



Vol. 31 No. 4

Quarterly

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ICAR-NBPGR participates in the Governing Body Meeting of the International Treaty on Plant Genetic Resources for Food and Agriculture

The sixth session of the Governing Body (GB 6) of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), was held from 5-9 October 2015, at Rome, Italy, which was preceded by the 4th Meeting of the Ad-Hoc Open-ended Working Group to Enhance the Functioning of the Multilateral System (MLS) of Access and Benefit-sharing (ABS), from October 2-7, 2015. Dr K.C. Bansal, Director, ICAR-NBPGR participated in these meetings along with Mr Rajesh K. Singh, Joint Secretary (Seeds), Department of Agriculture and Cooperation, Ministry of Agriculture and Farmers' Welfare.

The Ad-Hoc Open-ended Working Group highlighted the preparatory work undertaken towards developing a subscription system. The progress made by the Working Group was presented to the Governing Body on Monday (5 October). The Governing Body provided guidance to the Working Group for further deliberations held from October 6-7, 2015. The Working Group deliberated on revised Standard Material Transfer Agreement (draft); structural elements for the development of a subscription model/system, and proposal to develop a mechanism of contributions by Contracting Parties to the Benefit-Sharing Fund.

At the Sixth Session of the GB meeting many resolutions were adopted. Deliberations revolved around two main themes that is addressing the shortfall in the Benefit-Sharing Fund (BSF), to enhance user-based payments through a subscription system for access to the MLS; and strengthening implementation of Treaty provisions. The GB also highlighted the issues related to the management of PGRFA, and documentation of related information for the Global Information System.



Dr K.C. Bansal at the sixth session of the Governing Body Meeting of ITPGRFA, Rome, Italy

PGR ACTIVITIES

Exploration and Germplasm Collecting

Germplasm exploration and collecting in Nagaland



***Herpetospermum operculatum*, a wild relative of *Luffa*, collected from Nagaland**

An exploration and collecting mission was undertaken by ICAR-NBPGR, RS, Thrissur in collaboration with ICAR-Indian Institute of Horticultural Research (IIHR) from October 10 to November 9, 2015 covering Phek, Tuensang and Mokokchung districts and adjoining areas of border districts like Dimapur, Kiphire, Kohima and Wokha of Nagaland. A total of 176 samples of 40 taxa of targeted crops and their wild relatives were collected. Good variability in French bean, yard-long bean and *Momordica subangulata* subsp. *subangulata* was collected. Species diversity in *Solanum* was very good. *Vigna nepalense*, *Gynopetalum chinense* (*Trichosanthes* related), *Herpetospermum operculatum* (*Luffa* related), *Abelmoschus tetraphyllus* var. *pungens*, *Solanum indicum*, *S. torvum*, *S. aculeatissimum*, *S. aethiopicum* were the crop wild relatives collected. Some of the unique collections included *Cucumis sativus*



***Momordica subangulata* subsp. *subangulata*, a rare and endangered taxon collected from Tuensang district of Nagaland**

(slicing cucumber with good taste and mild sweetness, JRPH/15-58), yard-long bean [extra long fruited (90cm), JRPH/15-68], French bean (with white small grains and no flatulence creation JRPH/15-122), *Solanum indicum* (semi-domesticated without spines, JRPH/15-39). Population diversity in RET taxa *Momordica subangulata* subsp. *subangulata* was also collected.

Exploration and collecting of *Ocimum* species

A collaborative exploration was undertaken by ICAR-NBPGR, RS, Bhowali; ICAR-NBPGR, New Delhi and Kumaon University, Uttarakhand during October 5-12, 2015 for collecting species of *Ocimum*. The areas explored included Mandakini and Alaknanda valley of Garhwal Himalayas. A total of 20 samples were collected comprising *Ocimum viridi* (8), *O. basilicum* (7), *O. sanctum* (4) and *O. kilimandscharicum* (1).

Collecting wild relative of rice from coastal Odisha

An exploration mission for collecting *Porteresia coarctata* (syn. *Oryza coarctata*) germplasm from coastal districts of Odisha such as Kendrapara, Bhadrak and Jagatsinghpur was undertaken by ICAR-NBPGR, RS, Cuttack in collaboration with ICAR-National Rice Research Institute, Cuttack during October 17-21, 2015. This wild rice grows in abundance in coastal regions near mangroves and is important for its salt tolerance. The germplasm (10 samples) was collected from the mangrove habitat spreading over the periphery of Bhitarkanika wild life sanctuary.

