

Reporter

JANUARY–MARCH 2010



News in Brief

From the DG's Desk 1

Workshops, Meetings, Seminars, Symposia, Conferences

Brainstorming session on Office Management	3
Horticulture development in the North-Eastern Region	4
ICAR Directors' Conference	5
81st Annual General Meeting of ICAR	6
Vice-Chancellors of Agricultural Universities chalk out future plans	6
Optimizing buffalo productivity through conventional and novel technologies	8
Peninsular Aquaculture: Quest for Solutions	9

International Linkages

Princess Mathilde of Belgium visits IARI	12
--	----

Success Story

Magur fish farming fetches good returns	12
Tribals earn respectable income from <i>Aloe vera</i> processing unit	13

Capacity Building/MoU

New Agro-Processing Centre inaugurated	14
ICAR Technologies on All-India Radio	14

Celebrations/Farmers' Corner

CPCRI celebrated Golden Jubilee	16
Pusa Krishi Vigyan Mela organized	16
Sarson Vigyan Mela-cum-Exhibition	18
Annual Cashew Day	19

Trainings 19

Awards 20

Personnel 22

From the DG's Desk

Dear Readers,

India accounts for about 12 percent wheat, 21 percent rice (paddy), 25 percent pulses, 10 percent fruits, 22 percent sugarcane and 16 percent milk of global production. This is being achieved from 2.3 percent of the global land, 4.2 percent of the water and little over 11 percent of arable land having only 50 percent potential for irrigation, to support 18 percent of world's population. Our National Agricultural Research System (NARS), one of the largest in the world has been playing a catalytic role in the overall growth and development of agriculture through generation of technologies for enhancing the productivity and production by overcoming production constraints. The returns from investment on R&D in agriculture are of the order of 48 percent, and strength of this sector was demonstrated in the wake of recent downturn in the global food situation, while India remained in a comfortable situation.



The momentum of growth witnessed till the decade of eighties started fading and several concerns have emerged with slowdown in growth rate of output, resulting in stagnation or even decline. Food security has to be continuously addressed. By the year 2030, food demand is expected to rise by about 60 percent over the year 2010 on account of increase in population and increase in per capita consumption. Demand for food could be much higher for adequate nutrition for the whole population. Coupled with rising food prices at national and global levels, the current challenges are further being compounded by alarming levels of degradation of natural resource base. The options for

... with given investments in R&D in general and agriculture in particular, it is important to be selective about what needs to be done, how it should be done and delivered so that resources are judiciously used....

any further expansion in area are practically exhausted and the availability of water for agriculture is reducing with diversion to domestic and industrial use. The floral and faunal species that have made India one of the mega centers of biodiversity are being lost due to habitat destruction. Increasing climatic change variability has become a concern. The globalization of agricultural trade in the 1990s leading to changes in some of the macro policies that supported agriculture have also subjected the Indian farmer to significant market risks and made farm sector more vulnerable. It is hence vital to increase and sustain agricultural incomes as this sector employs over 50 percent of the Indian work force.

The national agricultural policy has set a goal of 4 percent plus growth rate in agriculture to ensure sustainable household food security. As we go along, the new research would certainly be more capital and knowledge intensive. Further with given investments in R&D in general and agriculture in particular, it is important to be selective about what needs to be done, how it should be done and delivered so that resources are judiciously used.

The growth in agriculture being an outcome of interplay of several factors implies that besides a vibrant NARS, an enabling policy environment, adequate public funding, supportive markets and financial institutions, availability of inputs including energy, feed and fodder, and improved income, are equally important to provide impetus to the farm sector. As agriculture and food sector in the next two decades will be very different from what it is today, a new vision is required for transforming present day agriculture into more productive, efficient and sustainable.

The ICAR, being a knowledge based organization, has to address the challenges of New Agriculture. We have completed the exercise of formulating Perspective Plan 2025 documents for each of its institutions, adopting a bottom- up approach. Even as we address the constraints of increasing biotic and abiotic pressures, decreasing biodiversity, shrinking and degrading natural resources, and increasing climatic variability, the productivity growth has to be broad based, covering field crops, horticulture, livestock and fisheries; production in fragile

ecosystems will have to be insulated and optimized through effective technological interventions; and the paradox of a fiercely competitive national and global environment in the wake of IPR and WTO on the one hand and debilitating limitations like decreasing farm size and resources fatigue on the other, has to be addressed. With a large number of new opportunities unfolding in various fields of science we have to identify our science niches and if to be created, must be done. The overall strategy is to achieve goal of farmers' well being, livelihood, food and nutritional security, equity, industrial growth and economic prosperity by harnessing the potential of cutting edge science, supported with state-of-the-art infrastructure and enlightened human resource, while maintaining and building on the health of the primary production base.

We now need to define the state of Indian agriculture by 2030 in terms of natural resources' availability, its development, the capacity to deliver *vis-à-vis* the domestic and international demands, and competitiveness and sustainability. The Vision needs to spell out where we stand with regard to research capability, institutional, human and financial; its advancement and capacity to make use of advances in science; capacity to anticipate the emerging policy and production challenges; potential to respond to the exigencies; and above all how can the ICAR's effort really improve the farmers' knowledge and skills, so that farming becomes economically rewarding sector at par with others. Given the kind of research outputs that will be required, it would be necessary to forge alliances and partnerships to capitalize on mutual strengths for mutual benefits and to save on time and resources for technology development and dissemination. Higher education and extension systems have to be suitably streamlined in tune with changing needs.

We are presently in the process of formulating the ICAR Vision – 2030. I would invite the colleagues to send their views and suggestions so as to make the document a reflection of our aspirations for the cause of Indian agriculture.



S. Ayyappan

e mail: ayyappans@icar.org.in

WORKSHOPS, MEETINGS, SEMINARS, SYMPOSIA, CONFERENCES

Brainstorming session on Office Management



New Delhi, 15 March 2010. The Secretary (DARE) and Director-General (ICAR) Dr S. Ayyappan, chaired a Brainstorming Session on 'Office Management Issues in present scenario' in which Assistant and above personnel of ASRB, DARE, ICAR (Hq) were present at NASC Complex. The presentations were also made on 'Office Management Issues' the relevant subject. Later deliberations took place.

After a thorough discussion several action points emerged. Some of the issues are as follows:

Updating the Rules and Bye-laws/Manuals

- The ICAR Rules and Bye-laws framed in 1970s needs to be revisited.
- *Manual of Administrative Instructions of ICAR* by Shri P.V. Harihar Shankran and Booklet on *Delegation of Powers* need to be updated.
- The areas where Council and the Institutes can exercise their autonomy viz-a-viz Government of India Rules and Procedures need to be delineated so that references to Government Departments are minimized.

- A compendium of ICAR Circulars subject-wise for ready referencing may be updated monthly and uploaded on the ICAR's Website.

Improving visibility

- ICAR should take up some flagship programmes for much bigger role in certain areas where we have done reasonably well.
- An impact analysis of ICAR work for every rupee invested needs to be done to showcase our achievements.

Trainings

- All the SMDs/Units should submit their training needs (including those of the Institutes within the SMDs) in focused manner category-wise and area-wise to the Administration so that an appropriate training plan could be developed and implemented.
- Training should be given periodically and should be made mandatory every time the role of a person changes due to promotion and transfer.
- The in-house strength should be used for faculty development programme.
- Introductory booklets on ICAR be prepared for the newly recruited employees.

Staff Welfare

- For solving employees' related problems, the in-house mechanisms on the pattern of Lok Adalat may be explored to minimize litigations.

Building effective work culture

- Strong database needs to be built up unit-wise and division-wise for timely data retrieval and reducing the number of references to the Institutes; and Institute-wise, for their

convenience, as this will help them in answering Parliament Questions etc.

- Implementation of e-governance in ICAR needs to be looked into in totality as it is very much required in the system. E-payments to be made effective by all units including DIPA.
- Interactive workshops with the Institutes by senior functionaries of the Headquarters on administrative and financial matters be encouraged.
- Reminder culture to be strongly discouraged.
- Time planning by higher functionaries should also factor in the unscheduled and unanticipated deadlines.
- A system of awards and incentives should be built up for all categories of staff.
- Appropriate service provisions may be invoked for non performing and unwilling employees.
- Provisions given in the manual of Office Procedure need to be complied with for better quality disposal on files.
- For improving punctuality the use of biometric machines and flexi hours concept to be examined.
- Tasks which can be delegated to the SMDs, be identified.

- The proceedings of Institute Management Committees and Research Advisory Committees should come to the Hqrs. only for information.

Manpower

- Unified cadre for the Hindi personnel be examined for availing the benefits otherwise available to their counterparts in Govt. Departments. The recruitment process for the posts of Hindi Translators in Institutes be expedited.
- There is a necessity for revisiting the Technical Services Rules for better promotional aspects for directly recruited officers in category-III.
- There has to be a policy of support manpower deployment.
- Rotation of employees after a fixed period should be encouraged.

Horticulture development in the North-Eastern Region

Kahikuchi, 5 January 2010. A brainstorming session on Technological support to Horticulture Development in north-eastern region and exhibition on Horticulture Technologies were organized at Research Centre of Central Plantation Crops Research Institute. The programme started with the inauguration of "Exhibition on Horticultural technologies for North-Eastern Region".

