

Reporter

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From the DG's Desk

Dear Readers,

Agriculture in India is the single largest private enterprise that presently contributes over 14% of the national GDP, accounts for more than 10% of the national exports, engages about 52% of the national workforce and forms the backbone of agro-based industry. It also addresses non-trading issues of food and nutritional security, income generation, poverty alleviation, gender, ecology and environment. The Indian Council of Agricultural Research as the national apex organization has been continuously responding to the changing research and education needs of the agricultural sector. The generation and infusion of agricultural production technologies have made a visible impact on the national food and nutritional security. The estimates indicate a production of about 242 million tonnes of foodgrains with rice over 95 million tonnes, wheat 86 million tonnes and pulses 18 million tonnes. Similarly, the production of oilseeds, fresh fruits and vegetables, milk, eggs and fish is also estimated to be the highest ever during the year. The increased farm production has enabled the agricultural sector to register an encouraging growth rate of 6.6% during 2010-11.



The XI Five-Year Plan through its several programmes emphasized on balanced use of fertilizers; application of micro-nutrients; improved seed replacement rates; enhanced dissemination of improved and potential technologies; promoting commercialization in agriculture; launching research programmes to build resilience in agriculture against the climatic aberrations; revisiting the agricultural education curricula; e-linking of Krishi Vigyan Kendras; conducting technology demonstration in pulses etc. The demand for food and processed commodities is increasing due to growing population and rising per caput income. Projections revealed that demand for foodgrains would increase to 345 million

tonnes in 2030. The demand for high-value commodities such as fruits, vegetables, milk, meat, poultry and fish is increasing faster than foodgrains and their demand is expected to increase by more than 100% from 2000 to 2030 A.D.

The future increase in agricultural production has to come through mainly productivity enhancements that will require technological innovations and applications. The share of water in agriculture is declining. India has about 107 million ha degraded land that can be effectively put to productive use. Our major concerns therefore, are with regard to water crisis; soil degradation and fatigue; genetic erosion; increasing biotic and abiotic pressures; inefficient energy management; inadequate markets and unfavourable trade; increasing knowledge lag; management and protection of farm produce; and harvest and post-harvest losses.

Resource Conservation Technologies that improve the input-use efficiency, conserve and protect natural resources need to be aggressively promoted. Given the future projections of ever-growing requirement of food, fibre, feed and fuel, the varieties/breeds will have to be tailor-made to suit the requirements of the farmers, consumers and processors. In this endeavour, a careful choice and responsible use of biotechnological tools and realistic assessment of their potential in crop and livestock improvement are essentially needed for new generation designer crop plants; bio-fortification of staple food crops; pre-breeding for resistance/tolerance to various stresses and microbial genomics in search of new genes.

In the area of agricultural human resource development, the State Agricultural Universities and institutions need to provide the best of academic inputs along with hands-on training to the students. The new programmes proposed include ICAR Post-Doctorate Fellowships, ASPIRE (Agriculture Sciences Pursuit for Inspired Research Excellence) Programme to attract young talent, National Agricultural Entrepreneurship Project. The ICAR is also proposing to start a new project "National Agricultural Education Project" which aims at improving and sustaining quality of higher agricultural education for addressing emerging challenges for livelihood security and sustainable development. Our institutions of agricultural education need to have critical state-of-the-art infrastructure such as laboratories, classrooms, farms and libraries.

There is a need to re-examine architecture of agricultural extension services so that the farmers are technologically empowered. Krishi Vigyan Kendras will be strengthened through novel e-extension and knowledge management programmes, well-developed technology demonstration farms, and training facilities for overall improvement of the extension system.

The Council has identified 27 priority areas to be addressed during the XII Five-Year Plan. These include Agri-Biodiversity Management; Genomics; Phenomics; Seed (Planting material, propagules, semen); Hybrids; Climate change (Rainfed agriculture/Dryland farming); Conservation agriculture; Water; Waste (Agro-waste, Municipal waste, Residues); GM Foods; Health foods; Feed and fodder; Fibre; Bio-fortification; Diagnostics and

vaccines; Precision farming; Farm mechanization and energy; Nanotechnology; High value compounds /Phytochemicals; Companion animals; Mammalian pests in agriculture; Mariculture; Aquaculture medicine; Agri-incubators; e-Extension and AKM; Socio-economic dimensions; Missions on Goat, Pig, Camel, Poultry. Further,

new initiatives include Borlaug Institute for Strategic Agriculture; National Institute of Abiotic Stress Management; National Institute on Biotic Stress Management; National Institute on Agricultural Biotechnology; Central Agricultural Universities in Bundelkhand, Barapani and Bihar; and NAARM, IIHR, CIAE, CSWCRTI of the ICAR as Deemed-to-be Universities. The appropriate mechanisms will be put in place for their implementation during XII Five-Year Plan.

These programmes would require application of Biotechnology, Information and Communication Technology, Space Science, etc. that are knowledge and capital intensive. The investments will have to be considerably increased from the present levels. Hon'ble Prime Minister of India, Dr Manmohan Singh, in his 83rd ICAR Foundation Day Lecture also highlighted the need to enhance investments in agricultural research and development by 2 to 3 folds by 2020. We are confident that successful implementation of the new programmes envisaged would help in finding technological solutions to various problems confronting agriculture sector for sustainable higher growth.



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WORKSHOPS, MEETINGS, SEMINARS, CONFERENCES, BRAINSTORMING SESSION

Prioritization of Plant Physiology and Biochemistry Research for XII Five-Year Plan

New Delhi, 6 August 2011. Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) chaired the inaugural session of the brainstorming session at Dr B.P. Pal Auditorium, Indian Agricultural Research Institute, New Delhi. He emphasized on the exploitation of photosynthetic efficiency, importance of source-sink relationship, enhancing nitrogen-use efficiency by introduction of *nif* genes from pulses to cereals and conversion of C3 into *nif*C4 plants in a network mode. He highlighted that for quantum jump in yield potential we have to increase the resource-use efficiency of the crop plants, i.e. to produce more-from-less. He emphasized that crop-improvement strategies must focus on increasing yield potential of crops through modification of physiological processes, such as high photosynthetic efficiency, efficient nutrient uptake, greater efficiency to accumulate storage reserves, terminal heat stress in wheat, minimizing post-harvest losses and manipulation of factors responsible for productivity with greater emphasis on quality with respect to the classical nutrition as well as the functional foods. He also announced that ICAR is ready to fund the long-term research of national priority. He further stressed that this can be achieved only through team based Network Programmes focusing on basic, strategic, applied and anticipatory research.

Main sessions were on

- Physiological manipulation for enhancing yield potential.
- Abiotic stress tolerance.
- Crop adaptations and resilience to climate change.
- Plant nutrition—physiological and molecular aspects.
- Physiology and post-harvest physiology of horticultural crops.
- Metabolic engineering for improved productivity and quality.



- Functional foods, nutraceuticals and nutrigenomics.
- Protein engineering applications.

Recommendations

- Evaluation of crop germplasm for physiological trait: phenomics of traits and identification of QTLs.
- Improvement of source-sink relationship and radiation-use efficiency to enhance yield potential; biological nitrogen-fixation in non-legume plants for enhancing productivity; and nutritional quality and yield in forage crops.
- Physiological and molecular manipulations for the improvement of terminal heat-stress tolerance in wheat.
- Enhancing yield potential of rice crop under low light intensity through physiological and molecular approaches; and elucidation of reproductive phase stress tolerance mechanisms in important crops (rice and other crops).
- Manipulation of ethylene-dependent and-independent pathways for enhancement of post-harvest life in horticultural crops.
- Enhancement of nutrient-use efficiency through development of crop plants with efficient ion transporters for uptake and remobilization.

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ICAR Directors' Conference

New Delhi, 15 July 2011. The ICAR Directors' Conference was held under the Chairmanship of Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) at NASC Complex, New Delhi; and was attended by all the Directors of ICAR Institutes and by all Senior Officers of ICAR (Hq).



Dr S. Ayyappan emphasized on to increase the public expenditure on agri-R & D from 0.5 to 1% of agri-GDP, to re-energize the public institutions (State Agricultural Universities and ICAR institutions), and urged policy-makers to create greater space for the private sector in the technology generation and diffusion etc. He reiterated that water crisis, soil

degradation and fatigue, genetic erosion, inefficient use of inputs in agriculture, limited use of improved management practices and post-harvest losses are the major causes of concern. Regarding the strength of the ICAR he mentioned that majority of agricultural researches are being carried out in public sector whereas in terms of seed production public sector has increased its stake from about 52 to 60%.

The Director General appreciated the efforts made by all the directors of the institutes to bring out the *Vision 2030* within the timeframe, and urged that the areas identified in vision must be reflected in the XII Five-Year Plan proposals. He also assigned the specialized area and tasks to all the SMDs for the future plan.

He proposed the secondment of the scientists vide which a scientist can go to work on regional stations and to other institutes for shorter period. This will be substantiated by funding in terms of contingences; this may also become part of EFC document.

Under National Initiative on Climate Resilient Agriculture (NICRA) the emphasis is to be given to the hill agriculture, dryland agriculture etc. To achieve this, mandate and objectives of the institutes working in these areas are to be modified. He also assigned the various platforms for future plans to

different working groups, such as Genomics; Seed (including Quality); Hybrids varieties; Climate Change; Conservation Agriculture; GM Foods; Health Foods; Feed and Fodder; Fibre; Biofortification; Diagnostics and Vaccines; Precision Farming, Farm Mechanization and Energy; Nanotechnology; High-



value Compounds/Phytochemicals; Water; Waste (Solids- Agro-waste, Municipal); Secondary Agriculture (Processing and Value-addition); Missions on Goats; and E-Extension and AKM.

Director, CIFA, pointed out that freshwater aquaculture is a sunrise sector, growing at about 7% level. But the factor crippling the industry is poor-quality seeds. He suggested that broodstock upgradation and seed quality assurance/certification may be included in ICAR platforms. The Director, NRC on Seed Spices requested to have a mini-mission on seed spices as the demand for seed spices may increase by 10 times in coming years. Director, NRCPB also requested to include NRCPB in the genomic Platform. DDG (Hort.) mentioned that the platform on seed may be broadened to include horticultural seeds and planting materials.