Multi-crop germplasm exploration in Madhya Pradesh and Gujarat



***Luffa echinata*, a close relative of ridged gourd, collected from Madhya Pradesh**

During a trip undertaken by ICAR-NBPGR, RS, Thrissur (Nov. 11- Dec. 2, 2015) in areas covering Rewa, Siddhi and Singrauli districts of Madhya Pradesh, and adjoining areas of border districts (Satna, Panna and Shadol of Madhya Pradesh and Chitrakoot in Uttar Pradesh), 122

samples comprising 31 taxa were collected. Good variability in population samples of *Solanum incanum* was collected. Unique bunch type, small round and



***Canavalia virosa*, a close relative of sword bean and jack bean, collected from Madhya Pradesh (inset shows fruits)**

medium-long, nearly un-ridged fruited *Luffa hermaphrodita*, good variability in *Trichosanthes cucumerina*, small fruited native bitter melon and vegetable cowpea were collected. Unique collections included *Luffa echinata* (JJNS/15-119); *Rhynchosia rothii* (JJNS/15-18, morphologically allied to soybean), ridged melon (JJNS/15-13 and JJNS/15-16, small, scented bunch type called 'Ramthorai'), sponge melon (JJNS/15-52, slender thin bunching).

In another trip to the Northern Western Ghats area of Gujarat (Nov. 23-Dec. 4, 2015), in collaboration with the ICAR-Indian Institute of Oilseeds Research (ICAR-IIOR), Hyderabad, wild species of *Sesamum* were collected. The area comprising four districts of Gujarat namely Valsad, Dang, Navsari and Surat was covered and a total of 73 samples belonging to 15 species were collected including 30 samples in two species (28 of *S. malabaricum* and two of *S. radiatum*). Six samples of castor germplasm were collected, three different species of *Abelmoschus* (26 samples) and distinct cultivated landrace each of greater yam, bottle melon, brinjal ('Desi Gulabi') and sorghum (white seeded) were also collected.

Germplasm collecting of rice and finger millet in Jharkhand

Exploration and collecting mission of known landraces of rice (*Oryza sativa*) for drought tolerance and finger millet (*Eleusine coracana*) was conducted in Chhattisgarh (Raigarh, Balod, Rajnandgaon) and parts of Bastar region (Kanker, Narayanpur and Kandagaon). This was undertaken by ICAR-NBPGR, RS, Ranchi in collaboration with ICAR-NBPGR, New Delhi, from Oct. 25 – Nov. 1, 2015. A total of 60 samples were collected,

comprising rice (48) and finger millet (12). The main collections of drought tolerant rice landraces are *Ampo*, *Parasmani*, *Desi-sapri*, *Dawar dhan* (awned), *Dawar dhan* (unawned), *Laldhan*, *Shridhan*, *Sathia*, *Jandradhan*, *Turiadhan*, *Bayo dhan*, *Kolia dhan*, *Dokramuchha dhan*, *Paradhan*, *Kaladhan*, *Lalichaudah*, *Bansbhida dhan*, *Luchai dhan*, *Kolinga*, *Chuhkhadan*, *Dumarphool*, *Chirai-nakhi*, *Ghadha-khuntha dhan*, *Barangi*, *Gurmatia dhan*, *Bhata-sapri*, *Culture*, *Bhursi*, *Khut-bodi dhan*, *Ashan-churi*, *Mundaria*, *Haldighati*, *Bhata-sona* and *Anjandhan*.

Germplasm collecting of millets from Maharashtra



Collecting inflorescence of proso millet (*Panicum miliaceum*) (ESD-98) accession

An exploration was undertaken by NBPGR, RS, Akola, in Dhule and Nandurbar district of Maharashtra during Sept. 25 - Oct. 3, 2015 in collaboration with IIMR, Hyderabad. A total of 125 samples were collected from 61 sites from four districts i.e. Dhule (22), Nandurbar (82), Buldana (10) and Jalgaon (11). These include, *Sorghum bicolor* (39), *S. halpense* (2), *S. purpureosericeum* (1), *Panicum miliaceum* (8), *Pennisetum glaucum* (06), *Paspalum scrobiculatum* (3), *Echinochloa crusgalli* (3), *Eleusine coracana* (12), *E. frumentacea* (19), *Setaria italica* (18), *S. verticillata* (1), and cultivated species of *Vigna mungo* (4), *V. radiata* (4), *Macrotyloma uniflorum* (1), *Sesamum indicum* (3) and *Zea mays* (1). Ear head length of *S. bicolor* varied from 10.8-56.1cm whereas ear head weight varied from 9.23-556.5 g. 100-seed weight was recorded 1.65-2.92 g. A promising high yielding accession of proso millet (ESD-98) was collected from Talawari valley of Tam vurni village, Nandurbar district at an altitude of 1,744 feet amsl. The plants are tall, having broad leaf and possess long panicle and grown by most of the farmers of the area.