The important participants were Central Plantation Crops Research Institute, Kahikuchi, Assam Agricultural University, Jorhat, Central Rice Research Institute Regional Station, Gerua, NEDFI, Guwahati, TERI, NERC, Guwahati, CDB, Guwahati, Rubber Board, Guwahati; IFFCO; SBI, ARKSS (NGO), and NDRF. In his inaugural address, Sri L. Rynjah urged the farmers to adopt the technologies developed by different ICAR institutes and other organizations.

Dr H.P. Singh, Deputy Director-General (Horticulture), in his presidential address emphasized on the efforts for development of the farming community in the region by adoption of improved technologies.

In the session followed, presentations of various technologies were made by the experts from their respective organizations. The scientists in their addresses urged the farming community to follow the improved cultivation practices to increase the productivity and thus the socio-economic status of the farmers.

Arecanut leaf plate making machine should be installed on community basis for processing the arecanut leaf sheaths. Also, it was decided to initiate the process for establishment of turmeric processing unit and establishment of coconut/arecanut based cropping system with newly released quick wilt-resistant black pepper varieties with collaboration of Central Plantation Crops Research Institute and Indian Institute of Spices Research. It was also highlighted to set up demonstration gardens and taking up training programmes on potential flower crops in this region with the help of National Research Centre for Orchids, Sikkim.

e mail: sickahikuchi@yahoo.com

At our latest stack:

- **Farm Machinery : Maintenance and Management** ● **Safed Musli** ● **Cacti...**
- **Stock Assessment of Tropical Marine Fishes** ● **Convenience Products from Fish**
- **Aquahouse – New Dimension of Sustainable Aquaculture** ● **Bluetongue**
- **Indian Dairy Co-operatives** ● **Oyster Biology**

For obtaining copies:

Business Manager, Directorate of Information and Publications of Agriculture
Krishi Anusandhan Bhavan-I, Pusa, New Delhi 110 012
Tel : 011-25843657, Fax 09-11-25841282; E-mail : bmicar@icar.org.in

ICAR Directors' Conference

New Delhi, 17 February 2010. The Secretary (DARE) and Director-General (ICAR), Dr S Ayyappan made a presentation on the current scenario of agriculture, its growth rate and future food requirement keeping in view the growth of population at Directors' Conference that was held from 15 to 17 February 2010 at NASC Complex. He

flagged the issue of decreasing share of agriculture in overall Gross Domestic Products of the country and elaborated the need for specialization in the emerging areas of research to be competitive with the rest of the world. He cautioned about spreading the resources thinly with limited success and reminded that a sound planning is necessary for full utilization of the valuable resources. He emphasized on prioritization of research projects for efficient use of resources and collaboration for greater synergy in efforts.

Interaction of ICAR Directors with Vice-Chancellors of Agricultural Universities

On 17 February 2010, an interaction meeting of the ICAR Directors was held with the State Agricultural Universities. Union Agriculture Minister Shri Sharad Pawar inaugurated the Vice-Chancellors Conference and said that the threat from trans-boundary animal diseases and epizoonotics has increased. He stressed on the research on developing crop-live stock farming system based on integrated food-fodder, breed-health and bio-security management.

The Union Minister of Agriculture (State) Professor K V Thomas, emphasized on the need for a big push in the higher education sector in Agriculture and Allied subjects- both economically and technologically. The Vice Chancellors also assured to look into the problems raised by Directors and Project Co-ordinators. A detailed discussion was held on various issues presented by senior ICAR officials.

The action point emerging from discussion included



Data Base, International year of Biodiversity, Monthly Expenditure Plan, Asset Register, Communication and connectivity, Land laws and land records, Outsourcing of staff, Delegation of powers to Principal Investigators, Training of Registered Medical Practitioners, Transport Allowance to Directors, Air Travel by Economy Class,

The issue of food Bills for food from roadside shops, Record Retention Schedule.

The agenda items forwarded by Directors of Institute were on Enhancement of security contract amount and power of Directors in this respect, Supply of technologies output/ processed product/machinery etc. developed by ICAR Institutes to KVKs for popularization at free of cost after patenting, Equal treatment of administrative staff in whole ICAR and the parity between ICAR (HQs)' administrative staff and ICAR Institutes' administrative staff, Change in 6 monthly report period in respect to scientists; Disbursement of incentives under contract Research Projects to the Directors of the Institute and Provision of Incentives to staff members under other Revenue Generation activities, Problem in construction work awarded to CPWD, Separate maintenance of Lal Bahadur Shastri building, Publication cost/per page charges for research papers in journals, Creation of a system to enable Ph.D. students of Agricultural Universities to join as RA/SRFs in externally funded projects in ICAR institutes and complete research requirement of Ph.D under Senior/Principal Scientist (PI) of the project with co-guide at the University, Indent for vacant posts of scientists, Zonal Technology Management and Business Planning & Development unit, and the establishment of the Agro-Technology Management Centre. Project Director, Directorate of Information and Publications of Agriculture, made presentation on packaging and dissemination of information that was supplemented by ERNET.

e mail: icarreporter@rediffmail.com

81st Annual General Meeting of ICAR

New Delhi, 23 December 2009. The 81st Annual General Meeting (AGM) of the ICAR Society was held at the NASC Complex and Union Minister of Agriculture, Shri Sharad Pawar, chaired the AGM. He said that 2009 was a year of challenges for the Indian agriculture, while referring to the delayed and deficient monsoon hitting the country and flash floods in Andhra Pradesh and Karnataka. Shri Sharad Pawar lauded the way ICAR responded to the challenges and its efforts in designing technology-driven contingency crop plans which contributed greatly to protect the standing crops and to mitigate the drought effects. He informed that 55 patent applications from 13 ICAR Institutes were filed during the year and that 5 State Agricultural Universities were given accreditation during the year and so taking the total number of State Agricultural Universities to 33. He also highlighted the capacity building efforts of the ICAR in higher agricultural education and high-end research. About 40,000 training programmes for enhancing farmers' capacity and skills were organized where 11.27 lakh farmers and farm-women were benefitted.

Union Minister of Agriculture (State), Professor K. V. Thomas, said that the demand for protein foods is increasing exponentially and for that, the production has to be increased through sustainable agriculture by ushering input regime and higher yields from the static or decreasing catchments. He stressed for indigenizing and evolving crop-specific strategies by



using Genetically Modified technologies, micro-irrigation, etc. Professor Thomas informed that the ICAR has made appreciable efforts in crop genetics by developing 147 successful varieties of important crops for different agro-climatic regions of the country.

Achievements of ICAR were highlighted by Dr Mangala Rai, the then Secretary, DARE and Director-General, ICAR. He said that new varieties of rice capable of withstanding drought (*Sahbhagi Dhan*) and water submergence (*Swarna-Sub 1*) for 14 days under water, were developed. The ICAR also produced 7,340 tonnes of breeder seeds and over 25 lakh planting materials during the year. Dr Mangala Rai informed that 51 models for different agricultural commodities were developed for promoting production-to-consumption chains for maximizing farmers' profits.

Vice-chancellors of Agricultural

New Delhi, 18 February 2010. Annual Conference of the Vice-chancellors of the State Agricultural Universities, Central Agricultural University and Directors of the Deemed Universities including Central Universities was held at the National Agricultural Science Centre, New Delhi from 17 to 18 February, 2010. On this occasion, an interface meeting of Vice-Chancellors was organized with ICAR Directors, Zonal Coordinators and Project Coordinators on 17 February 2010. Probably for the first time, the joint meeting of Vice-Chancellors of State Agricultural Universities and ICAR Research managers was organized. Shri Sharad Pawar, Union Minister of the Agriculture inaugurated the Conference on 17 February 2010. Prof. K.V. Thomas, Union Minister of State for Agriculture, delivered the special address.

Dr S Ayyappan, Secretary, Department of Agricultural Research and Education and Director-General, ICAR said that ICAR-Agricultural Universities partnership is unique in the world and outlined the roadmap of agricultural research, education and extension wherein components of capacity building, niche area of excellence, international co-operation and collaboration could function in synergy and complementarily mode. He highlighted the role of green curriculum, HR mapping and development of knowledge and skills. He hoped that the brand A-school in agriculture just as B-schools in business would become popular and agriculture profession would be acceptable and respectable.

Union Agricultural Minister, Shri Sharad Pawar, in his inaugural address appreciated the Niche Areas of

He emphasized that the ICAR took lead in cloning buffalo for faster multiplication of highly productive animals, and GARIMA, the cloned buffalo calf is growing well. Various cutting-edge areas of research have been identified for international training programmes.

Some of the major challenges in agriculture are—enhancing income and employment, ensuring food and nutritional security, adapting to climate change, adjusting to changes in energy scenario, maintaining bio-safety and bio-security, sustainable use of natural resources and protecting bio-diversity. There is need for accelerating output growth, investments in Agricultural Research and Development and agriculture infrastructure, demand-driven diversification of agriculture and more production from the shrinking resource base and stressed environment.