Following actionable points emerged during discussions:

1. Database of the projects (both institute and externally funded) may be completed on priority to check the duplication of research within a month's time.
2. Some projects are running for several years without any logical finding; these need to be revamped. PME cell at the institute has to be strengthened by assigning the duties to young scientists.

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National Consultation on Gender Perspective in Agriculture

New Delhi, 9 August 2011. The Directorate of Research on Women in Agriculture (DRWA) organized a two-day National Consultation on Gender Perspective in Agriculture at NASC Complex, New Delhi from 8 to 9 August 2011. Smt D. Purandeswari, Union Minister of State for Human Resource Development was the Chief Guest. She said, 'Migration of rural men has put the pressure on women agricultural labour in rural areas. Their children need more nutritional and health care. Holistically revisiting agricultural policy can solve these problems'. Lauding the role played by the ICAR, she said that agricultural research should be centered on the problems faced by women. She also deliberated upon the credit facility for women farmers. Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) emphasized on better working conditions and share in income and benefits for women in agriculture. 'Food security along with nutritional, health and emotional security are another aspects for development', he added.

The two-day consultation consisted of four technical sessions—Envisioning gender research in agriculture, Setting research priorities for DRWA, Home science in changing agricultural scenario, and Employment opportunities in home science were the major themes of discussion.

Recommendations

The major recommendations emerged out of the discussion in National Consultation are:

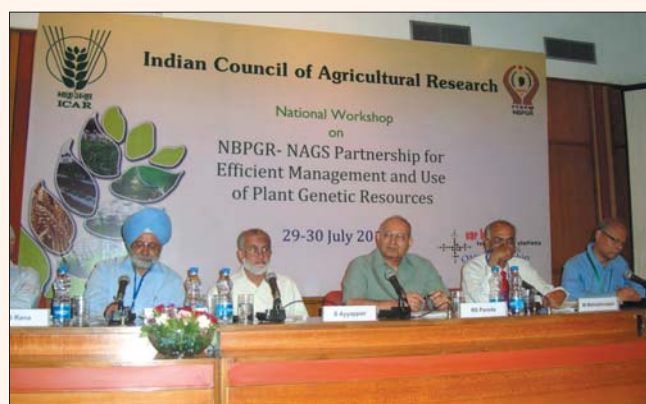
- Address gender issues by engendering agricultural research for inclusive agricultural growth and development through equal partnership between men and women.
- Concerted efforts are required to make the R&D professionals gender sensitive and oriented to create an enabling environment for better appreciation and understanding of the gender issues and developing gender encompassing R & D strategies, approaches and institutional convergence to attain sectoral, human development and other economic goals.
- Continuous research is needed to assess the gender based outcomes of changes in governance and contribute to more informed decision making. This calls for a strong linkage between agricultural research and development institutions for strengthening gender perspective in research and development programmes.
- There will be greater demand for mainstreaming environmental concerns in development agenda, climate smart agriculture and measures to mitigate adverse impact on agriculture and the people involved. It is important to add gender perspective in all these programmes.

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Workshops

Efficient Management and Use of Plant Genetic Resources

New Delhi, 29 July 2011. A two-day National Workshop on NBPGR-NAGS Partnership on Efficient Management and Use of Plant Genetic Resources was organized from 29 to 30 July 2011 at the National Bureau of Plant Genetic Resources (NBPGR), New Delhi. It was attended by over 70 participants representing various ICAR institutes and State Agricultural Universities, collectively known as National Active Germplasm Sites (NAGS). Dr R.S. Paroda, Chairman, Haryana Farmers' Commission and TAAS, inaugurated the workshop as Chief Guest, and Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) presided over the inaugural session.



The workshop focused on strengthening national networking on acquisition, conservation, evaluation, strengthening database on plant genetic resources information, utilization of crop germplasm, and policy issues ensuring harmonized PGR management. Germplasm management, a huge task particularly in the context of richness of genetic resources and agro-ecological diversity in the country, can be efficiently done only in a coordinated manner by networking with the ICAR institutes, State Agricultural Universities and other stakeholders with the NBPGR playing a pivotal role.

Dr R.S. Paroda, in his inaugural speech, emphasized on the need for creating an AICRP on Evaluation and Use of Plant Genetic Resources at the Council for addressing the efficient management and efficient utilization of PGR as a national network. He further emphasized on integrating all National Bureaux dealing with plant, animal, fish, microbe and insects and creating a high level advisory body for various policy decisions and monitoring of country's genetic resources. Dr Ayyappan emphasized on strengthening pre-breeding/genetic enhancement initiatives and enhanced sharing of genetic resources for use in crop improvement at national level.

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Pulsed-Field Gel Electrophoresis

Old Goa, 23 August 2011. A national workshop on 'Molecular sub-typing of microbes using Pulsed Field Gel Electrophoresis (PFGE)' was organized at the ICAR Research Complex for Goa, Old Goa from 20 to 23 August 2011, for the benefit of teachers/researchers/officers of Veterinary, Medical and Agricultural Universities, private research and development organizations having a background in molecular microbiology. The workshop was inaugurated by Dr Earnest D'Costa, Deputy Director, Department of Animal Husbandry and Veterinary Services, Government of Goa. Dr N. P. Singh, Director of the Institute, presided over the function. At the outset Dr S. B. Barbuddhe, Coordinator of the workshop, narrated the theme of the workshop and welcomed the participants. Dr N. P. Singh spoke about the research activities of the Institute and importance of organizing such events. Dr D'Costa appealed the participants to take full advantage of such workshops for enriching their knowledge. In recent years, the use of pulsed-field gel electrophoresis (PFGE) in the molecular biology area has been subject to much research.

PFGE may be used for genotyping or genetic fingerprinting. It is commonly considered a gold standard in epidemiological studies of pathogenic organisms.

Lectures explaining the other techniques of molecular detection, sub-typing and analysis were delivered. The experience enriched the knowledge and built a confidence among the participants besides broadening their research aptitude. The participants can impart/disseminate the knowledge gained here to their colleagues and students in their respective state agricultural universities/institutes.

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Portable FRP Carp Hatchery Technology

Bhubaneswar, 13 July 2011. The Central Institute of Freshwater Aquaculture organized National Workshop on 'Portable FRP Carp Hatchery Technology' in collaboration with AICRP on Application of Plastics in Agriculture from 11 to 13 July 2011. The institute developed a fibreglass reinforced plastic hatchery, as an alternative to concrete hatchery, for production of healthy carp seed. The hatchery system consisting of one breeding pool; one hatching pool; and egg collection chamber and an over-head storage tank, can produce 10 lakh carp spawn per operation. This hatchery is easy to install, operate and it has an added advantage that the unit can be carried to different locations as per the requirement of the farmer. This technology is of immense help in producing quality fish seed and ensuring availability

of adequate quantity fish seeds to small and marginal farmers all over the country. Till date 126 units have been established in 25 states and the performance of this technology is reported to be encouraging.

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Exploring the New Horizons in Nutrition

Izatnagar, 25 August 2011. A one-day Business Opportunity Workshop with the theme of Exploring the new horizons in animal and avian nutrition, jointly organized by the Division of Animal Nutrition and Zonal Technology Management and Business Planning and Development Unit was held at the Indian Veterinary Research Institute. The main aim of the workshop was to fill the gap between corporate houses and government Research and Development activities, wherein technology leaders from ICAR institutes of North Zone-II and representatives of different organizations participated.

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Forecasting Technological Needs

Cochin, 7 July 2011. One-day Workshop-cum-Brainstorming Session on 'Forecasting Technological Needs for fishing and fish processing sectors in India' was jointly organized at Cochin by Indian Agricultural Statistics Research Institute (IASRI), New Delhi and Central Institute of Fisheries Technology (CIFT), Cochin. The workshop was organized as part of the National Agricultural Innovation Project on 'Visioning, Policy Analysis and Gender (V-PAGe)' — Subcomponent-II: 'Technology Forecasting'. The workshop was organized to provide a platform to fisheries scientists from different disciplines and other major stakeholders to delineate broad contours of future technological needs for sustainable and development oriented fishing and fish processing sectors of the country.

The programme was attended by about 100 delegates representing the fisheries research institutions, state department of fisheries, MPEDA, NGOs, fisherman associations, fish processing industry and representatives from the print and electronic media.

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Advancements in Purse Seine Fishing in India

Cochin, 25 July 2011. An awareness creation workshop on Advancements in Purse Seine Fishing in India was organized on 25 July 2011, by Zonal Technology Management - Business Planning and

Development (ZTM-BPD) Unit, South Zone at Central Institute of Fisheries Technology, Cochin. Purse Seining is one of the most efficient and advanced commercial fishing methods. About 50 purse seine fishermen attended the workshop.

Dr Leela Edwin, Member-Secretary, ZITMC presided

over the function. During the workshop Dr P. Pravin, Senior Scientist, CIFT, explained about the design of purse seine net and SONAR and demonstrated the use of power block which is used to operate purse seine net more efficiently and to reduce the drudgery of the crew on board.

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Meetings

Dignitary Appreciated Efforts of NDRI

Karnal, 13 September 2011. Thakur Richh Pal Singh, Vice Chairman (MoS), Jammu and Kashmir State Advisory Board for Development of *Kisan* visited National Dairy Research Institute (NDRI), Karnal. While interacting with the scientists and senior faculty of the NDRI, he conveyed the greetings from dairy farmers of J&K State. He said that we are looking forward to develop Jammu region into a milk-shed area and sought cooperation from NDRI in the

breed improvement, better reproductivity, and conversion of milk into value added products. Mr Singh visited the Model Dairy Plant, the Experimental Dairy, Animal Biotechnology Centre and Dairy Cattle Section of the Institute. He was highly impressed with the technologies developed by NDRI scientists for low cholesterol ghee, machinery for indigenous dairy products, cloning of buffalo and functional dairy foods.

He was welcomed by Dr A. K. Srivastava, Director, NDRI who elaborated the scenario of dairy development, milk production, and challenges and

Long Term Commitment and Partnership needed for Desired Change in Agriculture

New Delhi, 17 September, 2011. The Indian Council of Agricultural Research Interaction Meet with NGOs and Farmers Entrepreneurs was inaugurated by Prof. R.B. Singh (President, National Academy of Agricultural Sciences) and said, 'Creating opportunities and enabling environment for transforming the conditions that perpetuate poverty and deprivation is an important task that will be better attained in long- term. Therefore, the linkages



should move ahead of a loosely defined collaboration or contractual agreement between Public-Private-NGO sector and transcend to cover a whole range of organizational relationships with a sense of long term commitment to genuinely contribute to the processes in agricultural sector to accomplish the desired change'. He described storage facility and gap between farming and non-farming income as

emerging challenges for Indian agriculture. While lauding the role played by the ICAR, he urged agricultural scientists to work hard for food security and elimination of malnutrition.