Collecting Asiatic *Vigna*, wild relatives of *Cajanus* and *Mucuna*

A tour to South Gujarat was undertaken by ICAR-NBPGR, RS, Akola, in collaboration with Pulses

Research Station, SDAU, Sardarkrushinagar, Gujarat during Oct. 18-30, 2015. A total of 112 accessions were collected from 53 sites in ten districts. These include, cultivated species *Vigna mungo* (36), *V. radiata* (25), *V. unguiculata* (18), *V. aconitifolia* (3), *V. trilobata* (3), *Cajanus cajan* (3), *C. scarabaeoides* (2), *C. albicans* (1), *Oryza sativa* (8), *Sesamum indicum* (1), *Mucuna pruriens* (4), *Abelmoschus tuberculatus* (2), *Rhynchosia minima* (3), and others (3).

Exploration for cucurbit species

An exploration was conducted for collecting wild relatives of *Cucumis*, *Luffa* and *Trichosanthes* spp. from Visakhapatnam, East and West Godavari districts of Andhra Pradesh during Oct. 29 – Nov. 7, 2015 by ICAR-NBPGR, New Delhi and RS, Hyderabad. A total of 50 accessions belonging to 19 taxa were collected, majority being *Trichosanthes* (2 taxa; 18 samples) and *Cucumis* (5 taxa; 15 samples). In addition, 80 herbarium specimens of cultivated plants/wild relatives/minor economic plants were collected along with field notes and ethnobotanical information.

Germplasm Exchange

Import

A total of 11,652 accessions of various crops were introduced from 22 countries.

Promising introductions include high zinc varieties of rice (EC862444-46) from Bangladesh. Promising local varieties of black cumin (EC869421-423) coriander (EC869415), Egyptian clover (EC869417), fennel (EC869416), soybean (EC869419), sesame (EC869418, EC869420), silver berry (EC869425), buckwheat (EC869427), oats (EC869429), chickpea (EC869428), field pumpkin (EC869433), French bean (EC869430), mung bean (EC869426), sacred basil (EC869424, EC869432) and castor (EC869431) from Uzbekistan; coriander (EC870951), cumin (EC870954 to EC870955), fennel (EC870957), field pumpkin (EC870950) and rosemary (EC870956) from Kyrgyzstan; sesame (EC870952 to EC870953) and musk melon (EC870958 to EC870960) from Tajikistan were introduced. Promising germplasm/varieties of oil palm (EC869395-869414) from Malaysia were also obtained under a collaborative research project.

Plant Quarantine

At ICAR-NBPGR, New Delhi, a total of 80,395 samples of imported samples (including transgenics and trial material) were processed for quarantine clearance and 524 samples were subjected to X-ray radiography. Of these, 1,127 samples were found infested/infected with insects (37), fungi/ bacteria (137), nematodes (70) and

weeds (883). The infested/infected samples were salvaged through different physico-chemical methods. A total of 2,956 paddy samples were subjected to prophylactic HWT; 3,095 samples of different crops were fumigated and 10% tri-sodium orthophosphate treatment



Exotic weeds intercepted in barley germplasm imported from Morocco (a) *Avena barbata* (b) *Phalaris paradoxa* (c) *Polygonum arenastrum* (d) *Galium tricornerum*

was given to 679 samples of chilli and tomato. A total of 67 samples were rejected due to infection of fungi: barley due to *Ustilago segetum* var. *hordei* from Morocco (60), brassica (1), wheat due to *Tilletia caries* from Australia (2), tomato due to *Fusarium solani* from Tajikistan (1) and chilli, tomato and garlic due to heavy fungal infestation (4). Two post-entry quarantine inspections (PEQI) were undertaken during this period.

A total of 2,814 samples were received from Division of Germplasm Conservation, for seed health testing of which 1,687 samples were subjected to X-ray radiography. A total of 203 samples were infested with insects, 56 samples infected with fungi and 37 samples infected with nematodes. A total of 62 samples were rejected as they could not be salvaged.

At ICAR-NBPGR, RS, Hyderabad, a total of 3,533 import and 2,541 of export germplasm samples (including 1,662 for Svalbard Seed Vault) were processed from quarantine point of view. Import germplasm (7,277 samples) consisting of paddy, maize, sorghum, tomato, chickpea, capsicum, garlic, tobacco and *Eucalyptus* spp., received from different countries was released to consignees after necessary mandatory treatments. Eight accessions of barley from France, infected with *Pseudomonas* sp. were detained. Eight samples of chickpea meant for export to Kenya by ICRISAT were also detained due to bacterial infection. In all, 11 Phytosanitary certificates were issued.