He also expressed his concern over the projected impacts of climate change on agriculture as a serious threat to food security and suggested some ways for its mitigation. He said that to combat these future challenges, we need to focus on human resource

development, while paying attention to processing, product development and value-addition, and to production and availability of seeds, semen, saplings and fingerlings. Efficiency in the use of input, energy and water needs to be enhanced. Effective ways for converting so-called waste into wealth are to be identified and exploited on a larger scale.

“Be proactive for meeting emerging challenges”

Sharad Pawar

“To meet the exponentially increased demand for protein foods the production has to be increased through sustainable agriculture”

Professor K. V. Thomas

The ICAR has come with some new establishments, viz. National Institute of Abiotic Stress Management, National Bureau of Agriculturally Important Insects, DNA Gene Bank and Directorate of Floriculture, to keep pace with the growing challenges and the emerging scenarios. National Institute of Biotic Stress Management and Indian Institute of Agricultural Biotechnology have been approved in principle and are in the process of establishment.

On the occasion *Handbook of Agriculture* (Sixth and revised edition), *Technologies for Commercialization and Adoption*, and *Housing and Space Management* were released by the dignitaries.

e mail: icarreporter@rediffmail.com

Universities chalk out future plans

Excellence being supported by ICAR in 30 universities commented the mutative of the joint meeting of ICAR-Agricultural Universities managers and that have

set a new trend in promoting schools of excellence in diverse fields. Along with the Experiential Learning Units established in different disciplines, these state-of-the-art facilities would help in honing the skills of the students through hands-on-training. These measures are aimed at realizing enhanced high quality research and technology development capability as also inculcating corporate practices in farm research and management. They would also lead to development, testing and validation of environmentally sound agro-production and protection practices, he said. He also made a mention about the modernization of research and instructional farms and laboratories of the agricultural universities being taken up towards enhancing regional research and educational



capabilities through the catalytic support from ICAR. The support would facilitate development, standardization and validation of site-specific, precision agriculture technologies and would in the long-term, have a sustained cascading effect and beneficial impact of the created facilities by providing demand-driven technologies. The modernization would also help in boosting the seed production and much needed resource generation for the Agricultural Universities.

The establishment of a chair of National Professor named “*Norman Borlaug Chair in Agricultural Biotechnology for Crop Improvement*” this year as a tribute to Prof. Norman Borlaug, the Father of Green Revolution in the specific field of agricultural biotechnology for crop improvement at IARI, New Delhi was also referred. He called for the alliance of ICAR-University and line departments of State governments for creating an atmosphere of academic excellence. “We must strive to be models of all-round excellence creating institutions of global standards. Requisite models of public-private partnerships must be evolved for educational activities as well as for development, application and flow of technologies from lab to the market place and for strengthening of National Agricultural Research System infrastructure, through active interface with the industry.” He lauded the efforts of

ICAR in exploiting ICT tools. “The support to research institutes and agricultural universities for connectivity, availability of on-line journals and related infrastructural development is being provided under the National Agricultural Innovation Project creation of digital library and linking library resources globally through the “*e-granth*” and a digital library of Ph.D. theses through the *Krishiprabha* would enhance the visibility of National Agricultural Research System. These steps would promote the use of ICTs for in-campus and off-campus interactions, access to knowledge and library management.”

Our research efforts have to be doubled to ensure that all misgivings regarding GM crops are removed comprehensively from the minds of the policy makers and the public. How well we are able to do this is going to hugely impact our commitment to the national food security.

e mail: icarreporter@rediffmail.com

Optimizing buffalo productivity through conventional and novel technologies

New Delhi, 1 February 2010. The Secretary (DARE) and Director-General (ICAR), Dr S. Ayyappan, inaugurated the International Buffalo Conference on ‘Optimizing Buffalo Productivity through Conventional and Novel Technologies’ at NASC Complex to commemorate the Silver Jubilee of the Central Institute for Research on Buffaloes, Hisar. He said that livestock rearing has remained the most effective employment generation and livelihood security enterprise for the uneducated and educated unemployed rural youth. Over the last three decades, livestock sector has consistently accounted for over 4% of the country’s GDP, while its share in the GDP from agricultural sector steadily increased from 14 to 25%, while remaining greater than 20% over the last two decades. Milk is the major contributor to the GDP from livestock sector. He called buffalo as ‘the black gold of India’ and the preferred milch animal of the farmers.

The Director-General, ICAR added that today over half of the total milk produced in the country, is being contributed by buffaloes despite the fact that buffalo population (98 million) is nearly half than cattle (185 million). With such a high contribution of buffalo, today India is the largest milk producer in the world producing about 108 million metric tonnes/ annum. Professor K M L Pathak, Deputy Director-



General (Animal Sciences) in his presidential address informed that milk production in India has witnessed a phenomenal increase of as high as 5.5% per annum during certain periods in the last three decades, taking per caput milk availability to 241 g /day from a meagre 124 g/day in 1950s. The congress was attended by participants from the USA, Brazil, Italy, Germany, Australia, Egypt, Iran, Malaysia, Philippines besides participants from India. Scientists with outstanding contribution to buffalo research were awarded on the occasion.

e mail: icarreporter@rediffmail.com

Peninsular Aquaculture: Quest for Solutions

Bengaluru, 26 February 2010. The Regional Research Centre, Bengaluru, of the Central Institute of Freshwater Aquaculture hosted a workshop “Peninsular Aquaculture: Quest for Solutions” on 26 February 2010. The workshop had its genesis when the need for a regional level workshop to focus on the unique problems of peninsular aquaculture was felt at the National level State Fisheries Ministers meet held in June 2009 at Bhubaneswar. Based on the responses to a detailed questionnaire by the peninsular states, common issues for in-depth discussion were identified.

Representatives from the state fisheries departments of Andhra Pradesh, Karnataka and Kerala participated in the workshop, which was also attended by experts from the NFDB, CIFA, CIFE, CIFRI, State Pollution Control Board, Watershed development agencies, University of Agricultural Sciences (Bengaluru) and the Karnataka Veterinary, Animal and Fisheries Sciences University, Bidar.

Issues pertaining to aquaculture resources, challenges in utilizing plurally owned short season water bodies, inequities in fish/shrimp seed production and distribution across the states and species diversification of aquaculture were some of the issues discussed in three technical sessions. The workshop recommended the following points for action:



- Prioritization of species: A long term approach as well as short term approach is needed for prioritization of species on which work is needed for research and/or popularization.
- Hatchery and culture technology of *Etropolis suratensis* are required for Andhra Pradesh and Kerala.
- Culture technology of *Mastacembelus armatus* and *Anabas testudineus* was required by Andhra Pradesh.
- Broodstock management techniques for higher seed production and large scale nursery practices for increasing carp seed survival (spawn to fingerling) to above 25% was required by Karnataka.
- A comprehensive plan for broodstock up gradation on a national level was needed.

e mail: icarreporter@rediffmail.com

Institute Management Committee Meeting at CIPHET

Abohar, 23 February 2010. XXVI, Institute Management Committee Meeting was held at CIPHET, Abohar in the Chairmanship of Dr R.T. Patil, Director.

In his presentation, Dr R.K. Gupta has emphasized the importance of value chain for selected underutilized fruits such as aonla (*Emblia officinalis*), ber (*Ziziphus mauritiana*), jamun (*Sizigium cumini*) and custard apple (*Annona squamosa*) which are considered to be minor or underutilized fruits in the country. Further, there has been sustained recognition that these fruits are an integral part of the culture and way of life of tribals in the country earlier, but now-a-days, there has been a sustained recognition that these fruits can be exploited much more widely due to their value in human nutrition and the added benefits through

proper processing and value addition . Since, fresh fruits of jamun, ber and custard apple except aonla has limited shelf life. Hence, these fruit-based products can offer many nutritional and health benefits to the consumers. Therefore, various value added products such preserve, candy, beverages, dried powder, shreds, mouth fresheners etc. can be developed by technology, equipment/process development which may have a great potential as a novel products for food processing industry. This is possible by educating farmers, growers, entrepreneurs and other stakeholders in the field of the new technologies, capacity building and extension activity for processing and value addition technology i.e. value chain, which is the need of the hour.

e mail: maniciphet@yahoo.co.in

Network for fisheries development in north-east region

Bhubaneswar, 19 March 2010. In a bid to form a network of fisheries R & D workers for the development of north-east region the Central Institute of Freshwater Aquaculture (CIFA) of ICAR based in Bhubaneswar, Orissa organized a workshop at Gangtok from 11 to 12 March, 2010. Sri D. N. Takarp, Minister for Health, Livestock, Fisheries and Parliamentary Affairs, Sikkim, inaugurated the meeting. The CIFA is working for the aquaculture development of the north-eastern region for over a decade and a large number of fish production units have been established all over the region. Besides large number of training programmes, farmers' meet and technology demonstrations have been conducted, informed Dr Ambekar E Eknath, Director, CIFA. The impact of the programme is highly encouraging and many more farmers and entrepreneurs have evinced interest to establish hatchery and production units of their own. This has led to increasing demand and pressure on the CIFA to cater to the research and development needs in the region, he added. Dr Eknath stressed that in the ensuing year CIFA would intensify its efforts towards development of aquaculture by transferring technologies and training line department officials and entrepreneurs in the region. Further, a large number of scientists and researchers present within the approachable distance in the region can prove to be a useful means for development. Therefore, they need to be made as one group by forming a network to carry out the research and development activities in the region. The strategies and options available for the development of the region were also discussed in details. The CIFA also showcased the portfolio of aquaculture technologies ready for various agro-climatic zones of the north-eastern region. The workshop came out with "Gangtok Declaration" to commit and consolidate a network mode of the research and development in the north-east region.