Dr S Ayyappan (Secretary, DARE and Director General ICAR) called for more partnerships with NGOs across the country. He said, 'there are 0.6 million villages in the country and it is difficult to reach every village. Therefore, we are looking for partnership with NGOs. The Private-Public Partnership in agriculture became profit in agriculture, prestige in agriculture and progress in agriculture. NGOs are working at grassroot level and can help to achieve this objective'. Dr Ayyappan stressed upon the need for work in emerging areas of challenges-quality seed, input management, quality plant material, farm mechanization and plant health monitoring.

Shri Ramashankar Rajbhar, Member of Parliament and Member of the ICAR Society urged Non-Government Organizations and farmers to create awareness about the effects of climate change on Indian agriculture. He also suggested for more use of local languages for dissemination of agricultural information. Officials from ICAR and office bearers of different NGOs across the country were participated in the Interaction Meet.

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opportunities in livestock sector at national level. He informed that India produced only 17 million metric tonnes of milk per year during 1964-65 and now it has reached 113 million metric tonnes taking India to 1st rank in the global milk production. Dr. Srivastava briefed the Minister about the research project on cloning of Pashmina goats being pursued at Sher-e-Kashmir University of Agricultural Sciences and Technology (K), Srinagar in collaboration with NDRI. The programme was coordinated by Haryana State and the dignitary also visited Sulatn Fish Farm, village Butana (Karnal) and grain market at Shahbad Markanda apart from NDRI.

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Annual Review Meeting of Seed Production in Agricultural Crops

New Delhi, 19 September, 2011. Two-day Annual Review Meeting of the ICAR Seed Project, 'Seed Production in Agricultural Crops', for 2010-11 was inaugurated by Dr S. Ayyappan (Secretary, DARE and DG, ICAR) at Dr B. P. Pal Auditorium, Indian



Agricultural Research Institute, Pusa, New Delhi. Dr Ayyappan pointed out that we need to upgrade our production in terms of quality to play an important role in seed trade at national and international level.

Dr S. K. Dutta, DDG (Crop Science) read key note address. He further stressed that genetic purity, higher vigour and nutrient profile must

be ensured through SNP marker to ensure the genetic purity and vigour of seed lot.

Action Taken Report

The ICAR Seed Project aims to strengthen capacity building for enhanced quality seed production of agricultural crops. The major achievements during the last four years were the record production of different classes of quality seeds including nucleus, breeder, foundation, truthfully labeled seeds and planting material. The infrastructure created at the cooperating centres includes irrigation facility, farm implements, farm developments and seed processing units.

The nodal officers/ Directors of Research of different State Agricultural Universities/ICAR institutes have

also presented their major achievements and constraints. Apart from these the needful issues to be considered for the XII Plan has been presented by the various nodal officers involved in the Project. The meeting was attended by around 100 delegates involving Directors of Research from various state universities, Directors from the ICAR institutes and nodal officers from 56 cooperating centres, across the country.

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E-Linkage at KVK

Ujjain, 31 August 2011. To strengthen the existing linkages among the 200 Krishi Vigyan Kendras a state level E-linkage Review Meeting was held at Krishi Vigyan Kendra, Ujjain, in which 22 KVKs representing IGKV, Chhattisgarh, JNKVV, RVSKVV, NGO and CIAE (ICAR), Bhopal participated. Dr V. Venkatasubramanian (Chief Guest) suggested the delegates to emerge out with innovative ideas and modules, hosting of websites of all the concerned Krishi Vigyan Kendras which should invariably bear the contents relating to location-specific demands, secondary agriculture, marketing linkages and also share the technologies with one another. E-connectivity should aim to fulfil the needs of farmers with small and marginal holdings. Dr A.K. Singh, Zonal Project Director, Zone IV hoped that farm mechanization through this project will help in bringing second Green Revolution in eastern India and informed that National Initiative on Climate Resilient Agriculture project has been initiated in 11 districts of Uttar Pradesh.

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Rural Feed Processing Unit established at Nellore by NRC on Meat

Nellore. A Rural Feed Processing Unit (RFPU) has been successfully established at Chennur, Gudur mandal, Nellore district, Andhra Pradesh by National Research Centre on Meat, Hyderabad under National Agricultural Innovation Project, 'Value chain for clean meat production from sheep'. The RFPU was established under the objective, 'Augmenting quality meat and byproducts production through nutritional intervention and growing ram lambs to larger weight'. Complete feed is being produced using agricultural byproducts (maize straw, groundnut haulms and blackgram straw) and concentrate ingredients (maize grain, soybean meal, rice polish etc). Ratio of byproducts to concentrate ingredients is being maintained at 50:50. Unit is producing complete feed of about 5 tonnes per month since April 2011 and about 400 ram lambs are being fed with complete feed in the farmers' premises. Initial results (0 - 45 days) have shown that the ram lambs

fed with complete feed recorded average daily weight gain of 124 g, whereas the control animals reared on grazing average daily weight gain of 49 g. Farmers were also encouraged to grow the ram lambs to larger weight (up to 25-30 kg) instead of harvesting in underweight (20 kg and below) stage, which is a common practice among sheep farmers. Acceptability of the feed was very good among lambs and farmers involved in the project are extremely happy owing to high growth rate of lambs and saving on labour, as lambs need not be taken out for grazing.

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NICRA launched at KVK, Kushinagar

Kushinagar, 2 September 2011. Launching Workshop of National Initiative on Climate Resilient Agriculture (NICRA) was organized at Barwawapatti (Amwakhas Gram Panchayat) of district Kushinagar, Uttar Pradesh. Amwakhas village is situated near river bank of Gandak (Narayani) which originates from Nepal and causes severe floods every year from the water drained from Balmiki barrage from Nepal during July-September. While launching NICRA, Dr K.D.Kokate, Deputy Director General (Agricultural Extension), ICAR, emphasized upon to take up efforts to demonstrate best and low-cost technologies for flood-stricken areas. He suggested to organize demonstrations on resource conservation technologies of paddy and wheat and other technologies having potential of livelihood security.

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Agricultural Entomology for the 21 Century: The Way Forward

Bengaluru, 25 August 2011. The Chief Guest, Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) inaugurated a two-day National Meeting on Agricultural Entomology for the 21 Century: The Way Forward at National Bureau of Agriculturally Important Insects.

Dr Ayyappan emphasized upon the important role of entomology in sustaining and strengthening food security in the country. Realizing the importance of

research on insect pests, the ICAR upgraded the Project Directorate of Biological Control to National Bureau of Agriculturally Important Insects recently with renewed thrust and emphasis on emerging threats and challenges. Insect pests account for nearly 18% of crop losses, which is significantly higher considering the constraints we are facing in feeding the burgeoning population, he added. Hence, appropriate and eco-friendly strategies need to be developed on priority basis.

Dr Ayyappan emphasized upon the institutional collaboration between the ICAR institutes for capacity building in this important area of research. Multiplication and distribution of parasitoids may be taken up by KVKs across the country, he suggested. The National Meeting was a brainstorming exercise to identify the crucial areas for frontier research in entomology during forthcoming XII Plan. There is a need to take the stock of existing scenario, identify the missing links and plan for the future to meet challenges in agricultural entomology and related disciplines.

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CIFA hosts 4th 'Farmers First' Committee meeting

Vijaywada, 13 August 2011. The Central Institute of Freshwater Aquaculture (CIFA), Bhubaneshwar, in collaboration with Zonal Project Directorate, Kanpur, hosted the 4th meeting of 'Farmers First' Committee at Vijaywada.

Dr P. Jayasankar (Director, CIFA) said that 'Farmers First' seeks to strengthen Farmer-Scientist linkage with focus on innovation, feedback, stakeholder participation and new institutional configuration. The premise of Farmers First is that farmer should be in the driver's seat in matters related to agricultural development. Dr K.D. Kokate, Deputy Director General (Agric. Extension) said while addressing the gathering that Farmers First is not going to be a transfer of technology (Transfer of Technology) project. It would enable farmer-led research which in the long run would help empower farming community.

Over 100 persons including farmers, scientists, government officials, bankers and NGO officials attended the meeting. There is a growing realization that the existing extension system is not adequately responding to the emerging demand of the farmers. Many a times research system is not getting adequate feedback to plan and conduct demand-driven research, resulting in a huge gap in the quality of research output and what is required at the farm level. Farmers First project seeks to bridge this gap, informed Dr A.K. Singh, Zonal Project Director.

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Awareness Meet on the Winter Culture of Banana Shrimp in Gujarat

Navasari, 28 July 2011. An awareness meet was held at Danti farm of Navsari Agricultural University, Gujarat on the winter culture of the banana shrimp *Fenneropenaeus merguensis*. This meet was held to review the results of the earlier winter crop of banana shrimp conducted at Danti farm during November 2010 - April 2011. It is a new avenue for the shrimp farmers of Gujarat to diversify the banana shrimp during winter to get a reasonable crop when tiger shrimp growth is slow in low temperature conditions. Chennai based Central Institute of Brackishwater Aquaculture (CIBA) considers this development as successful example of its outreach programme taken up in collaboration with Navsari Agricultural University. Altogether 16 aqua-farmers from Danti and Chijgam in Navasari and Olpad in Surat districts participated in this meet. Each farmer intends to go for banana shrimp culture in the forthcoming winter season with stocking minimum of 2 ponds in each of their farms as it would be economically remunerative. It is expected that at least 22 ha will be under winter culture and the seed requirement will be around 33 lakh. The technical details and the management measures to be followed during the crop were explained to the farmers.

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Preparing Roadmap for Seed Research in India



New Delhi, 1 August 2011. The Consultation Meeting on 'Preparing Roadmap for Seed Research in India' was organized under the Chairmanship of Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) at the IARI, New Delhi. He emphasized on developing the world-class referral lab in India to address all issues related to seed quality. The issues related to seed policy, seed industry development were highlighted to bring in harmonization in seed trade for a vibrant seed industry.

