Bangalore (21 May)
- ❖ **Dr. M.K. Mukundan**, HOD, QAM - 75th meeting of the Expert committee for the schemes - Societal programme, DST, New Delhi (11-13 June)
- ❖ **Dr. P.N. Joshi**, HOD, Engg. - Meeting of the 8th Master Plan Task Force on Fisheries Infrastructure (Govt. of Kerala), Thiruvananthapuram (8 May)
- ❖ **Dr. P.N. Joshi**, HOD, Engg. - One day workshop on Renewable energy, North Parur (5 June). Dr Joshi delivered an invited talk on 'The applications of renewable energy in the fisheries and allied sector'.
- ❖ **Dr. S. Balasubramaniam**, HOD, EIS - Meeting of the Nodal Officers of NEH component of ICAR Fisheries Institutes, NE Regional Centre of CIFRI, Guwahati (21 April)
- ❖ **Dr. S. Balasubramaniam**, HOD, EIS - Third zonal workshop on Fisheries and aquaculture policy: Responsible fisheries and sustainable aquaculture perspectives for west coast states, ICAR Research Complex, Goa (21-23 June). He also presented a paper on 'Policy guidelines for reducing post harvest losses and to increase value addition'.
- ❖ **Dr. B. Meenakumari**, HOD, FT - Meeting of the Task Force on Marine fisheries (Govt. of Kerala), Thiruvananthapuram (6 May)
- ❖ **Dr. B. Meenakumari**, HOD, FT, **Dr. P. Pravin**, **Dr. V. Geethalakshmi**, Senior Scientists, and **Shri M.V. Baiju**, Tech. Officer (T 7-8) - Stakeholders meeting of the NAIP project on "Oceanic tuna and



Dr. Khasim distributing books to school children

squid fisheries in the Andaman and Lakshadweep seas: A value chain approach", CMFRI, Cochin (28-29 May)

❖ **Dr. P.T. Mathew**, Acting HOD, FP, **Shri P.K. Vijayan** and **Dr. T.K. Srinivasa Gopal**, Principal Scientists - Stakeholders Workshop for the development of the project "Intervention in production to consumption system of high value aquaculture species for equitable prosperity" under NAIP, CIBA, Chennai (6-7 June)

❖ **Dr. M.R. Boopendranath**, Principal Scientist - Meeting of the Task Force on Aquarium reforms in fisheries sector and fisheries research (Govt. of Kerala), Thiruvananthapuram (7 May, 3 June and 16 June)

❖ **Dr. M.R. Boopendranath**, Principal Scientist - Meeting of the Task Force on Fisheries resources (Govt. of Kerala), Thiruvananthapuram (26 June)

❖ **Dr. M.R. Boopendranath**, Principal Scientist - Meeting of the Expert Committee on Diversification of aquaculture (Govt. of Kerala), Thiruvananthapuram (28 June)

❖ **Dr. M.R. Boopendranath**, Principal Scientist - Meeting of the Expert Committee on Trawl impact assessment (Govt. of Kerala), Thiruvananthapuram (29 June)

❖ **Dr. T.K. Srinivasa Gopal**, Principal Scientist - National workshop in Hindi on Coldwater fisheries scenario: Development, management and conservation, NRC on Cold Water Fisheries, Bhimtal (6-7 April). He also presented a paper on 'Ready to serve Mahseer (*Tor khudre*) curry in indigenous retort pouches'.



Dr. Srinivasa Gopal presenting the paper

❖ **Shri M. Nasser**, Principal Scientist and **Dr. K. Ashok Kumar**, Senior Scientist - Meeting

convened by Pollution Control Board, Thiruvananthapuram (28 June). They made a presentation on the "The energy efficient ETP developed by CIFT".

❖ **Dr. G. Rajeswari**, Senior Scientist - Meeting on Diversification of trawls into semi-pelagic fishing, Visakhapatnam (6 June)

❖ **Smt. J. Bindu**, Scientist, Sr. Scale - National workshop on Application of high pressure in food processing, CIPHET, Ludhiana (21 June)

❖ **Dr. B. Madhusudana Rao**, Scientist, Sr. Scale - Training on production of disease free shrimp seed in hatchery, Andhra University, Visakhapatnam (18 June) (As resource person). Dr. Rao delivered a lecture on 'PCR techniques in shrimp disease diagnosis'.

❖ **Smt. K.K. Asha**, Scientist - Training in Aflatoxin detection, ICRISAT, Hyderabad (9-18 April)

❖ **Dr. A.R.S. Menon**, Technical Officer (T9) - Training programme on Right to Information Act - an analysis with focus on procedures, legal aspects and practical problems in implementation, Parsam Institute of Statutory Rules, Bangalore (9-11 May)

❖ **Dr. A.R.S. Menon**, Technical Officer (T9) - First training cum workshop on Intellectual property and technology management in ICAR system, NAARM, Hyderabad (28-30 May)

❖ **Shri Santhosh Alex, Jr.** Hindi Translator (T4) - 47th meeting of the Town Official Language Implimentation Committee, Visakhapatnam (23 May)

Personalia

Appointments

1. Kum P. Jeyanthi, Scientist (Agril. Economics), Cochin

Retirements

1. Dr. K.G. Ramachandran Nair, Acting HOP, FP, Cochin
2. Shri M.K. Asokan, Tech. Officer (T5), Cochin
3. Shri Santhosh Banchoor, SSG IV, Burla
4. Shri P.A.G.A. Rehman, SSG IV, Veraval

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