



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

*AgriSearch with a human touch*

Icar  
mail

## Meeting of Agricultural Experts Working Group on Agro Products and Food Security of BRICS Countries

Dr S Ayyappan, Secretary, DARE and Director General, ICAR inaugurated 2nd Meeting of Agricultural Experts Working Group on Agro Products and Food Security of BRICS Countries at New Delhi on 27 August, 2012. In his welcome speech the DG traced the events leading to this second meeting. The two-day meeting was jointly convened by the Department Agricultural Research and Education, Government of India and Indian Council of Agricultural Research.



The BRICS countries label refers to a select group of five large, developing countries (Brazil, Russia, India, China and South Africa). The five BRICS countries are distinguished from a host of other promising emerging markets by their demographic and economic potential to rank among the world's largest and most influential economies in the 21st century. The objectives of BRICS countries meeting at New Delhi include building of a systematic, timely, effective, and authoritative agricultural information exchange system which is expected to be an integral part of agricultural cooperation mechanisms of BRICS countries through implementation of Action Plan 2012-16.

One of the four agreements reached by BRICS Ministers of Agriculture and Agrarian Development in Moscow on 26 March 2010 was to create an agricultural information base system of the BRICS countries. At the Second Meeting of BRICS Ministers of Agriculture and Agrarian Development on 30 October 2011 in Chengdu | China, Action Plan 2012-16 for Agricultural Cooperation of BRICS countries was approved, designating China to coordinate the creation of a basic agricultural information exchange system of BRICS countries. The system intends to provide reference for decision-making by agricultural authorities of BRICS countries through information collection, processing, exchange, analysis and evaluation to drive sustainable agricultural growth of BRICS countries.

## Zero tillage cultivation of rapeseed-mustard raises yield in Imphal

Directorate of Extension Education, Central Agricultural University (CAU), Imphal implemented an extension project on "Augmenting Rapeseed-Mustard Production of Tribal Farmers of North Eastern States for Sustainable Livelihood Security" in collaboration with Directorate of Rapeseed-Mustard Research (DRMR), Bharatpur under Tribal Sub-Plan (TSP) in Imphal East District, Manipur during *rabi* 2011. Due to lack of irrigation facilities and uncertainty of rain during *rabi* season, farmers in Manipur are reluctant to grow *rabi* crops and vast area in the state remains fallow after rice from November to June. Taking into consideration the above facts, yield performance of rapeseed varieties, M 27,



TS 36 and Ragini and mustard varieties, Pusa Agrani, Pusa Mahak, NRCHB 101 and NPJ 112 were evaluated in 55 ha under zero tillage cultivation and compared with crops grown in 40 ha under conventional tillage.

Since there was no rains throughout the crop period, the growth and yield parameters in all the rapeseed-mustard varieties were better in zero tillage practice than conventional tillage due to residual soil moisture after rice harvest. Under participatory varietal selection trials, yellow sarson, Ragini among rapeseed varieties gave maximum yield of 8.0 to 14.0 q/ha with average yield of 10.0 q/ha, whereas, NRCHB 101 among mustard varieties gave maximum yield of 8.0 to 11.0 q/ha with average yield of 10.2 q/ha in zero tillage cultivation. Under on-farm demonstrations, not only no tillage (zero tillage) practice, but use of 4 (four) bee colonies/ha during crop bloom of rapeseed for pollination and spray of botanical pesticides without affecting pollinators population and to harvest organic honey were demonstrated.

One hundred seventy two farmers across nine villages of Imphal East District who were involved in the project improved their income by getting average net profit of ₹27,000/ha including cost of honey within three and half months with a low investment of ₹7,800/ha. All the farmers attended eight on-farm and two on-campus training programmes and 60 farmers from the project site visited DRMR, Bharatpur on exposure trip.

In order to popularize high-yielding mustard varieties like NRCHB 101, Pusa Agrani etc. under scientific cultivation, the CAU has constructed three water harvesting structures in three villages of project site with micro-irrigation facilities covering a total area of 2.5 ha with 64,063 m<sup>3</sup> of harvested water and irrigable command area of 44 ha. The innovative message of zero tillage cultivation of rapeseed-mustard has spread in neighbouring districts and around 1,000 ha in three valley districts of Manipur are being covered during current *rabi* 2012 in Manipur.

## Knowledge Meet

Prof. Abhijit Sen, Member (Agriculture), Planning Commission emphasized the need to increase the efficiency in agriculture while addressing the Knowledge Meet of ICAR as the Chief Guest at New Delhi on 21 August 2012. Agricultural production and research are the two key areas where more investment is required. We must enhance quality of higher agricultural education to provide quality human resource to face forthcoming challenges in Indian agriculture, he added.