Dr S. Ayyappan said that new Seed Bill, which would help streamline the supply of quality seed on new plane, is going to be the harbinger of seed-quality assurance to the farmers and seed growers. He added that the roadmap for seed research in current decade should encompass a strategy that connects the status of seed research till date, based on the background information and analysis. This exercise needs to grow on the edifice of defined strategic planning framework, milestones and deliverables on a given timeframe to address all the envisaged goal and vision of providing best quality seeds, and requisite practical technologies for seed grower, industry and other stakeholders. This can be achieved only through team based network programmes focusing on basic, strategic, applied and anticipatory research, including public-private partnership.

Recommendations

- To develop and promote a shared vision and consensus for action on seed science and technology
- To develop network projects on frontier areas of seed science and technology encompassing: (i) Documenting knowledge generated so far across NARS in seed research; (ii) Seed production and protection; and (iii) Seed quality assessment and enhancement
- Generation of information to encourage and debate to influence action by SAUs, NSP, and AICRPs to serve the cause of seed science and technology
- To usher in an environment to create India as a hub of excellence in seed research, production and international seed trade.

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A Field Day-cum-interaction

Bundi, 2 September 2011. The Krishi Vigyan Kendra, Bundi organized a Field day-cum-interaction meeting at Bhairunpura Ojha, Bundi district. In all 25 frontline demonstrations (FLDs) on *moong* with variety SML 668 was laid out during 2011 to motivate farmers for augmenting the productivity of pulses crop in the district under RKVY. Through these FLDs, improved production practices along with yield potential of variety SML 668 of *moong* were demonstrated at farmers' field. During the interaction various queries of farmers regarding production of *moong* were resolved by scientists of the KVK. Farmers were urged to incorporate pulse crops in their cropping system.

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Animal Husbandry Directors' Meet

Izatnagar, 31 July 2011. A one-day meeting of State Animal Husbandry Directors under National Initiative on Climate Resilient Agriculture Project was held under the Chairmanship of Professor M.C. Sharma,

Director, IVRI. He informed that the present meet is aimed at developing database on animal disease in relation to climate change and climatic variability in the country and also to identify traits in our indigenous livestock resilient to different climate conditions. The meeting was attended by 13 Animal Husbandry Directors belonging to Sikkim, West Bengal, Chhattishgarh, Bihar, Goa, Puducherry, Punjab, Madhya Pradesh, Maharashtra, Gujarat, Delhi, Uttarakhand and Uttar Pradesh.

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Zone VII KVKs reviewed

Bilaspur, 6 August 2011. Dr Charandas Mahant (Union Minister of State for Agriculture and Food Processing) reviewed the activities and performances of 16 KVKs functional in the Chhattisgarh and belong to Indira Gandhi Krishi Vishvidyalaya, Raipur under ZPD Zone VII. He emphasized that to realize the Second Green Revolution in the state, there is need of an institute for rice research, as the state has great potential for the rice production. This would help in enhancing the livelihood and quality of life of the tribal farmers. He also discussed about the progress of the establishment of the four new/additional KVKs in the

state. Dr Mahant asked Vice-Chancellor, IGKV, Raipur to prepare and submit a proposal for the desired rice research institute in the state for connecting the farmers directly to this centre to reap the maximum benefits of the research output.

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Interface Meet between Scientists and Veterinary Officers

Izatnagar, 6 August 2011. A one-day interface meet between scientists of Indian Veterinary Research the Institute, and Veterinary Officers of Bareilly, Moradabad and Agra regions was held under the Chairmanship of Professor M.C. Sharma(Director,IVRI). The meeting was organized by the Joint Directorate of Extension Education, IVRI wherein, 58 field veterinary officers from Agra, Moradabad and Bareilly regions participated. Main focus of the interface meet was to decide the mode of action for developing suitable technologies and to make available these technologies at the door steps of the end-users to provide maximum benefit to the livestock owners and farming community.

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International Linkages

International Brainstorming Meet on Recent Advances in Fish Reproductive Physiology

Bhubaneswar, 16 August 2011. The Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar, organized an International Brainstorming Meet on Recent Advances in Fish Reproductive Physiology.

Dr A.D. Diwan, UGC Emeritus Professor, urged that scientists and industry to come together and find a solution for early puberty in fish. Dr S. S. Giri, Head, Fish Nutrition and Physiology Division, CIFA described that fish reproduction is influenced by nutrition to a great extent. Quantity and quality of egg and larval survivability are determined by feed. He informed that CIFA has developed an improved diet "CIFABROOD" for carp for healthy seed production.

Major issues discussed were: Diversity of fish habitat; Diversity in fish reproductive behaviour; Sexual hermaphroditism; Ovoviviparity; Melatonin in oocyte maturation; Photoperiod in gonadal maturation ; Gene expression during testis maturation and spermiation; and Use of balanced feed to enhance maturity, fecundity and larval survival. Participants included foreign experts from France, Australia and

Israel. Emerging global crisis like climate change does impact reproduction of fish including shifting of breeding season. This has tremendous implication for not only fish production in the country but also in the livelihood of several million people in India, said Dr P Jayasankar, Director, CIFA. The experts stressed on the application of new tools - molecular biology, nano-science etc., in understanding reproductive physiology.

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SAARC Training Programme on Drought Management

Hyderabad, 29 July 2011. Drought-prone areas have the potential for harvesting and conserving water by following an integrated water resource management, optimum utilization of water and using micro-irrigation systems. Drought-management measures are always related to the efficient water resources management. In this context, the SAARC Disaster Management Centre, New Delhi, in collaboration with the Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad, organized a two-week training programme (from 18 to 29 July, 2011) on the Techniques of Water Conservation and Rainwater Harvesting for Drought Management.



Member of Andhra Pradesh Legislative Assembly and Vice-Chairman, National Disaster Management Authority, Shri M. Shashidhar Reddy, inaugurated the training programme on 18 July as Chief Guest. Trainees from India, Bangladesh, Sri Lanka, Bhutan, and Afghanistan participated in this programme. The training programme was focused on *in-situ* and *ex-situ* conservation of water, effect of climate change on water availability, design of water harvesting structures, groundwater recharge, farm machinery for soil and water conservation and watershed management practices. A compendium of training material was released and put on website (www.crida.ernet.in).

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IVth Indian Trade Fair 'INDEXPO 2011'

Muscat, 22 September 2011. The 3-day IVth Indian Trade Fair 'INDEXPO-2011', organized at Oman International Exhibition Centre, was inaugurated by H. E. Sheikh Abdullah bin Nasser Al Bakri, Minister of

Manpower, Sultanate of Oman, on 20 September 2011. This has been organized with a view to provide an opportunity for Indian organizations and entrepreneurs businessmen to showcase their products and technologies to the Omani market and to exhibit the technical capabilities of the Indian industry. The exhibition is supported by Directorate General for the Development of Small and Medium Enterprises, Ministry of Commerce and Industry, Oman, Oman Chamber of Commerce and Industry and Department of Commerce, Ministry of Commerce and Industry, Government of India. The Federation of Indian Chambers of Commerce and Industry (FICCI) is one of the partners in IVth INDEXPO-MUSCAT, 2011 exhibition. From the ICAR, Dr H. P. Singh, Deputy Director General (Horticulture), Dr T. P. Trivedi, Project Director and Mr S.K. Joshi, Business Manager (DKMA) explored commercial technologies and knowledge products in this trade fair relevant to the region. The agriculture was one of the identified sectors at Muscat. Both the countries showed hope towards the enormous opportunities in both countries which are to be explored through Trade Fair.

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Success stories

Entrepreneurship development programme in meat processing

A press report titled "chicken hot business" after the visit of the press reporter to exhibition stall of the NRC on Meat at National Institute of Rural Development (NIRD) and discussion with the Director has resulted a large response from interested entrepreneurs to learn more about chicken products processing. An initial awareness programme was conducted to explain in detail about technologies available for value-added meat products. And based on the response 5 batches of 3-day paid (₹ 1,000 per participant) hands-on training programmes on small-scale chicken products production, were conducted in which more than 100 participants including around 35 women participants were imparted training. The trainees have acquired the skills for production of 10-12 value-added chicken products, namely emulsion meat products (sausages, nuggets, patties, meat balls, idlies, croquettes etc), restructured meat products (bites), enrobed meat products and cured and smoked meat products. Each training programme had an introductory presentation followed by products processing and evaluation. All the programmes were ended with interaction and presentation of a CD of their 3-day efforts and a certificate.

The participants were informed about the further collaboration with the NRC on Meat for entering into

an MoU/ Agreement to utilize the NRC Meat facilities for test marketing of products and guidance for establishing a small-scale meat products processing unit. Eight entrepreneurs have already signed MoUs and initiated their activities, and few more are in the pipeline. The key factor for getting such a successful response from entrepreneurs was the good presentation of NRC on Meat technologies in a popular daily newspaper. The NRC on Meat is contemplating similar efforts for popularizing its much valued simple and low-cost technologies among entrepreneurs for development of processed meat sector with many benefits. A local language bulletin and a book on *Value added chicken products: an entrepreneur guide* were also brought out for facilitating better understanding of entrepreneurs.

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Large-Scale Farming of Pearl spot

Chennai, 2 July 2011. A facility of seed supply of the fish, pearl spot (*Etroplus suratensis*) by breeding them under controlled conditions was inaugurated by Shri Basudeb Acharia, Chairman, Parliamentary Committee on Agriculture at Muttukkadu Experimental Station of the Central Institute of Brackishwater Aquaculture (CIBA).

The CIBA has developed an innovative technology for easy propagation of the pearl spot fish. A captive

broodstock of pearl spot fish in cages from diverse genetic pool (from Pulicat and Muttukadu in Tamil Nadu and Kumarakam in Kerala) was established at its Muttukadu Field Centre from which a simple and effective facility for consistent seed production was developed. An average of 1,200 juveniles can be obtained from a pair of parent fishes. The “*Matsya Keralam*” Scheme has taken up a massive programme for the farming of brackishwater fishes on a large scale and owing to this, demand for the quality pearl spot fish juveniles has increased. The hatchery produced seeds of pearl spot were supplied to Women Self-Help Group fish farmers from Kerala.