Gangtok Declaration

- Develop a common vision for sustainable aquaculture and fisheries development of the region.
- Complement and strengthen existing capacity to develop critical mass of professionals to address common issues and problems unique to north-east region.
- Sharing of resources - infrastructure and professional expertise.
- Provide a Forum for sharing of ideas, technologies, and information.
- Provide Policy advocacy for enhanced and sustainable development of fisheries and aquaculture in north-east region.

An *ad hoc* constituent committee was formed to prepare documents and modalities of the network.

email: hkde@sify.com

National Conference on Quality Seeds and Planting Material of Horticultural Crops

New Delhi, 14 March 2010. The critical issues, viz. nursery standards, diagnostics, genetically modified seeds, policy interventions, pathogen free clones and virus indexing were addressed at the National Conference on Quality Seeds and Planting Material of Horticultural Crops, organized by the Society for Promotion of Horticulture, Indian Institute of Horticultural Research and Confederation of Horticultural Association between 11 and 14 March, 2010. Prof. K.V. Thomas, Union Minister of Agriculture (State) inaugurated the National Conference and emphasized on private and public sector participation in production and management of quality seeds and planting materials to ensure higher seed replacement rates and achieve targeted production to meet the growing demand. He exhorted all the concerned to work towards providing Indian farmer with good healthy seeds and planting material, so that they could grow quality horticultural produce and fulfil the needed nutritional security. He added that development of new technologies and recognition of many Indian cultivars abroad; there is a great opportunity for seed trade both in India and abroad. He said that 'New Seed Bill, 2004' was approved by the Cabinet recently, and it also covers all the horticultural crops for regulation of seeds and planting material. The Minister stated that despite various challenges, Indian agriculture has made rapid strides. And initiative of the Government to provide seeds and inputs in a timely manner has paved the way for all time record harvest of wheat. In this context, Indian Council of Agricultural Research has played a key role in technology generation, development of seeds and production of breeder seeds and nucleus planting material. The Secretary (DARE) and D.G. (ICAR) Dr S. Ayyappan said that inadequate availability of quality material is one of the major constraints for a sound horticulture industry. He told the participants that massive area expansion programmes under National Horticulture Mission and Technology Mission for Development of Horticulture in North- Eastern and Himalayan States require improved varieties for replanting, planting in marginal and arid areas. He added that the strong institutional network of the Council – 9 research institutes, 11 National Research Centres and 1 network project on hybrid seed production are involved in the production of planting material.

e mail: icarreporter@rediffmail.com

Research Advisory Committee Meeting of DRMR

Bharatpur, 13 February 2010. Directorate of Rapeseed-Mustard Research, Bharatpur held its 13th meeting of Research Advisory Committee from 13-14 February 2010.

Dr J.B. Chowdhury, Chairman, advised the scientists to integrate modern tools of biotechnology with conventional approaches and also stressed the need of developing suitable mechanism for transgenic evaluation. He reminded the scientists that in the era of globalization, multi-disciplinary and multi-institutional national / international collaboration is imperative for the effective research programme. Dr J.S. Chauhan presented research and development programme of the Directorate and AICRP-RM Research highlights for the year 2008-09. The scientists of DRMR presented project-wise significant achievements. The RAC advised for more focused efforts in some of the areas/issues especially creation of epiphytotic condition for screening germplasm against diseases under controlled environmental conditions, organic farming, resource conservation techniques and their effects on oil quality and soil micro-flora. In view of the climate change, development of high temperature tolerant varieties with high productivity per day is another area of priority, according to RAC. The Director assured the



RAC members visited experiments at DRMR and FLDs, Chairman, RAC addressing farmers

RAC for considering the suggestions during the programme formulation in the coming years.

The RAC visited research experiments, seed production plots at the DRMR farm, various laboratories for in-depth interaction with the scientists, “*kisan diwas*” at village Paharshar, Bharatpur, and also visited front-line-demonstrations being in progress with mustard varieties and hybrids.

e mail: js_chauhan@yahoo.com

Quinquennial Review Team (QRT) for DRMR, Bharatpur and AICRP-R&M

Bharatpur, 4 February 2010. The QRT team with Chairman Dr B. Mishra, Vice-Chancellor, Sher-E-Kashmir University of Agriculture Sciences and



QRT Chairman visited experiments at DRMR

Technology, Jammu, members and Secretary, held its first meeting with Dr S.K. Dutta, DDG (CS) at ICAR, Krishi Bhawan on 4 February 2010. Dr Dutta suggested the team to critically review the work done during the period and give constructive suggestions. The QRT also visited experiments being in progress at Division of Genetics, IARI, New Delhi. The team also visited experiments, germplasm collections, laboratory facilities and interacted with concerned scientists as well as held discussion with policy planners and administrators at RRS, Bawal (CCS HAU, Hisar); ARS, Navgaon (RAU, Bikaner); ZARS, Morena (RVRS KVV, Gwalior); SKD Agricultural University, SK Nagar and DRMR, Bharatpur during Feb 20-24, 2010.

e mail: js_chauhan@yahoo.com

International Linkages

Princess Mathilde of Belgium visits Indian Agricultural Research Institute



New Delhi, 22 March 2010. Her Royal Highness Princess Mathilde of Belgium participated in a debate on the theme of Food security, at National Academy of Agricultural Sciences at NASC Complex, New Delhi. This was followed by a field visit to Indian Agricultural Research Institute, New Delhi. Her Royal Highness Princess visited mango orchard and other fields at IARI. Under major Belgian economic mission to India, an important number of senior businessmen participated in this princely mission to develop new business opportunities in India.

e mail: icarreporter@rediffmail.com

Success story

Magur fish farming fetches good returns

CIFA, Bhubaneswar. Four years ago, Md Mazid Ali, from village, Jogirpam of Barpeta district of Asom was inspired by the DFO, Barpeta to start *Magur* breeding, where the financial return is higher than the carps, and there began the quest for *Magur* farming. Mr Ibrahim Khan, a fisheries personnel from the District Fisheries Office, advised him to visit Central Institute of Fisheries and Aquaculture (CIFA) and learnt the breeding and seed production technique. Md Mazid Ali reached CIFA to learn the technique of breeding and seed production of *Magur*. He was able to breed and produce the *magur* seeds at his small hatching facility with the personal interaction, he had at CIFA, and constructed few cements cisterns for larval rearing. With the administration of Ovaprim, he could partially succeed in breeding the catfish but came across again with one or the other constraints during larval rearing phase. During that period, CIFA got involved in the development of aquaculture in the north-eastern hills states with separate allocation of funding from the ICAR. Mazid would strictly adhere to the tips given to him by the ICAR experts during their visit to the north-east.

With regular interventions including training and demonstrations at his place, Mazid Ali developed self confidence and succeeded in breeding the species

and producing seed in good number. With the development of FRP *Magur* hatchery at CIFA, Bhubaneswar, the same was established at his farm for the large-scale seed production. He could produce the seed up to 7 to 8 lakh per year for 3 consecutive years for which Hon'ble, Chief Minister, Government of Asom felicitated him on the 15 August 2009. With Mazid coming to limelight, the other farmers across Asom started developing interest in this precious species.

Following the CIFA technology, he also succeeded in larval rearing. He fed them with live feed, egg-yolk and finely powdered fish meal for better survivability. He also followed the management practices of the broodstock carried out at this Institute for better breeding response. Due to high cost of the pelleted feed, Mazid fed the broodstock with mixture of boiled rice, mustard oil-cake, fish-meal and vitamin mineral mix. He has been duly recognised as a progressive *Magur* farmer by the ICAR and was commented by Dr S. Ayyappan, Secretary (DARE) and Director-General, ICAR. Many other organizations such as National Fisheries Development Board (NFDB), Hyderabad have also encouraged Mazid through various incentives. Indeed, Mazid has made a precedence for the progressive fish farmers of the country.

e mail: ashoksahu7@rediffmail.com

Tribals earn respectable income from *Aloe vera* processing unit

Ogna. The member of the Self-help Group *Van Suraksha evam Prabandh Samiti*, Village - Atatiya, Range - Ogna, District - Udaipur (Rajasthan) after successful training at PHT centre, established the *Gwarpatha Prasanskaran Kendra (Aloe vera processing unit)* in Ogna village. They were trained to use the motorised small scale gel extraction machine, and in processes for value added products such as *Aloe vera* juice, squash and RTS beverage with/without blend of lemon, ginger and mint extracts, at the PHT centre, Udaipur. Between December 2008 and February 2009, the unit produced about 500 litres of *Aloe vera* juice. Processed and bottled Aloe juice was launched for sale to general public and tourists as a health drink. At present the processing unit is running successfully. Effective aloe juice recovery is about 30% as the plantation is under rainfed condition on Aravali hills. Total cost of production of *Aloe vera* juice is Rs 40 per litre with sale price as Rs 100 per litre, with a net profit of Rs 60 per litre. The low sale price has been fixed after considering the prevailing market price of Rs 200 to 550 per litre juice. Local tribals and members of *Van Suraksha evam Prabandh Samiti* are earning profit by sale of aloe vera juice.