Shri Amardeep Singh Cheema, Member, ICAR Society; Dr Ashok Gulati, Chairman, CACP; Dr JS Samra, CEO, National Rainfed Area Authority; and Dr R B Singh, President, National Academy of Agricultural Sciences gave valuable remarks on the future challenges of Indian agricultural research which need to be addressed in the Vision-2050 of ICAR. Dr Ramesh Chand, Director, National Centre for Agricultural Economics and Policy Research made a brief illustrative presentation on the Vision-2050.

Earlier, Dr S Ayyappan, Secretary, DARE and DG, ICAR welcomed the dignitaries and highlighted recent major achievements along with current issues and challenges before agricultural research.

The two-day Knowledge Meet of Directors of ICAR institutes and Vice Chancellors of Agricultural Universities was organized with the objective to discuss various issues as relevant to the XIIth Plan Period and the Vision-2050 for Indian Agriculture. Senior Officials of ICAR and other related organizations participated in the Meet. A book *Protected Cultivation: KVKs Initiative in Himachal Pradesh* was also launched in the meeting.

## For sustainable development of sugar industry

Research and development in sugarcane must address the issues of sugarcane, sugar and energy sector of the country in holistic manner, said Dr S Ayyappan, Secretary, DARE and DG, ICAR while addressing the scientists of Indian Institute of Sugarcane Research, Lucknow on 13 August 2012. Dr Ayyappan emphasized to break the stagnant cane yield of about 68 tonnes/ha in the country, and urged sugarcane scientists to evolve mechanism for seed-cane production and distribution chain for quick replacement of very old varieties with new promising ones.



Dr Ayyappan commended the efforts of scientists in evolving cutting edge sugarcane technologies such as improved cane variety CoLk 94184 (early maturing high sugar variety), cane node technology (new technique to reduce cane seed quantity and higher plant population), organic ratoon cultivation for sustaining yield and soil health, water saving sugarcane technologies, sugarbeet cultivation in sub tropics, sugarcane machines (planter, RMD & harvester), diagnostic kits for red rot and smut diseases, bio-intensive insect-pests and diseases management. Most emergent challenge is to convert sugar mill into sugarcane processing complex to produce sugar, ethanol, electricity, pulp, animal feed, fertilizer etc. to meet ever increasing demand for sweetener and energy, he added. Farmers' First must be focus of research and technology development programme. Water saving technologies like Skip furrow method of irrigation, drip irrigation, trash mulching etc. must be popularized over larger areas by implementing modern Extension tools like ICT, Expert system, model farm approach to extend benefit to more and more number of farmers, Dr Ayyappan emphasized.

Dr S Solomon, Director, IISR, Lucknow presented a brief account of Institute's achievements in developing many remunerative sugarcane technologies.

## KVKs lend a hand to flood-affected farmers in Asom

Due to the very active monsoon regime in the north-eastern part of India, estimated flood affected people were about 21 lakh in all 27 districts of Asom and total flood affected villages were nearly 2,800. A total of 10,57,558 farmers' families, including 1,55,989 families of small and marginal and other farmers, were hit by the floods. About 4,83,536 ha land area came under the grip of flood water of which total crop area damaged was about 2,54,935 ha (50% of total cropped area). Major crops affected are – *boro* rice and *ahu* rice (in maturity and reproductive stages, respectively), Seedlings of *sali* rice, Jute and *khariif* vegetables. The process of nursery bed and main field preparation for *sali* rice have been delayed by almost one month in the flood affected areas. Besides, river bank erosion during the high flood period in Brahmaputra and Barak Valleys is a recurrent feature in Asom.

The KVKs located in the flood affected districts of Asom reciprocated with issuance of contingent farm advisories to the farmers to be observed during post flood situation. The major advisories issued were – (a) Crop production: raising of community nurseries of rice, cultivation of submergence/flood tolerant rice varieties, direct seeding of sprouted seeds of short duration rice cultivars, sowing of *khariif* pulses where rice cultivation is no more possible during this season and other related interventions on crop management; (b) Natural resource management: repairing of drainage systems to drain out excess water under post flood situation, promotion of raised and sunken bed techniques, tillage management techniques and tools for better establishment of the crop, repairing of bore well and pump sets for timely utilization of ground/surface water; (c) Livestock/fishery: proper removal and destruction of dead animal bodies to prevent spread of human and animal diseases, handy methods to clean water for drinking purposes of human and animals, cleaning of ponds and repairing of bunds and other structures.

Altogether 12 KVKs under Assam Agricultural University, raised seedlings of rice varieties in KVK farms in order to help farmers from worst flood affected areas in 13 districts of Asom. Rice seedlings were raised in 21 ha area, of the following varieties, to cover a total area of 225 ha of land as a measure of successful implementation of the Contingency Plan. The varieties are (A) Long duration: Ranjit, (B) Medium duration: Jaimati, Kanaklata, IR 64, IR 36, (C) Short duration: Luit, Disang and (D) Varieties with staggering ability: Prafulla, Gitesh.