The Women Self-Help Group representatives from Thodiyoor, Kaikulangara, Karichira, Parinadu, Kalluvathakal, Kottiyam, Sakthikulangara and Punalur in Kerala received the seed. The CIBA, Chennai has been approached by the Kerala Government to extend its know-how and expertise with regard to this technology for seed production and grow-out of pearl spot fish, as well as in their other programmes to promote pearl spot fish production in the state. Efforts are also being made to promote pearl spot fish culture in derelict inland saline wetlands of Karnataka.

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CMFRI achieves maiden success in the finfish breeding of pompano

The silver pompano, *Trachinotus blochii* is one of the topmost tropical finfishes, mainly owing to its fast growth rate and high market demand. The Central Marine Fisheries Research Institute initiated the aquaculture research on pompano since 2008 and the first successful broodstock development, induced breeding and larval production is now successfully

the practise is of high commercial value. In the Indian domestic market the current price of pompano is about ₹ 200/kg.

The present success in the pompano breeding is a major step in the development of seed production technology. However, standardization of commercial



accomplished. It can be considered as a milestone towards the development of pompano aquaculture in the country.

Silver pompano is caught only sporadically in the commercial fishery and hence its natural availability in the sea is rather scarce. It is a much sought after species and hence the demand can be met only through aquaculture. The farming of pompano can be successfully carried out in ponds, tanks and floating sea cages. Since the species is able to acclimatize and grow well even at a lower salinity of about 10 ppt, it is suited for farming in the vast low saline and brackishwaters of our country besides its potential for sea cage farming.

It is evident that any aquaculture venture can be popularized only if proper technology is available and



level seed production technology is the next urgent step. Hence investment on infrastructure for broodstock development and state-of-the-art hatchery should be given topmost priority. It is felt that pompano is a potential mariculture giant which has vast domestic and global business prospects.

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Celebrations

ICAR Foundation Day and Award Ceremony

New Delhi, 16 July 2011. Hon'ble Prime Minister of India, Dr Manmohan Singh, delivered lecture on 83rd Foundation Day Lecture of the Indian Council of Agricultural Research in which he quoted that broadbased, inclusive and sustainable Second Green Revolution is needed. He also presented productivity awards to Chief Ministers of India who belonged to winner states.



Best Performing States in the Foodgrains Production (2010-11) was awarded by the Prime Minister of India for achieving highest total production and production in individual crops during the period. Instituted by the Ministry of Agriculture, the award will be given to five states each in the total foodgrains category and individual crop category. The ceremony was also attended by the Union Minister of Agriculture and Food Processing Industries Shri Sharad Pawar; Union Minister of State for Agriculture, Food Processing Industries and Parliamentary Affairs Shri Harish Rawat, and Union Minister of State for Agriculture and Food Processing Industries Dr Charan Das Mahant.

ICAR Award Ceremony



The Union Minister of Agriculture and Food Processing Industries, Shri Sharad Pawar, congratulated the awardees and their families for the excellence, and said that the reward system within ICAR will contribute in fair measure to improve the work performance of

the scientists and create an environment of healthy competition among individuals, groups and institutions.



Shri Harish Rawat, Union Minister of State for Agriculture, Food Processing Industries and Parliamentary Affairs and Dr Charan Das Mahant, Union Minister of State for Agriculture and Food Processing Industries complimented awardees for their noteworthy contributions.



Dr S. Ayyappan, Secretary, DARE and Director General, ICAR welcomed dignitaries and awardees. Publications and CDs on agriculture and allied sciences published by the ICAR institutes and Directorate of Knowledge Management in Agriculture were released by the dignitaries.

The awards were given away to 85 awardees in 17 categories such as researchers, institutions, progressive farmers, farm journalists, teachers,



authors, women scientist etc. Besides, the ICAR's first Norman Borlaug Award and the first ever Plant Genome Savior Community Award (2009-10) were also given away.

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Nation celebrates Rinderpest eradication

New Delhi, 23 August 2011. The ICAR organized National ceremony on Rinderpest eradication at NASC, Pusa. Earlier 192 member countries adopted the resolution in Rome during the 37th FAO Conference making it the first animal disease being eliminated from the planet in response to Rinderpest eradication. The ceremony was presided over by Shri Rudhra Gangadharan, Secretary, Department of



Animal Husbandry, Dairying and Fisheries and Chaired by Dr S. Ayyappan, Secretary (DARE) and Director General (ICAR).

The impact of Rinderpest eradication has yielded a major economic benefit to the country irrespective of owners of livestock sector particularly small and landless labourers which has indeed enhanced the food security. Now, livestock production around the globe has become safer and the livelihoods of millions of livestock farmers are protected.

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IIPR celebrated its Foundation Day

Kanpur, 5 September 2011. The XIX Foundation Day of the Indian Institute of Pulses Research (IIPR) was celebrated with great fervour and gaiety. Dr B.B. Singh, Assistant Director General (Oilseed and Pulses) was the Chief Guest and Dr Masood Ali, former Director of IIPR, was Guest of Honour on the occasion. Dr Singh stressed on developing varieties capable of giving high yield in extreme high and low temperature. He called for harnessing the rich biodiversity with modern tools of biotechnology for gene transfer and genetic improvement.

Dr N. Nadarajan, Director of the Institute, presented a detailed resume of research programmes, activities and achievements made during 2010-11. He informed the house that during the year four new varieties of *kabuli* chickpea, mungbean, urdbean and fieldpea, developed by the Institute, have been released for

cultivation in different parts of the country. He commended the progress made in developing multiple resistance against major diseases. Dr Nadarajan said that efforts are going on to develop pod borer-resistant varieties of chickpea and pigeonpea. The IIPR is collaborating with several international institutes and successfully pursuing various research programmes.

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Tenth Foundation day of NRC on Pig

Guwahati, 4 September 2011. The 10th Foundation Day of NRC on Pig, Rani, Guwahati was celebrated with a great enthusiasm. The Vice-Chancellor of Assam Agricultural University (AAU), Jorhat, Dr K.M. Bujarbaruah, Chief Guest for the occasion, appreciated the activities undertaken by the institute and hoped that the institute will continue in the



similar way in future too. To commemorate the foundation day, a farmers' day was organized where about 200 farmers from nearby areas participated in various activities. An exhibition was also organized with the help of KVK, Kamrup, AAU and KVK, Dudhnoi to showcase the technologies (to the farmers) developed by both the KVKs. A pig show was also organized on the day and the farmer whose pig was judged as the best one was awarded with a prize and a certificate of appreciation. A Farmers-Scientists interaction session was also held to address the problems faced by the farmers.

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National Fish Farmers' Day

Bhubaneswar, 10 July 2011. The Central Institute of Freshwater Aquaculture (CIFA) observed National Fish Farmers' Day to mark the discovery of induced breeding of fish. Besides, the CIFA also organized Aquaculture Innovators' Meet. "Farmers often experiment with their resources and available technological options for maximizing outputs through trial and error and come up with several locally



tested practices, which became highly popular in that area,” said Dr P. Jayasankar, Director, CIFA. He added that these valuable ideas and technologies remain unnoticed which need to be recognized and shared among farmers of similar agro-climatic regions. The innovators can equally contribute in planning, research and dissemination of technology and development. He felicitated 11 progressive fish farmers belonging to Odisha (5), Uttar Pradesh (2), Maharashtra (1), Bihar (1), West Bengal (1) and Karnataka (1) for adopting scientific fish farming practices and also extending support to other farmers in the locality. The *Aquaculture Innovators* was also released on the occasion. One Aquaculture Field School (AFS), a school without walls where one farmer learns from another, was established by the CIFA in Bhatpadagarh, Banpur block and the other at Sarakana in Baliantha block of Khurda.

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A Seafood Fest ‘Quilon Flavors’

Kollam, 23 July 2011. ‘Quilon Flavors’ a seafood fest was organized at Azheekal as part of the Department of Science and Technology funded project ‘Location

specific livelihood interventions for fisherwomen in Kerala’. The festival was celebrated to bring the fisherwomen in mainstream to discuss the recent developments in production technologies, value-addition and marketing of fish and fishery products. The Fest also aimed at creating awareness among the consumers about fish as a healthy food.

Recipe competitions of various types of seafood preparations were arranged for women to bring out the talent in preparing varieties especially local delicacies of ready- to-eat fish products like sardine chutney, tuna cutlets, crab masala, and many more delicious and richly spiced traditional dishes.

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Microenterprise initiatives

Ernakulum, 8 July 2011. An awareness campaign was arranged for the Self Help Groups (SHGs) at Moothakunnam, under the DST project entitled ‘Location specific livelihood intervention in fisheries sector for the empowerment of fisherwomen in Kerala’.

The awareness campaigns aims at upgrading the traditional skills and knowledge of women through training, credit and market linkages in the fisheries sector. The SHGs were briefed about the government policies and initiatives, role of credit and investment support especially credit delivery to women in fishing communities. Fisherwomen SHGs were being encouraged to take up microenterprises and made aware of importance of maintaining quality and hygiene and other interventions which could help them to capture the international markets. About 45 women participated in the campaign and showed keen interest to take up the microenterprise concept.

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Capacity Building

Setting up AGRINDIA : DARE

The Union Cabinet has approved the proposal of Ministry of Agriculture, Department of Agricultural Research and Education (DARE) for setting up of a new company, called AGRINDIA that would be a registered company under the Companies Act, fully owned by Government of India in the Department of Agricultural Research and Education (DARE) with a share capital of ₹ 100 crore and initial paid up capital of ₹ 50 crore. The company would be made functional within four months. The AGRINDIA would undertake, amongst others, the following major activities:

- Protection and management of intellectual properties generated in the system and its commercialization/distribution for public benefit.
- Production, marketing and popularization of ICAR’s products, processes and technologies in agriculture and allied sectors, viz. seed (including fodder seed, semen and fish seed), planting material, vaccines, diagnostics, several other biotechnological products, other value-added inputs and products, farm implements and machinery, other technologies etc.
- Providing skilled services from ICAR, such as consultancies, contract research, contract service,

customized capacity building, technical support for turnkey project etc.

- Setting up research and development farms and assist in setting up production units outside India, especially in Africa and in the Asia-Pacific region; and perhaps other regions of the world such as Latin America.
- Public-private partnerships in research, education and other capacity building in agriculture and allied sectors.
- AGRINDIA would promote spread of R&D outcomes through IPR protection, commercialization and forging partnerships.