Aloe vera is a plant of great potential and value in the field of therapeutic pharmaceuticals and cosmetic industries, and in Ayurvedic and Unani system of medicines, it is particularly useful for treatment of burns, bleeding wounds, as eye drops for sore eyes. The gel contained in *Aloe vera* leaves reportedly comprises 75 nutrients, 200 active compounds, 20 minerals, 18 amino acids and 12 vitamins. There is about 125 ha of *Aloe vera* plantation in the adjoining area of the processing unit within the Ogna forest area of Udaipur district, which amounts to 12.5 lakh plants of *Aloe vera*. These plantings were done by the Forest Department on degraded forest land for conservation under different

schemes since 1996-97. However, due to lack of awareness and non-availability of simple technology for value addition at production catchment, tribal people were getting little or no monetary benefit from this large aloe vera plantation.

From November 2009 to January 2010, the group handled approximately 4 tonnes of aloe leaf and produced 950 litres of aloe juice. The expenditure on

labour, electricity, preservative (KMS), bottles, cans, etc. has been estimated as Rs 31,000. As the raw material i.e., *Aloe* leaf is a forest produce and managed by *Van Surakshya Avam Praband Samiti*, Atatiya hence no cost has been incurred for aloe leaf. The building for housing the principal

equipment and product was provided by the Forest Department, Government of Rajasthan. Therefore, with a revenue of Rs 95,000 obtained @ Rs 100/litre against the expenditure of Rs 31,000, a net profit of Rs 64,000 was realized for the duration.

This *Aloe vera* processing unit established with an investment of Rs 70,000/ is providing employment to 8 persons/day (collection of leaf, processing, packaging and marketing). The unit can be effectively operated from September to February i.e., 6 months in a year, while the cost of unit could be recovered in almost three months. Quality raw material (aloe leaves) are not available from March to September, as the production area is rainfed hill forest.

This is the first such processing unit in underdeveloped tribal area of the Rajasthan for livelihood strengthening, economic empowerment and conservation of forest. The success of its *Aloe vera* processing unit has encouraged the entrepreneurship among the tribal farmers of this area.

e mail:sk_nanda4578@sify.com



Interaction meet on Asian Seabass

Nellore, 19 February 2010. The Central Institute of Brackishwater of Aquaculture has been engaged in frontline demonstrations of successful culture of Asian fish seabass. *Lates calcarifer*, with scientific technological modifications for high growth and survival rate in the pond culture systems, in farmers' ponds,



cages and pens in marine, brackishwater and freshwater eco-systems in Andhra Pradesh, Tamil Nadu and Maharashtra. To commemorate the successful completion of the first demonstration of the fish culture, an Interaction Meet was conducted at Gangapatnam, Nellore District, with farmers. About 100 farmers, entrepreneurs, feed manufacturers, State

Fisheries Department officials and media persons attended the meet.

Our scientists explained the technological improvements made by the Central Inland Bureau of Aquaculture in the culture of Asian seabass, especially on the recent achievements made in the nursery rearing and pre-grow out phases and mentioned that this has given great scope for adoption by small farmers and self help groups as their livelihood option. They expressed the hope that the demonstration will help many farmers to take up seabass farming and requested to take steps for adequate seed supply of the fish. Several schemes of National Fisheries Development Board especially of the assistance available for setting up hatcheries and culture for the diversified species like Asian seabass, were discussed and our scientists suggested the farmers to avail the technological support and improve fish production through aquaculture. The participants were taken on exposure visit to the fish farm site.

e mail: director@ciba.res.in

Capacity Building / MoU

New Agro-Processing Centre inaugurated

Abohar, 23 February 2010. Agro-Processing Centre was inaugurated by Dr R.T. Patil, Director, CIPHET. This center is having facilities for Seed cleaning and grading, Cotton ginning machine, Minor millets processing unit, and Food Processing unit. Seed cleaning and grading and Cotton ginning machine were shifted and commissioned from old building whereas equipments for dehulling and pearling of small millets have been recently developed under DST Project were commissioned in the Centre. The facility for seed cleaning and grading is being used by the farmers for cleaning and grading of wheat, Bengal gram, green gram etc. on custom hiring basis.

ICAR Technologies on All India Radio

New Delhi, 31 March 2010. ICAR signed a contract with Prasar Bharti (Broadcasting Corporation of India) for dissemination of technology and industry by using dedicated liveslot for ICAR. All India Radio, Delhi will broadcast a special programme (25 minutes) on the



theme ICAR on every Friday evening. The programme will include different sections on agriculture, animal husbandry, fisheries, horticulture and agriculture education and extension. Besides relevant and profitable technologies, the programme will focus on the success stories of the field. It will have a farmer-friendly approach and will be an effective link between agricultural scientists and farming community.

e mail: icarreporter@rediffmail.com

Pantvarsity and Nestle sign MoU

Pantnagar. 10 February 2010. A Memorandum of Understanding with Nestlé India for the implementation of the “Nestlé Nutrition Awareness Program” in Uttarakhand was signed by Dr B.S. Bisht, Vice-Chancellor, Govind Ballabh Pant University of Agriculture and Technology and Mr Suresh Damodaran, Factory Manager. The programme will cover balanced diet, nutritive value of common foods, common local deficiencies and fads and fallacies related to food. Mr Suresh Damodaran, Factory Manager, Nestlé India said that project would reach out to adolescent girls, aged between 13 and 17 years, studying in village schools with the aim of imparting health and nutrition awareness.



The Vice-Chancellor, Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, constituted a joint committee to oversee implementation of the programme. Joint surveys will be carried out to determine the areas in which the project will be conducted.

e mail: vc@gbpuat.ernet.in

CIPHET signs Memorandum of Understanding

Ludhiana, Central Institute of Post-Harvest Engineering and Technology, a premier institute of Indian Council of Agricultural Research, signed a Memorandum of Understanding (MoU) with 3 entrepreneurs for licensing them meat processing and value addition technologies developed by the institute for commercial use. Entrepreneurs will be associating the CIPHET's brand name along with their products to attract consumers.

After signing MoU with three entrepreneurs from states of Maharashtra, Karnataka and Tamil Nadu, Dr R.T. Patil, Director, CIPHET, said that hygienic practices and simple marketing tools play an important role in attracting the consumers to buy the meat products. He said that now India has a lot of potential for marketing of processed meat products at higher prices as opening of multinational brands had already generated demand in high-end segment. Processing needs to go hand-in-hand with production, if producers want to fetch good price.

Senior Scientist Dr Suresh K. Devatkal said that these entrepreneurs had got training in meat processing and value addition technology in the Livestock Products Processing laboratory of CIPHET and they would be making use of above technologies for processing of emu meat, poultry meat, and rabbit meat. Entrepreneurs including Badresh Mehta from Dr Emu Products, Maharashtra, Dr C S Srinivas from Pragatho Hatceries, Karnataka, Ashok from Kamraj Integrated Farm, Tamil Nadu, said that technologies developed by CIPHET would provide them great help in their meat processing units.

e mail: ciphet@sify.com; maniciphet@yahoo.co.in

ICAR Journals in Open Access

ICAR has decided to allow open access to its research journals online for the benefit of students, researchers and farmers for free nationally and internationally. The journals namely, *The Indian Journal of Agricultural Sciences* and *The Indian Journal of Animal Sciences* are published monthly by ICAR. The journals will be accessible from the ICAR website (www.icar.org.in) from March 2010 onwards.

ICAR Vichar Manch



New Delhi, 15 March 2010. Shri Surendra Sharma, poet of *Hasya Ras*, amused the august audience with his poetries of four lines which were containing moral education as well as satire in them.

e mail: icarreporter@rediffmail.com

CPCRI celebrated Golden Jubilee

Kahikuchi, 8 January 2010. The technology generation and dissemination for major plantation crops mainly arecanut and coconut for the north-eastern region were highlighted by his Excellency the Governor of Asom, Shri J.B. Patnaik, the Chief Guest at the Golden Jubilee functions. He advised farmers to adopt the mixed cropping systems to enhance the production and thus the returns from their gardens at *Kisan Mela* on the occasion of the Golden Jubilee Celebration of Research Centre of Central Plantation Crops Research Institute. Mentioning that there is a lot of potential for the plantation crops based cropping systems in the region, he urged the farmers to respond to the need of the country at present to achieve food security. He also released publications namely *Coconut Cultivation Practices, Major Diseases and Pests of Arecanut and Coconut Based Cropping System*, and *Success Stories of the Beneficial Farmers of the Centre* in Assamese and 1 in English covering aspects of diseases and pest management of arecanut- and coconut-based cropping system. His Excellency also felicitated farmers, viz. Shri Sabin Thakuria of Manikpur village, Shri Anup Choudhary of Kandupur village, and Shri Rupdhar Boro of Chaigaon village, who successfully adopted the improved technologies in arecanut thus enhancing the net returns from their gardens.