Dr K D Kokate, Deputy Director General (Agriculture Extension), ICAR visited Krishi Vigyan Kendra, Nalbari on 7 August 2012 to take on the spot assessment of flood damage and also to participate in seedling distribution organized by the KVK to help the flood affected farmers of the district. The KVK raised rice seedlings in an area of 1 ha for free distribution to flood

victims. More than 300 farmers had attended the function. The DDG was also accompanied by MLA of Nalbari LAC Mr Jayanta Malla Baruah, Dr A K Gogoi, ZPD, (Zone-III), Dr H C Bhattacharyya, Director, Extension Education, Assam Agricultural University, Jorhat ; Mr Abu Suffian, Superintendent of Police, Nalbari district among others. An agri-exhibition was also organized, which was participated by the KVKs of Darrang, Barpeta and Nalbari districts reflecting the outcome of various KVKs interventions and giving exposure to the technologies released by AAU and other organizations.



Dr K D Kokate, Dr A K Gogoi and Mr Jayanta Malla Baruah distributed rice seedlings to the farmers and released two bulletins on contingency measures for post flood situation, meant for flood-affected farmers.

## Interface of Gujarat KVKs on livestock infertility

Interface of Gujarat KVKs on livestock infertility of Zone-VI was held at Anand Agricultural University (AAU), Anand on 27 July 2012. Dr BS Prakash, ADG (AN&P), ICAR, New Delhi in his inaugural address pointed out that infertility is the major problem in livestock in our country, i.e. about 30 to 50% of livestock population. Efficient reproduction is the prerequisite for milk production. Therefore, it is very essential to reduce the incidence of infertility in livestock in order to have high milk production from animals. Dr Prakash called upon all the Gujarat KVKs to work on recently developed livestock technology (NDRI) transfer at grass-root level in order to benefit the marginal and smallholder livestock owners.

Dr A M Shekh, Vice Chancellor, AAU, in his presidential address expressed his satisfaction over lead role being played by the KVKs and the linkage between the KVKs and the line departments for meeting the technical needs of the farmers at district level. He further informed that livestock sector of Gujarat has contributed significantly towards GDP which is the highest in the country. Dr Shekh emphasized the role of KVKs in livestock technology assessment, refinement, demonstration and also empowering the small and marginal farmers in Gujarat.

Dr PP Patel, Director Extension Education, Anand welcomed all the participants; while Dr YV Singh, Zonal Project Director, Zone-VI, Jodhpur briefed about the livestock growth and salient achievements of Gujarat KVKs under Zone-VI, which is highly affected with arid and semi-arid climatic conditions. He further assured that the livestock technology developed by NDRI will be transferred at grass-root level in order to reduce the infertility problem in Gujarat which would improve the economic status of the livestock owners. Dr YV Singh, ZPD, Zone VI, stressed the need to work in collaboration with line department, dairy personnel, NDDB, AMUL and ATMA to address the issues related to infertility for making animals productive. Directors of Extension from Gujarat (Anand, Dantiwada, Junagadh, Navsari), Scientists from ZPD, Zone-VI, Professors from Dairy Science College, AAU, Anand, Directorate of Extension, Officials from Department of Animal Husbandry, officials from NDDB, AMUL and SMS (Animal Science or Veterinary Science)/ Programme Coordinators of 28 KVKs of Gujarat participated in the workshop and discussed in detail about the strategies for livestock fertility improvement.

## ICAR-CII Joint Working Group on Farm Mechanization

Central Institute of Agricultural Engineering (CIAE), Bhopal was the host for the third meeting of the ICAR-CII Joint Working Group on Farm Mechanization on 10 August 2012 under the chairmanship of Dr M M Pandey, DDG (Engineering). Mr T R Kesavan, President Tractors Manufacturing Association led the CII delegation. Several leading farm machinery manufacturers, i.e., TAFE, M&M, John Deere, New Holland, Escorts, VST Tillers Tractors, SAME Deutz, SDF Group, and Eicher Tractors were represented at the meeting. Besides, Directorate of Agricultural Engineering of MP and local agricultural machinery manufacturers were also represented.

Issues such as anthropometric parameters for appropriate machinery design, precision machinery development, and biomass management for collaborative efforts came up for discussion. Three sub-groups for specific actions related to anthropometric parameters, precision machinery, and mutually agreeable collaborative activities were formed. Collaborations in the areas of in-plant training and post-graduate research were also discussed. The institute availed the opportunity to showcase the important R&D achievements and infrastructure for the visiting industry officials.

Dear All  
please submit topical news related to agriculture to:  
Project Director  
e-mail: dka@icar.org.in