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Farm Office Premises of NCIPM inaugurated

New Delhi, 15 August 2011. Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) inaugurated the farm office premises of the National Centre for Integrated Pest Management (NCIPM) at Rajpurkhurd, Mehrauli, New Delhi. While stressing upon the



importance of pest mitigation not only in India but even in neighbouring countries, Dr Ayyappan expected that the construction of NCIPM premises would certainly be an impetus for strengthening the good work going on in the NCIPM. While appreciating the small step towards development, he assured full-support from the Council as he envisioned to build the Centre into a regional champion for the cause of IPM beyond national boundaries as an International level institute on IPM in the next plan itself.

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Foundation Stone Laying Ceremony of the Office buildings

New Delhi, 8 July 2011. The Union Minister of Agriculture and Food Processing Industries, Shri Sharad Pawar, laid the Foundation Stone of new office buildings of Protection of Plant Varieties and Farmers' Rights Authority (PPV&FRA) and Agricultural

Scientists' Recruitment Board (ASRB) in Pusa Campus. The Minister also complemented the works of both PPV&FRA and ASRB, expressing that with coming up of their own independent office buildings, these institutes will reach new heights in the service of nation. The ASRB discharging the onerous responsibilities of recruiting scientific and other human resources for the Indian Council of Agricultural Research apart from advising the Council on personnel and related policies. The need for an independent office building of ASRB was being felt since long time.

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Seminar Hall and Plant Health Diagnostic Facilities inaugurated

Suttur, 27 August 2011. Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) inaugurated the newly built Mini Seminar Hall and the Plant Health Diagnostic Laboratory of the JSS Krishi Vigyan Kendra at Suttur in Mysore district in the presence of Jagdguru Sri Shivarathri Deshikendra Mahaswamiji of Jagdguru Sri Veerasimhasana Mahasamsthana Math, Suttur Sriksheetra.

Dr S. Ayyappan appealed to the media to highlight the record production of foodgrains, which reached 242 MT this year. Strengthening KVKs, getting farmers involved in setting agenda through its "Farmers First" initiative and promoting agripreneurs, especially keeping the rural youth in mind and developing "Agri-Incubators" are some of the current efforts of the ICAR to bring back the pride in agriculture, he said. Dr V.V. Sadamate suggested that each KVK may bring out its own publication in the regional language in which the state and central schemes may be published on a regular basis for the benefits of the farmers.

Dr M. Mahadevappa (Director, Rural Development, JSS Mahavidyapeetha) highlighted some of the important contributions of the KVK in which he mentioned that the yield improvement in crops like paddy, cotton, pigeonpea and banana are essentially on account of innovative work of the KVK and its functional relationship with the various development departments. He also revealed that the KVK is now coming up with a new initiative, "JSS Raith Seva Kendra" which is a single-window system of extending farm advisory service and critical inputs to the farmers. Over hundred farmers participated in the event along with members of the Scientific Advisory Committee and senior officers of JSS. Various scientists and extension functionaries from a cross section of the state and district R & D institutions were also present.

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Agricultural Innovations

New look of Website — <http://www.ciba.res.in>

Chennai, 16 August 2011. A new look of the website (<http://www.ciba.res.in>) of the Central Institute of Brackishwater Aquaculture was launched by Dr S. Ayyappan (Secretary, DARE and Director General, ICAR). The CIBA is one among the nine consortia partners of the NAIP sub-project of 'Agroweb - Digital Dissemination System for Indian Agricultural Research (ADDISIAR)' being carried out under the leadership of National Bureau of Plant Genetic Resources (NBPGR), New Delhi. The Agroweb project team of CIBA has designed and developed a model website with in-house expertise confirming with 'Uniformity Guidelines for Websites' as issued by the ICAR. In the new website, a Google location map helps the prospective visitors to identify the location of the Institute. Five online dynamic and interactive databases on 'Brackishwater candidate species', 'Shrimp production and export statistics', 'Diseases of aquatic animals', 'National fisheries policies' and 'Fisheries institutions' with a weekly weather advisory, have been included in the website. Subscribed users get automated e mail alerts with a subscription utility when new announcements like jobs, tenders, and meetings are being posted on the website. A video and photo gallery, voluntary disclosure of information under Right to Information (RTI Act, 2005), links to websites of other fisheries/aquaculture Institutions and Agri-feeds are also available. The website is reviewed on a continuous basis by a committee constituted by the Director, CIBA. The usage of CIBA website has increased many folds with trial floating of beta version of website as reflected in Google analytics web traffic statistics. 'Total number of visitors per annum' increased from 8,712 to 27,861 (319.80% increase) and the 'Number of visits to CIBA website from other countries/territories' has increased from 33 to 87 (263.6 4% increase), after trial launch of beta version.

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Brinjal fetches more price

Pantnagar, 30 August 2011. Abide by NAIP sub-project 'Establishing and Networking of Agricultural Market Intelligence Centres in India' the research team of the Govind Ballabh Pant University of Agriculture and Technology conducted market survey of Haldwani regulated market, a major market for brinjal in Uttarakhand, and analyzed market price data which prevailed in last 21 years in this market. Results of econometric analysis showed that wholesale price of brinjal in Haldwani market would range between ₹ 950 and ₹ 1,100/q in September 2011, and between ₹ 650 and ₹ 800/q in October while in November these prices are expected to be between ₹ 600 and

₹ 750/q. However, the range may slightly go up since this year rainfall has affected brinjal crop in the state. Scientists have, therefore, advised farmers, who have adopted brinjal cultivation in current season on their farms, to harvest brinjal crop considering forecast prices of brinjal as well as other conditions.

In Uttarakhand, brinjal is mainly grown in plains. It is grown in an area of 1,685 ha in the state. Dehra Dun, Haridwar, U.S. Nagar and Naini Tal are the four major districts producing brinjal and constituted about 60 % of the total production in the state during 2009-10. In Uttarakhand, peak period of round brinjal arrival to market is October to November though it starts arriving market in August and lasts up to January. Traders of Haldwani market also indicated that October and November are major arrival months of brinjal.

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New courses introduced in AHRD

New Delhi, 2 August 2011. Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) handedover twelve courses to Dr Arvind Kumar, Deputy Director General (Education) for the adoption in State Agricultural Universities/Deemed Universities from the current academic session. The courses are Introductory Crop Physiology (Horticulture); Commercial Floriculture (Horticulture); Veterinary Physiology (Veterinary and Animal Husbandry); Veterinary Andrology and Reproductive Techniques (Veterinary and Animal Husbandry); Veterinary Gynaecology (Veterinary and Animal Husbandry); Veterinary obstetrics ((Veterinary and Animal Husbandry); Canning and Fish Packaging Technology (Fisheries); Ornamental Fish Production and Management (Fisheries); Normal and Therapeutic Nutrition (Home Science); Life Spar Development -1 (Home Science); Biochemistry and Human Nutrition (Dairy Technology) and Thermodynamics (Dairy Technology).

Thirteen e-learning laboratories have been set up, each adequately equipped with required hardware, software, and other gadgets such as video cameras, scanners, video editing workstations, CD/DVD mass duplicator etc. A total of 415 teachers have been trained so far including 14 in foreign universities for getting expertise in development of these e-courses. The format of these e-courses is innovative, containing lot of visuals, audio/video clippings, animations etc., to keep the interest of the learner intact. Each course has question bank, a facility for mock quizzes with a system for instant evaluation. The competence of our graduates can be improved tremendously by providing them with quality learning material innovatively developed using the latest tools in ICT by the best teachers in the country and made available both offline and online.

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Redgram transplanting

Livelihood Security through Resource and Entrepreneurship Management

Redgram or pigeonpea (*Cajanus cajan*) is popularly known as *tur* or *arahar* in India. The crop requires less water and also improves soil fertility. It fixes nearly 20 kg N/ha from the atmosphere into the soil. As estimated the potential and present yield of redgram in Bidar district are 2,700 kg/ha and 829 kg/ha respectively. To bridge this yield gap (1,871 kg/ha) Krishi Vigyan Kendra, Bidar, organized farmers scientists interface meet, wherein progressive farmers and Krishi Vigyan Kendra scientists discussed various aspects to boost the yield levels in redgram. The idea of transplanting/dibbling technology finally emerged during these meetings.

Process adopted to spread technology included training programmes, field days, exhibitions, radio and television programmes, print media etc. After invention of transplanting/dibbling technology in redgram and constant effort made by KVK, Bidar, the area of adoption under this technology in Bidar

district and neighbouring districts has increased from 200 ha in 2007-08 to 4,000 ha in 2009-10. Total production and estimated value have gone up to 11,424 tonnes and ₹ 5,483 lakh, respectively, during 2009-10. The average productivity of the improved and traditional practices was 29.306 and 13.937 q/ha respectively. This gave an additional revenue of ₹ 43.96 crore in these three years. The economic scenario of the district has completely changed. Lot of new redgram processing units are being established in Bidar district, simultaneously creating employment opportunities. Recently redgram-growing farmers in the district started forming associations. They are planning to export processed dal to neighbouring states as well as abroad. Further, owing to this technology living standard of redgram-growing farmers is changing slowly in the pulse bowl of Karnataka.

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MoUs

DRDO-ICAR signed Memorandum of Agreement

New Delhi, 23 August 2011. The Defence Research and Development Organization (DRDO) and Indian Council of Agricultural Research (ICAR) signed a Memorandum of Agreement (MoA) for conservation of Plant Genetic Resources (PGR) in the National Permafrost Repository at Chang-La, Leh-Ladhakh (J&K) during the VI DRDO-ICAR Meeting at DRDO Bhavan, New Delhi, by Dr V. K. Saraswat, Scientific Advisor to *Raksha Mantri*; Secretary, Department of DRDO; Director General, DRDO and Dr S. Ayyappan (Secretary, DARE and Director General, ICAR).

Dr S. Ayyappan expressed his gratitude to Scientific Advisor to *Raksha Mantri* for arranging this historical meeting, in his opening remarks. He mentioned that India is facing a challenge to increase the food production and productivity in present scenario of climate change. To meet this challenge, access and utilization of biodiversity in crop, animal and fish are important as India has varied agro-ecological regions harbouring the immense amount of biodiversity. National Genebank at National Bureau of Plant Genetic Resources (NBPGR) is a great asset to the country, however, the new Permafrost Facility at Chang-La will facilitate low-energy conservation of PGR. Dr Ayyappan also emphasized that ICAR scientists may provide the expertise to DRDO and

vice-versa by involving in various committees on policy and research related to agriculture.