Dr K.M. Bujarbaruah, Vice-Chancellor, Assam Agricultural University was the guest of honour, and he encouraged the farmers to take up the latest technologies in the field of crop production and go for commercial farming to face the challenges in the field at present. Dr George V. Thomas, Director, Central Plantation Crops Research Institute, Kasaragod, in his presidential address highlighted the activities of his Institute and the potential of plantation crops in the north-eastern region. In the interaction session, improved technologies on arecanut, coconut, and other horticultural crops were presented and developmental activities of different developmental agencies were explained. Farmers interacted with the research and developmental agencies with great enthusiasm.

e mail: georgevthomas@yahoo.com

XX Foundation Day celebrated

Jabalpur, 23 January 2010. A *Kisan Mela* was organized on the occasion of XX Foundation Day at Directorate of Weed Science Research. Dr K. Kasturirangan, Member (Science), Planning Commission, Government of India was the Chief

Guest and he delivered the Foundation Day Lecture. He emphasized on pro-active role of improved agricultural technology and remote sensing in precision agriculture while inaugurating the *Kisan Mela*, Dr Kasturirangan stressed upon strengthening of extension agencies to transfer the existing technologies which is the need of the hour.

The function was presided over by Minister of Agriculture, Government of Madhya Pradesh, Dr R.K. Kusmaria who urged upon all the concerned departments to have better co-ordination among themselves so that hardship of farmers is minimized. He advised the policy planners to include weed control in the NAREGA for benefit of the farmers. Dr Jay G. Varshney, Director of the Institute, presented an overview of weed problems and requested all concerned to create awareness among farmers to control weeds.

Around 5,000 farmers/students visited *Kisan Mela* and obtained knowledge on various aspects of agriculture from the different stalls (56) put up by various developmental and research organizations. A *Kisan Sangoshthi* and field visits were also organized in which scientists interacted with the farmers, discussed and solved their emerging agricultural related problems including weed management. The progressive farmers (20) belonging to different villages of Madhya Pradesh were also felicitated during the *Kisan Mela*.

e mail: drsinghpk@gmail.com

Pusa Krishi Vigyan Mela organized

New Delhi, 6 March, 2010. The Indian Agricultural Research Institute, Pusa organized a 3-day *Krishi Vigyan Mela* and its theme was 'Agricultural Technologies for National Prosperity'. Union Minister for Agriculture, Shri Sharad Pawar, inaugurated it and said that our Government is committed to





Director-General, ICAR, Dr Ayyappan assured farmers that ICAR is with them from seed to market

remunerative prices to farmers while ensuring foodgrains to the poor at affordable rates. He added, Our Country will not prosper unless the economic condition of farmers improves and their purchasing power goes up.

Referring to steps taken by the government to ensure remunerative prices to farmers, the Union Minister said that Minimum Support Price of wheat and paddy has been enhanced substantially and asserted that the increase in Minimum Support Price encouraged farmers to increase production of foodgrains. He said that the wheat production is expected to surpass the previous record during *rabi*. The Union Minister informed that the sugarcane farmers got the highest price of their cane for the first time in this crushing season and the enhanced price will further encourage them to increase cane acreage, which will help to tide over the crisis of sugar shortage. The Union Minister pointed out that despite remunerative prices, the government, to protect the vulnerable sections of society, continues to provide foodgrains to them. He said that Central Issue Price of wheat and rice meant for AAY, Below Poverty Line and Average Poverty Line ration card holders has not been raised since 2002.

Earlier Secretary, (DARE) and Director-General, (ICAR), Dr S. Ayyappan, highlighted the technologies and achievements of the Indian Council of Agricultural Research for benefit of farming community. He further added, the Council is with farmers from seed to market. The ICAR continued to

move forward in generating technologies towards sustainable agriculture and food security, he added. The agricultural technologies and new seeds, plants developed by Indian Agricultural Research Institute ,its associate institutions etc.have been showcased in this agriculture science fare.

e mail: icarreporter@rediffmail.com

Maize Revolution in Sikkim

Sikkim ,28 January, 2010.Maize *mela* was organized by Zonal Project Director, Zone III, Directorate of Maize Research and the ICAR in south Sikkim. The Agriculture is the mainstay of majority rural populace of Sikkim. The economy of the state that is linked with agriculture, serves as the source of livelihood and economic security of sizeable native population. Since paddy is the traditional food crop of the Sikkim followed by maize, the purpose of the *mela* was to educate and equip the farmers with the latest technologies and skill for better production of maize and promptly demonstrate the latest varieties of maize to the farmers with a view to reduce the time gap between technology generation and its adoption.

The *mela* was inaugurated by Shri Dawcho Lepcha, Minister for Food Security and Agriculture Development, Horticulture and Irrigation, Government of Sikkim, and the Chief Guest of the honour was Dr K.D. Kokate, Deputy Director-General (Agricultural Extension),ICAR, New Delhi.

e mail:icarreporter@rediffmail.com

Technology expo at IISR gives new insights to farmers

Kozhikode, 12 February 2010.Exposing the peasant community to innovative agricultural technologies and new farming practices, the Indian Institute of Spices Research, Kozhikode, organised a *Kisan Mela* and showcasing of technologies under sub-project on 'Mobilising Mass Media Support for Sharing Agro-Information' of the National Agricultural Innovation Project between 8 and 12 February 2010.The event, *Karshika Sankethika Darshanam, 2010*, was held at the institute's experimental farm located at Peruvannamuzhi of Kozhikode district.

The farmers' meet and showcasing of technologies was organised in collaboration with the Krishi Vigyan Kendra of the institute at Peruvannamuzhi,

Kozhikode. Dr S Prabhukumar, Zonal Project Director, KVK, Bengaluru, stressed on the need for a business centric approach towards farming. "Agriculture has to be changed from a way of life to a way of business", he said. "Our farmers should be made aware of the quality improvement of their products to compete in the international market", he added.

The Krishi Vigyan Kendras spread across the country play a pivotal role in guiding farmers to adopt innovative technologies developed by various state and central research organisations, Dr Prabhu Kumar said. Equal importance must be given to technologies developed by farmers. Kerala is the first state to have Krishi Vigyan Kendras in all the districts and we have to work in micro-levels to bring more results, he added. Around 250 farmers from the district attended the function. Apart from the general public, around 900 farmers and 1000 school students visited the stalls.

e mail:john@spices.res.in

Sarson Vigyan Mela-cum-Exhibition

Bharatpur, 9 February 2010. Chief Guest, Sh. Subodh Agrawal, IAS, Divisional Commissioner, Bharatpur inaugurated 16th Sarson Vigyan Mela-cum-Exhibition at Directorate of Rapeseed-Mustard Research, Bharatpur. In his inaugural address, he advised the farmers to adopt low input technologies for reducing the cost of cultivation, identify farming problems and make collective efforts to address them. Further they should have positive attitude about emerging global agriculture scenario and emphasised on the importance of proper marketing of agriculture produce. Ms Suman Koli, Chairperson, Nagar Parisad, Bharatpur, presided over the function and called the farmers to be more pro-active and get the benefit of the scientists at the Directorate as well as various government schemes especially for empowerment for women.

Dr J.S. Chauhan, Acting Director, DRMR, informed the farmers that center regularly organizes FLDs, scientists-farmers interaction, exhibitions, farmers day, radio and TV programmes, mela, trainings, etc. for the benefit of the farming community. Technical



bulletins "Seed production programme", "Integrated disease management", "Integrated pest management" and "DRMR Developed varieties of rapeseed-mustard" were also released. Progressive farmers were honoured for raising excellent mustard crop by applying scientific recommendations and winning quiz programme of Radio Krishi Shiksha Programme of DRMR broadcast through AIR, Mathura.

The mela had many exhibition stalls representing industries, NGOs, banks, fertilizers, pesticides, etc., and were visited by more than 600 participants.

e mail: js_chauhan@yahoo.com

Rabi Sangoshthi / Farmers' Fair

Ujjain, 23 February 2010. Krishi Vigyan Kendra and Farmers' welfare and agriculture development department jointly organized 1-day "Rabi Sangoshthi/ Farmers' Fair" at the premise of the KVK centre in which 800 farmers of the district and all agriculture allied departments viz., Horticulture, Veterinary, Fisheries, Agriculture Engineering, participated.

Hon'ble Dr Ramkrishna Kusmariya, Minister of Agriculture (Madhya Pradesh) the chief guest, emphasized on the maximum use of organic manure in current farming to maintain the soil-health. Scientists increased public awareness on Integrated Nutrient Management, Integrated Pest Management, Organic Farming, latest technology of agriculture in relation to the present environmental condition etc. Besides the new improved varieties of crop and quality seed production and maximum utilization of modern agricultural tools in farming were discussed.

Crop cafeteria of Krishi Vigyan Kendra included different varieties of chickpea (18), wheat (20), mustard (10), Kusum (4), pea (4), lentil (2), potato (4), marigold and various vegetables. Farmers were also encouraged to adopt the new varieties suitable with Malwa agro-climatic zone to get more produce. KVK exhibited samples of productive Seed varieties, Vermi-compost and NADEP Model, Women Drudgery reduction tools, Soya flour, Light trap model etc. Various stalls of Fertilizer, Insecticides, Agriculture tools and other product exhibited by agriculture allied departments.

e mail: kvkujjain@rediffmail.com

Annual Cashew Day

Keyyur, 4 March 2010. The Directorate of Cashew nut and Cocoa Development, Kochi, sponsored Annual Cashew Day with the theme 'Improved cashew production technologies for higher yields' at Sri Durga Parameshwari Temple, Keyyur (Madavu), Puttur Taluk.



The Chief Guest, Mr Venkatesh N. Hubballi, Director, Directorate of Cashew nut and Cocoa Development, Cochin informed about the financial support available from his Directorate for the cashew farmers. The improved varieties, viz. Ullal 3, Bhaskara, and NRCC Selection 2, high density system of planting and intercropping were explained to the participants at demonstration plots laid in the progressive cashew farmers' field. Utilization pepper as intercrop under high density system of planting was also elucidated to them. A seminar on 'Improved cashew production technologies for higher yields' was also organized. Dr M.G. Bhat, Director, National Research Centre on Cashew informed the farmers to adopt multiple cropping pattern in their land in which cashew should be one of the component crops.

e mail: dircajures@rediffmail.com

Lal Bahadur Shastri Memorial lectures

Izatnagar, 11 January 2010. Indian Veterinary Research Institute (IVRI), organized "Lal Bahadur Shastri Memorial Lectures" on 11 January 2010 to commemorate the 44th Death anniversary of late Prime Minister, Lal Bahadur Shastri. Prof Rajendra P. Bharti, Director, Lal Bahadur Shastri Institute of Management and Technology, Bareilly was the Guest of honour, while Prof. Pranab K. Banerjee, DCAC, University of Delhi, Prof. Ramesh Chand, Director, National Centre for Agricultural Economics and Policy Research, New Delhi graced the occasion as Guest speakers.

The programme began with a floral tribute to the late Prime Minister by the Honourable Guests, which was followed by the first lecture by Prof. Banerjee on "Micro-financing in rural development of India". In the second lecture, delivered by Prof. Ramesh Chand on "Current food price crises and its implication on food security", he provided an overview of emerging food crises and its impact on food and nutritional security. He stated that livestock sector has helped to maintain respectable growth in food and agriculture production.

In his presidential address, Prof. M.C. Sharma, Director and Vice-Chancellor, IVRI highlighted the importance of the day. He briefed about the mandate and achievements of IVRI in the area of research, transfer of technology, and technology development, and complimented the Lal Bahadur Shastri Trust for initiating process to establish "Lal Bahadur Shastri National Professor Chair" at IVRI.

e mail: dirivri@ivri.up.nic.in

Trainings

Gene based techniques for research in biotechnology

Izatnagar, 7 March 2010. Inaugural function of a 21-day international training course on "Gene based techniques for research in biotechnology" sponsored under TCS Colombo Plan Secretariat, Sri Lanka and India Millenium Fund, Government of India was held on 7 March, 2010 at Indian Veterinary Research

Institute, Izatnagar. The course was organized by the Division of Biochemistry, IVRI, wherein 15 participants from ten Asian countries attended it.

Speaking at the inaugural function as the Chief Guest, Prof. M.C. Sharma, Director and Vice-Chancellor of IVRI expressed his happiness on the overwhelming response of the participants who had come from different developing countries like Indonesia, Thailand, Myanmar, Sri Lanka, Iran, Brunei

Darussalam, New Guinea, Maldives, Vietnam and LAO PDR. Prof. Sharma emphasized the need for such international training courses to share the newer techniques with other countries. He further stressed the need to develop the marketing system by value addition of animal products.

Delivering his welcome address, Dr Dharmeswar Das, Joint Director (Academic) spoke about the importance of such training course at international level. He also provided an overview of IVRI and its contribution in the field of research, teaching training and other extension activities.

Briefing about the training course, Dr Bhaskar Sharma, Course Director and ICAR National Professor, Division of Biochemistry, highlighted the training course and informed that since 2002, the institute has been organizing international training courses regularly for the last eight years. He further informed that the training course has been designed for mid-career researchers/scientists working in different countries on molecular biology, so that they can upgrade their skills and apply them in their on-going research and teaching commitments. Dr A.K. Srivastava, Former Head, Division of Biochemistry also expressed his views on this occasion.

e mail: dirivri@ivri.up.nic.in

Trainers' Training Workshop

Kochi, 18 January 2010. A 2-day Trainers' Training Workshop was organized by the Central Institute of Fisheries Technology, and Directorate of Research on Women in Agriculture, Bhubaneswar, on 'Capacity building of coastal fisherwomen through post-harvest technologies'.

Preparation of value-added oyster products

Kochi, 9 February 2010. The Central Institute of Fisheries Technology, Cochin, conducted a 2-day training programme on 8 and 9 February 2010 on "Preparation of value added oyster products" at Moothakunnam as part of the Department of Science and Technology funded project 'Location specific livelihood interventions for empowerment of fisherwomen of Kerala'.

e mail: cift@ciftmail.org

Capacity building Training for NABARD Officer

Tailor made programme on Post-Harvest Management and Value-Addition of Horticulture and Plantation Crops for senior level NABARD officers was organized from 2 to 6 March 2010 at CIPHET, Ludhiana/Abohar. 10 officers from different states have participated in 5-day capacity building programme on Post Harvest Management of Horticultural Produce.

e mail: maniciphet@yahoo.co.in

Awards

PAU honours Prof. Swaminathan

Ludhiana, 10 February 2010. The Punjab Agricultural University awarded Doctor of Science (*honouris causa*) degree to Professor M. S. Swaminathan, internationally acclaimed agricultural scientist, formerly Director-General of the ICAR and Chairman, National Farmers' Commission. The degree was awarded by the Chancellor of the University, His Excellency Governor of Punjab, Shri Shivraj Patil, during the Annual Convocation of the PAU, Ludhiana.

Introducing Prof. Swaminathan to the Chancellor, and Faculty, Vice-Chancellor, Punjab Agricultural University, Dr Manjit Singh Kang said that Dr Swaminathan has been hailed as agricultural leader of Green Revolution. Prof. Swaminathan has received



56 honorary doctorate degrees from 55 universities around the world. At present, he holds UNESCO Chair in Eco-technology. He is also Member of Parliament (Rajya Sabha) since May 2007 to which position he was nominated by the Government of India for his

Fish farmers trained in responsible fish processing

Kochi, January 2010. Under the NAIP Project on 'Responsible harvesting and utilization of selected small pelagics and freshwater fishes', fisher-women, selected from different self-help groups, were grouped into three post-harvest activity clusters and trained in operation and management of a community-based processing unit. In continuation with the entrepreneurship and skill-development activity, 1-day workshop was organized by the Central Institute of Fisheries Technology, Cochin and the Institute of Chartered Accountants of India (ICAI), Ernakulam Branch. Thirteen fishermen of the three clusters participated in the workshop. Under the Accounts Management session, the necessity of keeping accounts was explained and the basic registers to be maintained were explained with simple examples. The session was an interactive one in which the fisher-women participated actively.

e mail: cift@ciftmail.org

- Training-cum-exposure visit sponsored by Directorate, Soil Conservation, Jharkhand was organized at Dehra Dun from 4 to 11 January 2010.
- Model Training course on "Planning Designing and

Execution Procedure of Engineering Measures of Soil and Water Conservation", allotted by Department of Agriculture and Co-operation, Ministry of Agriculture was organized at Dehra Dun from 4 to 11 January 2010.

- Short courses on Watershed Management under NWDPRRA sponsored by Director of Agri. Uttarakhand, was organized at Dehra Dun from 13-25 January 2010.
- Short course on Watershed Management under NWDPRRA sponsored by Director of Agriculture Uttarakhand, was organized at Dehra Dun from 27 January to 8 February 2010.
- A 3-day Farmers' training programme on "Improving rural livelihood security through sustainable integrated farming system model and allied enterprises in Bastar region of Chhattisgarh", under Component-III NAIP-sub-project, was organized at the Centre between 1-3 and 4-6 February 2010 for the farmers of Bastar region of Chhattisgarh.
- Short course on Watershed Management under NWDPRRA sponsored by Director of Agriculture Uttarakhand, was organized at Dehra Dun from 11 to 23 February 2010.
- Two weeks training on 'Special project on Ravine Reclamation and Utilization of Chambal Ravines' commenced on 22 February, 2010 for officer trainees of 102nd batch at Kota.

outstanding contributions in agricultural research and development.

e mail: icarreporter@rediffmail.com

IDA Fellowship Award on Dr B.K.Joshi

Karnal, 17 February 2010. Dr B. K. Joshi, Director, National Bureau of Animal Genetic Research has been awarded the Indian Dairy Association Fellowship during the XXXVIII Dairy Industry Conference held at Bengaluru, Karnataka. He was awarded this fellowship to acknowledge his contributions in the areas of animal production and services rendered to the Indian Dairy Industry. He has handled 25 research projects in the area of animal production and

contributed in establishing elite herds of high producing breeds like Sahiwal, Tharparkar and Karan Fries cattle as well as Murrah Buffaloes at National Dairy Research Institute, Karnal. The Indian Dairy Association has conferred the fellowship as a befitting tribute to his services and contributions made in the area of important livestock.

e mail : directornbagr@gmail.com

Hindi Awards

New Delhi, 15 March 2010. Shri Surendra Sharma, poet of *Hasya Ras*, gave away Hindi Awards to those who have got different positions in the Hindi competitions, viz. Debate, Essay writing etc.

e mail: icarreporter@rediffmail.com

Personnel

Dr S. Ayyappan takes over as Secretary (DARE) and Director-General (ICAR)



Born on 10 December, 1955 Dr S. Ayyappan obtained Ph.D degree from Bangalore University in 1988. His specific areas of research are Fisheries, Freshwater Aquaculture and Aquatic Microbiology. He has served the Council in several capacities, viz. Deputy Director-General (Fisheries); Director, CIFE; Director, CIFA

etc. He is the Founder Chief Executive of the National Fisheries Development Board. He has two patents and one design in his name. He is recipient of Zahoor Qasim Gold Medal, 1996-97; ICAR Award for Team Research for 1997-98; and V.G. Jhingran Gold Medal, 2002. Presently, he is Fellow and Vice-President of National Academy of Agricultural Sciences, India; and Vice President, Indian Society of Coastal Agricultural Research, 2008-2011. Dr Ayyappan has been invited

to serve as Member/Chairman on the Boards of Network of Aquaculture Centres in Asia-Pacific (NACA), Bangkok, Thailand; and World Fish Center of the CGIAR, Malaysia.