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MoU signed between CIFA and AAU

Bhubaneshwar, 2 August 2011. The Central Institute of Freshwater Aquaculture (CIFA), Bhubaneshwar, Odisha, has signed a Memorandum of Understanding (MoU) with Anand Agricultural University (AAU), Anand, for the establishment of Regional Research Centre of the Institute in Gujarat. Dr P. Jayasankar (Director, CIFA), and Dr K. B. Kathiria (Director of Research and Dean, Post-Graduate Studies, AAU) signed the MoU. The Centre will function from the ATIC building of the University as well as from the Krishi Vigyan Kendra (AAU), Devataj of Sojitra Taluka. It will cater to the research and extension needs of freshwater aquaculture of Gujarat as well as the neighbouring states. The Centre will develop location-specific technologies for freshwater fish farming. Besides, the Centre would contribute to capacity building of line department officials and impart need-based training to fish farmers. Standardization of breeding and culture techniques of regionally important freshwater fish species would also be the thrust area of research of this centre.

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CIFT, signed MoU with Uniloids Biosciences

Central Institute of Fisheries Technology (CIFT), Cochin, signed a Memorandum of Understanding with Hyderabad based company, M/s Uniloids Biosciences. With this MoU, Uniloids Biosciences will have access to the unique and innovative technology developed by the CIFT to convert process waste of prawns to chitin and chitosan.

Chitin and chitosan find wide usage in various industries like pharma, food processing, cosmetics etc. Under the MoU, the Zonal Technology Management- Business Planning & Development (ZTM-BPD) Unit along with the Divisions of Fish Processing and Quality Assurance and Management of CIFT will further provide training and support to M/s Uniloids Biosciences for commercializing the technology.

The ZTM-BPD Unit at CIFT, Cochin is an Agri-Business Incubator facility providing 'one-stop-shop solution' to meet all business needs of an entrepreneur. Supported by the ICAR through National Agricultural Innovation Project (NAIP), ZTM-BPD Unit helps

entrepreneur's access technologies and expertise available at agricultural institutes in South India.

MoA signed between IVRI and CSKHPKV

Izatnagar, 11 July 2011. To formalize the cooperation in academic and research activities between Universities and National Laboratories has been realized by the University Grants Commission, Indian Council of Agricultural Research and Council of Scientific and Industrial Research. A memorandum of agreement (MoA) was signed between Indian Veterinary Research Institute and Chaudhary Sarwan Kumar Himachal Pradesh Krishi Vishvavidyalaya, Palampur, at IVRI Headquarters, Izatnagar. The agreement was signed by Prof. M.C. Sharma (Director, IVRI), and Dr S.K. Sharma (Vice-Chancellor, CSKHPKV, Palampur). The Director, IVRI, emphasized that it is the first MoA signed for the purpose of academic, and stressed the need of close cooperation in research and academic activities between IVRI and CSKHPKV, Palampur.

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KVK Corner

High level QRT team visits KVKs in Chhattisgarh

Raipur, 31 August 2011. A QRT meeting for reviewing the KVKs of Chhattisgarh was organized from 30 to 31 August 2011 at the IGKV, Raipur. The Chairman of KVK-QRT, Dr R.B.Deshmukh, former Vice-Chancellor, MPKV, Rahuri expressed that rice-based monoculture system is the serious concern in the states, and KVKs are promoting the diversification through awareness about the highly profitable alternative cropping systems in the state, but it still needs greater attention.

He emphasized that profits from the crop production should be highlighted to motivate and encourage the farmers for its adoption. He appreciated the work done by KVKs. He also suggested that time series data regarding productivity, production economics and other relevant parameters should be recorded regularly by the KVKs.

Dr R.P.S. Ratan, Member of QRT, expressed that profitability with sustainability of agriculture is a challenging task and there is need to work scientifically on mission mode basis. The KVKs should provide regular feedback to research system for location-specific modifications required, he further added.

Dr U.S.Gautam, Zonal Project Director, Zone-VII highlighted that Kisan Moblie Advisory is highly effective in the Zone in transferring agricultural technologies and around one lakh farmers are getting benefits of this ICT based intervention. Hybrid maize is coming in a big way in Chhattisgarh. He urged the programme coordinators of KVKs for bringing more visibility of the KVK through conducting impact assessment studies. Dr J.S.Urkurkar, Director Extension, IGKV, presented the achievements of KVKs in Chhattisgarh and highlighted that sweet potato and maize are replacing the area of rice in the state. The team also visited the farmers' fields of KVKs – Dhamtari, Kanker and Bastar districts in the state.

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Field Day celebration at Krishi Vigyan Kendra, CAZRI

Jodhpur, 8 September 2011. Dr Y.V. Singh, Zonal Project Director (Zone-VI) inaugurated field day programme that was organized by Krishi Vigyan Kendra, Central Arid Zone Research Institute, Jodhpur, on *kharif* crops at Pabunada village of Luni Panchayat Samiti of Jodhpur district to show the production potential of improved *kharif* crops cultivation practices to the practising farmer, farm-women, researchers and extension workers.

Dr Y. V. Singh urged the farmers to adopt 'seed village' concept for self-sufficiency in quality seed of different crops and also make more use of Kisan Mobile Advisory Service (KMAS) of KVK to update their knowledge, regularly. Dr M.M. Roy, Director, CAZRI, advised the farmers to take up seed-production programme in a participatory mode for better income and welfare of the farming community. He also suggested to take more advantage from the CAZRI by adopting its technologies for higher productivity and efficient utilization of natural resources.

In this function about 500 farmers, *Krishak Mitras*, farm-women and rural youth participated from nearby 10 villages and visited the site of frontline demonstrations of *bajra*, *moong* and *Guar*. They also interacted with scientists on different agriculture related issues and agro advisor services during *Kisan Gosthi*.

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Activities under NICRA initiated at KVK, Namakkal

Namakkal, 30 July 2011. Dr S. Ayyappan, Secretary, DARE and Director General, ICAR initiated activities under the National Initiative on Climate Resilient Agriculture (NICRA) at KVK, Namakkal, Tamil Nadu in the presence of Member of Legislative Assembly, District Collector, Vice-Chancellors of TANUVAS and TNAU, Deputy Director General (Agric. Eng.), ICAR, President, Vadavathur Panchayat, and Zonal Project Director, Zone-VIII. In his inaugural address, Dr Ayyappan highlighted the importance of water conservation and adoption of new technologies for improving the productivity of agriculture and the profitability of the farmers through the group approach. During the launching ceremony various technological interventions were inaugurated at Vadavathur village which, besides facilities, included

technological inputs for drought resilient programmes. Dr Ayyappan also inaugurated the Soil and Water Testing Laboratory, Portable Carp Hatchery Unit for Fish Seed Production, Homestead Egg Incubator, Low cost Mushroom Unit etc. The dignitaries distributed *Acerophagus* papaya parasitoid to control mealy bug in *Tapioca* to 340 farmers. Around 700 farmers participated in the interaction meet with the Director General, ICAR and other dignitaries.

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Facilities at KVK, Erode inaugurated

Erode, 31 July 2011. Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) inaugurated the Farmers' Hostel and Plant Health Diagnostic Centre at Krishi Vigyan Kendra, Erode, Tamil Nadu. He also visited



the ongoing activities of e-connectivity, soil, water and plant analysis, production of bio-control agents, quality seedling production, and exhibits organized by KVK team. He gave away fruit saplings to tribal families as part of KVK's small orchard development intervention.

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XVIIIth Annual Group Meeting of Rapeseed-Mustard Research Workers

Guwahati, 7 August 2011. The XVIIIth Annual Group Meeting of Rapeseed-Mustard Research Workers was organized by Directorate of Rapeseed-Mustard Research, Bharatpur from 5 to 7 August 2011 at Veterinary College, Khanapara Campus, Guwahati, Assam Agricultural University, Jorhat. The Minister of Agriculture, Sh. Nilamani Sen Dea and Minister of Irrigation and Soil Conservation, Dr Ardhendu Kr. Dey, Government of Asom inaugurated the meeting. Prof. S. K. Datta, Deputy Director General (Crop Science), ICAR, New Delhi was the Chief Guest and Dr. K.M. Bujarbaruah, Vice-Chancellor, AAU, Guwahati chaired the inaugural session.

Recommendations

- Creating zones for conducting yellow *sarson* trials, which are being conducted across 10 to 12 locations spread over 11 states resulting into large

g x e interaction and making identification of promising materials difficult. The appropriate decision shall be implemented after approval of the Council.

- Evaluation of *toria* and early mustard strains in separate trials to avoid intercrop competition due to differences in plant type thus masking actual performance of both the crops. And also a new trial shall be constituted for evaluation of mustard strains exclusively under rainfed conditions.
- Line sowing of rapeseed-mustard after land preparation in rice field and 80 kg N/ha fertilizer is recommended under *utera* cropping system in Zone-I (HP and Kashmir valley) and Zone V (Bihar, Chhattisgarh, Odisha, Jharkhand, West Bengal, Asom, North-eastern states).

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Visits

Minister of State for Agriculture Visits HSADL

Union Minister for Agriculture and Food Processing Industries (State) Dr Charan Das Mahant visited HSADL Bhopal, from 12 to 14 August 2011 for official meeting. Dr Das desired to review the working of Indian Institute of Soil Science; High Security Animal Disease Laboratory and Central Institute of Agricultural Engineering (all in Bhopal) on 14 August 2011 at Indian Institute of Soil Science, Bhopal, followed by Press briefing.

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Director General, ICAR visits IVRI Izatnagar

Dr S. Ayyappan, Secretary (DARE) and Director General (ICAR) visited Indian Veterinary Research Institute on 19 August 2011 and inaugurated the newly constructed Indoor ward of small animal facility in polyclinic of IVRI. He was accompanied by Dr K.M.L. Pathak, DDG (Animal Sciences) and Dr Gaya



Prasad, ADG (Animal Husbandary). In his inaugural address Dr Ayyappan underlined the importance of indoor ward especially for pet dogs and security canines who were earlier deprived of such indoor veterinary facility. The visiting dignitaries interacted with the faculty, staff and students including station incharges and Joint Directors. Dr Ayyappan highlighted the scope of quality education, job opportunities and need of innovated approaches for animal health. He further urged upon to the scientific community of the IVRI to get ready for the implementation of XII Plan in blending AICRPs and working in a mission mode. Dr K.M.L. Pathak specially highlighted the need to focus on animal health with reference to new diagnostics and new generation vaccines.