Dr Ayyappan has served in different capacities on important Committees, viz. Chairman of High level Expert Committee for development of Freshwater Aquaculture, Government of India; Chairman of the Working Group on Fisheries for Eleventh Five -Year Plan, Planning Commission; Chairman of the Task Force on Aquaculture and Marine Biotechnology, Department of Biotechnology, 2006-2009; Member of the Project Steering Committee on 'More Crop and Income per Drop of Water', Ministry of Water Resources, Government of India, 2006-2007; and Member of the Mid-Term Review (MTR) Committee on Agriculture and Allied Sectors for the XI Plan (2007-2012), Planning Commission, Government of India, 2009.

Appointments

- Dr S. Ayyappan has joined as Secretary (DARE) and Director-General(ICAR) on 1 January 2010. Earlier he was working as Deputy Director-General(Fisheries) in ICAR.
- Dr K. M. L. Pathak has joined as Deputy Director-General(ICAR) on 28 January 2010. Earlier he was working as Director, National Research Centre on Camel, Jobner.
- Dr Bangali Baboo has joined as National Director (NAIP) on 28 January 2010. Earlier he was working as Director, Indian Institute of Natural Resin and Gums, Namkum, Ranchi
- Dr S.C. Gupta has joined as Assistant Director-General (Animal Breeding and Production) at ICAR (Hq) on 8 February 2010. Earlier he was working as Principal Scientist at National Bureau of Animal Genetic and Research, Karnal.
- Dr Nalam Sudhakar has joined as Zonal Project Director-V, Hyderabad on 5 February 2010 (AN).
- Dr R.P. Singh is appointed as Director at Central Avian Research Institute, Izatnagar on 8 February 2010.
- Dr A.M. Narula has joined as Zonal Project Directorate Zone-I, Ludhiana on 11 February 2010.
- Dr Bijendra Singh has joined as Project Co-ordinator (Vegetables) at Indian Institute of Vegetable Research, Varanasi on 12 February 2010.
- Dr R.P. Dua has joined as Assistant Director-General (Food and Forage Crops) ICAR (Hq) on 15 February 2010.
- Dr N.P.S. Sirohi has joined as Assistant Director-General (Engineering) ICAR (Hq) on 18 February 2010. Earlier he worked as Principal Scientist, Indian Agricultural Research Institute, New Delhi.
- Dr K.R. Kranthi has joined as Director at Central Institute of Cotton Research, Nagpur on 18 February 2010.
- Dr K.K. Singh has joined as Assistant Director-General (Post-harvest Engineering) ICAR (Hq) on 19 February 2010.
- Dr Devendra Swaroop has joined as Director at Central Institute of Research on Goats, Makhdoom on 19 February 2010 (A.N.). Earlier he worked as Head, Division of Veterinary Medicine, Indian Veterinary Research Institute, Izatnagar, Bareilly.
- Dr M.M. Roy has joined as Director at Central Arid

Zone Research Institute, Jodhpur on 20 February 2010 (A.N.).

- Dr Babooji Gangwar has joined as Project Director at Project Directorate for Farming System Research, Modipuram, Meerut on 23 February 2010 (A.N.).
- Dr A K Vasisht has joined as Assistant Director-General (PIM) ICAR (Hq) on 2 March 2010.
- Dr N.P.Singh has joined as Director at ICAR Research Complex for Goa on 2 March 2010.
- Dr S.S.Ramani has joined as Project Co-ordinator (Honey bee and Pollination) Ch. Charan Singh Haryana Agricultural University, Hisar on 2 March 2010.
- Dr Ramesh Chand has joined as Director at National Council of Agricultural Economics and Policy Research, New Delhi on 2 March 2010.
- Dr R.S. Biradar has joined as Joint Director at Central Institute of Fisheries Education, Mumbai on 2 March 2010.
- Dr A.K. Gogoi has joined as Zonal Project Director-III at Barapani on 23 February 2010 (A N) on 3 March 2010.

Retirements

- Dr S.N. Shukla, Assistant Director-General (Food and Forage Crops) ICAR (Hq) retired on 31 January 2010.
- Dr S.K. Tandon, Assistant Director-General (Engineering) ICAR (Hq) retired on 31 January 2010.
- Dr Mathura Rai, Director, Indian Institute of Vegetable Research, Varanasi retired on 31 January 2010.
- Dr B.P. Singh Director, Central Avian Research Institute, Izatnagar retired on 31 January 2010.
- Dr N. Seetharaman, Director, Directorate of Sorghum Research, Hyderabad retired on 28 February 2010.
- Dr S.C. Mukherjee, Joint Director, Central Institute of Fisheries Education, Mumbai retired on 28 February 2010.
- Dr Murary Shyam, Project Co-ordinator (Renewable Source Energy), Central Institute of Agricultural Engineering, Bhopal opted Voluntary retirement on 28 February 2010.
- Dr Ajay Kumar, Director (DARE) opted voluntary Retirement on 31 March 2010.

Protocol Activities

Delegations abroad

- Dr Sanjay Kumar Singh, Senior Scientist, Directorate of Wheat Research, Karnal visited to Cornell University, Ithaca, New York, USA for training on 'Molecular Marker development and allied areas' for 3 months i.e. between 8 February and 7 May, 2010 under DRRW-ICAR bilateral programme.
- Dr P. Shinoj, Scientist, NCAP, New Delhi visited to Cornell University, Ithaca, New York, USA for the Norman Borlaug International Agricultural Science and Technology Fellowship programme, 2009 for 40 days i.e. between 6 March and 16 April, 2010 under Indo-US AKI in the field of Agricultural Economics.

Visit

Deputy Director-General (Crop Science) visits Directorate of Rapeseed-Mustard Research

Bharatpur, 28 February 2010. Dr Swapan Kumar Dutta, Deputy Director-General (Crop Science), visited ongoing rapeseed-mustard experiments at the Directorate of Rapeseed-Mustard Research, Bharatpur, and interacted with the scientists and offered valuable suggestions and comments for better and effective research output. Development of low cost technology for resource poor farmers should be the ultimate goal of research, opined Dr Dutta. He also emphasised the need of multidisciplinary team efforts and establishing multi-institutional linkages for enhancing the efficiency of the rapeseed-mustard research and development programme. Dr Dutta also felt the urgent need for human resource development through national and international training programmes. He assured all out support of the Council to the Directorate.

OBITUARY

Shri S.N. Tata, formerly Chief Editor (English), DIPA, ICAR, passed away on 7 March 2010. Shri Tata, 74, will be remembered not only as Editor for *The Indian Journal of Agricultural Sciences* but also of popular books like *History of Agriculture in India* and *Handbook of Agriculture*.



Indian Council of Agricultural Research

Established

16 July 1929

Personnel

28,258

Varieties released

147 varieties of major crops

Seeds

10,140 tonnes breeder seed and over 25 lakh planting materials

Fish seed

97.104 million fish seed

Cattle semen doses

253,011 semen doses

Rural livelihood initiatives

Technological innovation-based 36 models initiated in 102 of 150 most disadvantaged districts

Organisation

98 ICAR institutes
45 Agricultural universities
78 AICRP and NP
570 Krishi Vigyan Kendras

Human Resources

764 scientific positions filled

E-linkages

192 KVKs



हर कदम, हर डगर
किसानों का हमसफर
भारतीय कृषि अनुसंधान परिषद

Agrisearch with a human touch

www.icar.org.in



Editorial Board

Chairman

Dr S Ayyappan
Secretary, DARE and DG, ICAR

Members

Dr H P Singh, DDG (Horticulture)
Dr A K Singh, DDG (NRM)
Dr M M Pandey, DDG (Agricultural Engineering)
Dr Bangali Babu, National Director (NAIP)
Dr S K Datta, DDG (Crop Sciences)
Dr K D Kokate, DDG (Agri. Extn.)
Dr Arvind Kumar, DDG (Education and Fisheries)
Dr K M L Pathak, DDG (Animal Sciences)
Dr N B Singh, ADG (Tech. Co-ordination)

Member-Secretary

Dr T P Trivedi, Project Director (DIPA), ICAR