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Visit of Deputy Director General (Agricultural Extension)

Barapani, 20 July 2011. Dr K. D. Kokate, Deputy Director General (Agricultural Extension), ICAR visited Zonal Project Directorate, ATIC Division and KVK, Ri Bhoi of ICAR Research Complex for NEH Region, Barapani. He emphasized that KVK should take up entrepreneurial activities for the women SHGs for better economic empowerment. While assessing the production of ginger (var. Nadia) from Frontline Demonstration conducted, he advised to go for quality planting material for sustainable production and productivity of ginger in the district. He emphasized on adoption of agro-forestry model developed by the institute, which includes medicinal plant to be replicated in adopted villages. He appreciated the efforts for collecting, documenting and characterization of local germplasm collected by the institute which is useful for future research.

Press Interaction

New Delhi, 29 August 2011. Professor S.N. Puri (Vice-Chancellor, Central Agricultural University, Imphal) attended a Press Interaction at Directorate of Knowledge Management in Agriculture, ICAR, and apprised media personnel about the Central Agricultural University that has seven colleges in all states of North-East India except Asom and Nagaland.

In response of the Press the Vice Chancellor spoke:

1. The University is actively engaged in need-based location-specific research activities. CAU-R1, the variety of rice developed by the CAU, is popular among the rice growers in the valley districts of Manipur. Through participation of farmers every year 600 to 800 quintal truthful labeled seeds is produced and made available to the farmers.
2. A special packaging technology, using vacuum

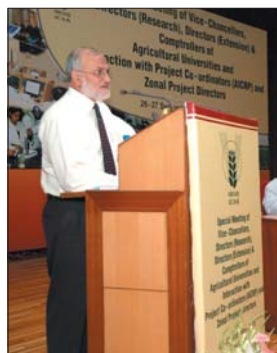
pressure, has been developed by the College of Agriculture Engineering and Post-Harvest Technology, Ranipool, Sikkim for enhancing shelf-life of orchids. Efforts are on for the development of new technology to convert pineapple juice to powder retaining its aroma.

3. Quail farming is being enhanced in Mizoram.
4. Marketing set up of ginger and turmeric is being improved, as these states are having good production of ginger and turmeric.
5. The future prospects include start of Doctor of Philosophy (Ph.D.) course wherever Postgraduate courses pertaining to fisheries are running.
6. Postgraduate course on Agricultural Engineering is also going to be launched.
7. A college on Food Science is also on the roadmap of CAU programme.

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Vice-Chancellors of Agricultural Universities meet

New Delhi, 26 September, 2011. Professor Ved Prakash (Chairman, University Grants Commission) urged the agricultural universities to use educational strategies for poverty alleviation from India. He added that 'Diversifying campuses is the core issue



for higher education. Only 1% of total enrolled students opt for the research and another 11% for the teaching. Without attracting talent we cannot achieve the desired goals. Add more components to curriculum to overcome researchers and teachers shortage. We need structural reforms for producing global as well as local leaders. Our education system must have

modernity with tradition. For this national conviction, sustainable political will power, substantial finance and capacity building is needed'.

Dr S. Ayyappan (Secretary, DARE and Director General, ICAR) stressed upon the need for attracting and retaining youth in agriculture education. He emphasized upon the important role played by the ICAR institutes in imparting higher education and urged them to sensitize the society for agricultural education. 'Agriculture should be encouraged in general education system. Greater support for researcher and quality assurance must be focused

areas for us'. Dr S. A. Patil (Chairman, XIIth Five-Year Plan Working Group on Agricultural Research and Education) deliberated upon emerging challenges of education and financial viability of State Agricultural Universities. Dr Tej Pratap (President, Indian Agricultural Universities Association) stressed the need for structural, financial, managerial and administrative reforms at university level for reshaping whole agriculture system.

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ICAR Vichar Manch

New Delhi, 12 July, 2011. Sheen Kaaf Nizam, internationally acclaimed Urdu poet and critic, was our orator at ICAR Vichar Manch who shared his views on the topic of *Myth, Creativity and Communication: Exploring Coherence*. He said that all mythological scriptures proclaim that when there was nothing, there was sound and word. Nizam *sahib*, responding to persuasion of audience, recited a few couplets from his *ghazals* and verses from *nazms*.



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Trainings

- The Visakhapatnam Research Centre of Central Institute of Fisheries Technology conducted a training programme on 'Design and fabrication of a new multi seam trawl' at SIFT, Kakinada during 11-13 July 2011 for the benefit of net makers and fishermen.
- A training course on the "Recent trends in finfish and crustacean grow-out practices" was organized at Kakdwip Research Centre (KRC) of the Central Institute of Brackishwater (CIBA), Chennai. The trainees group had heterogeneous educational background, comprising farmers having middle level education up to masters, graduates and SRFs from different parts of West Bengal. The training course was designed in such a way so as to cover all the important aspects of brackishwater finfish and crustacean culture.
- The National Research Centre for Litchi, Muzaffarpur, organized training-cum-demonstration on "Canopy Management of old and senile litchi orchards" from 7 to 10 September 2011.
- Selected animals having problem in conception and buffalos heifers not conceived up to the age of 7 years were synchronized. The approximately cost per animal ranges from ₹ 500 to ₹ 1,000. A 3-day training of 44 veterinary officer of Udaipur district were also conducted on "Synchronization of oestrus" to replicate the above technique in the district.
- A three-day training programme on 'Recent Advances in Agroforestry and its role in Natural Resource Management in North-East' was organized jointly by the Zonal Project Directorate, Zone-III, ICAR, Umiam (Meghalaya) and National Research Centre for Agroforestry, Jhansi (23 to 25 August 2011) at the premises of Central Inland Fisheries Research Institute (CIFRI), Regional Centre, Guwahati.
- A refreshers course entitled "Male germplasm production and handling for optimum fertility in Frieswal cattle" was conducted from 3 to 4 August 2011 at the Project Directorate on Cattle, Meerut, for Veterinary Officers of Military Farms.

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Personnel

Protocol Activities

- Dr K. Ramesh (Senior Scientist, Indian Institute of Soil Sciences, Bhopal) visited for participation in a training programme under the Norman E. Borlaug International Agricultural Science and Technology Fellowship Programme 2011 for undergoing training under the targeted search area 'Agricultural cooperation-Input Minimizing Technologies for Sustainable Agriculture' from 10 July 2011 to 10 September 2011 at Ohio State University, USA.
- Dr M. Sivaswamy (Senior Scientist from IARI Wheat Research Station, Wellington) visited for the training at Dr Mark Sorells Laboratory at Cornell University, USA for 6 months from May to November 2011.
- Dr Swapan Kumar Datta (Deputy Director General, Crop Science, ICAR, New Delhi) and Dr H.S. Gupta (Director, Indian Agricultural Research Institute, New Delhi) visited as part of the delegation led by Professor M.S. Swaminathan, Member of Parliament (Rajya Sabha) and Chairman, M.S. Swaminathan Foundation to Mynamar from 23 to 26 July 2011.
- Dr Vandana Rai (Senior Scientist, Directorate of Rice Research, Hyderabad) visited for training programme under the Norman E. Borlaug International Science Technology Fellowship Programme 2010 for undergoing training on "Salt Tolerance Mechanism" at Purdue University, Department of Horticulture and Landscape Agriculture, West Lafayette, USA from 15 August to 15 October 2011.
- Dr Sujay Rakshit (Principal Scientist, Directorate of Sorghum Research, Hyderabad) visited the Purdue University, USA for the Norman E. Borlaug International Agriculture Science Technology Fellowship Programme 2010 from 15 July to 13 September 2011.
- Dr Simmi Tomar (Senior Scientist, CARI, Izatnagar) visited for the Norman E. Borlaug Agricultural Science Technology Fellowship 2011 for the training on Metagenomics for ten weeks, starting from 13 September to December 2011 at A and M University, Texas, USA.
- Dr H.P. Singh, Deputy Director General (Horticulture), ICAR and Shri Roopak Chaudhuri, (Under-Secretary, DARE, New Delhi) visited Oman from 18 to 22 September 2011 for finalizing the Work Plan for the year 2011-12 and to discuss other related issues.
- Dr T.P. Trivedi (Project Director, DKMA) and Mr S.K. Joshi (BM, DKMA) visited Oman from 20 to 22 September 2011 to attend 3-day IVth Indian Trade Fair 'INDEXPO-2011'.
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Appointments

- Dr N.R.K.K. Kumar joined as Director, National Bureau of Agriculturally Important Insects, Bengaluru on 1 July 2011.
- Dr M. Anandraj joined as Director at Indian Institute of Sugarcane Research, Calicut on 4 July 2011.
- Dr Sanjeev Gupta joined as Project Co-ordinator (MULLARP) at Kanpur on 4 July 2011.
- Dr A.H. Prakash joined as Project Co-ordinator (Crop Improvement), Central Institute of Cotton Research, Regional Station, Coimbatore on 7 July 2011.
- Dr V.N. Sharda joined A.S.R.B. as Member in the afternoon of 11 July 2011.
- Dr B.C. Deka joined as Joint Director, ICAR -Regional Centre -NEH Region, Nagaland Centre, Jharapani on 11 July 2011.
- Dr P.S. Naik joined as Director, Indian Institute of Vegetable Research, Varanasi (Uttar Pradesh) on 11 July 2011.
- Dr M.J. Modayil joined as Acting Chairman, Agricultural Scientist Recruitment Board on 14 July 2011.
- Dr R.P.S. Gowda joined as Project Director, Directorate of Seed Research, Mau (Uttar Pradesh) on 19 August 2011.
- Dr K.P.R. Vittal joined as Director, National Institute of Abiotic Stress Management, Baramati on 1 September 2011 on reemployment basis for 6 months.

Retirements

- Dr C. D. Mayee, Chairman, A.S.R.B. was relieved on 14 July 2011.
- Dr D.B.S. Sehra, Principal Scientist (ICAR, Hq) retired on 31 July 2011.
- Dr K.P.R. Vittal, Director, NIASH, Baramati retired on 31 August 2011.
- Dr T.K. Adhya, Director, Central Rice Research Institute, Cuttack retired on 30 September 2011.

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