During quarantine processing, *Rhizoctonia bataticola* on maize from Philippines and Thailand, *Fusarium solani* on maize from Mexico, *Lasiodiplodia maydis* on maize from Thailand; *R. solani* on barley from Australia, *R. bataticola* and *Colletotrichum graminicola* on sorghum from Nigeria, *C. graminicola*, *R. bataticola*, *Fusarium equiseti*, *Drechslera setariae* on sorghum from Mali, *Choanephora cucurbitarum* on ridge gourd from USA, oospore crusts of downy mildew pathogen (*Peronospora parasitica*) on cabbage seed from USA, and *Stemphylium* sp. on garlic seeds and cloves from Israel were intercepted. *Sitophilus oryzae* on paddy from Philippines, *S. zeamais* (live insects) on maize from Egypt, *Rhizopertha dominica* on sorghum from Nigeria and live mites on garlic seeds and cloves from Israel were the insect interceptions.

Germplasm Characterization and Evaluation

Cabbage Field Day



A view of the exotic cabbage germplasm under multiplication and characterization at Katrain, Himachal Pradesh

Under the Consortium Research Platform (CRP) on Agrobiodiversity, 150 exotic germplasm imported from various countries are being multiplied and characterized at ICAR-IARI, RS, Katrain, Kullu Valley, Himachal Pradesh. A 'Cabbage Field Day' was organized on Nov. 20, 2015 at the site, which was attended by about 90 farmers, farm women, rural youth and senior representatives of private stakeholders and scientists of the station. The participants appreciated the range of variability exhibited with respect to head size, shape, compactness with few outer leaves and early duration. After the field day, a meeting was organized and during discussion, several of the farmers and local entrepreneurs enquired the procedure for obtaining germplasm. They were informed that the material is being supplied by ICAR-NBPGR under MTA.

Germplasm evaluation at New Delhi

A total of 8,786 accessions of various agri-horticultural crops comprising wheat (4,025), barley (250), brassica (2,185), linseed (250), lentil (1,171), chickpea (726), tomato (750) and potential crops (191) were grown for characterization and evaluation. Besides, 94 accessions of brinjal including wild species were characterized for resistance to fruit and shoot borer. Genetic variability was observed for days to maturity, growth habit, pods per plant, seed colour, shape and size in cowpea. Trait-specific germplasm were identified for earliness (EC723684, EC724381, EC723746, and EC723797), erect habit (EC723894, EC724381), pods per plant (EC723996, EC723804, EC723739).

Biochemical evaluation of velvet bean

At ICAR-NBPGR, RS, Cuttack, 25 accessions of velvet bean (*Mucuna pruriens*) were evaluated for L-DOPA content (%). Normally seeds of the plant contain about 3.1-6.1% L-DOPA. Amongst the test samples, accessions IC599290, IC599336, IC599361 and IC599350 were identified as promising for L-DOPA (%) with values of 7.09, 6.50, 6.43 and 6.42, respectively.

Genomic Resources and Bioinformatics

Development of mini-core of rice from North-East collections

A rice core consisting of 701 accessions was initially developed from 6,984 accessions collected from N-E region of India. This core was recently characterized with 50K SNP chip of rice. Cluster analysis based on 50K SNP markers grouped 194 accessions of mini-core into seven clusters. This analysis demonstrated that diversity in mini-core, developed from N-E rice collection, has captured maximum diversity present in entire 6,984 accessions.

Marker development and characterization

Different molecular marker systems used in molecular analyses and characterization of crop species has been accomplished. In *Trichosanthes*, new SSRs were identified, through cross-species transferability studies. Similarly, in little millet, several SSRs were designed from ESTs to be used in DNA fingerprinting and diversity analysis. Additionally, nine CAAT box-derived polymorphism (CBDP) markers were also identified in little millet for DNA profiling of accessions.

GMO detection

The practical applicability of developed multiplex (5-plex) PCR for screening of GM events of cotton has been tested and verified using eight sets of spiked samples with different proportions of selected GM cotton events. Additionally, adventitious presence of transgenes in ten *ex-situ* cotton collections using PCR assays has been done.

EXHIBITIONS AND FAIRS

Exhibition and Fairs in NEH Region

ICAR-NBPGR participated in the International Conference on Indigenous Terra Madre 2015 (ITM 2015) at North-Eastern Hill University (NEHU), Shillong, from Nov. 3-7, 2015. The theme of this conference was 'The



ICAR-NBPGR exhibition stall in the 'International Conference on Indigenous Terra Madre 2015' at NEHU, Shillong

future we want: Indigenous perspective and action'. It had participation of over 600 delegates from 140 tribes belonging to 58 countries. The conference deliberated on issues of how to shape a future for food and how indigenous people in NEH contribute to resilient food system. ICAR-NBPGR participated in an exhibition wherein local germplasm of citrus, root crops, maize, rice

and other potential crops was displayed.

Another exhibition was held by ICAR-NBPGR during the 'National Seminar on Sustaining Hill Agriculture in Changing Climate' at Agartala (Tripura). The seminar was organized by Indian Association of Hill Farming and ICAR Research Complex for NEH Region, Umiam, Meghalaya from December 5-7, 2015. The exhibition and displayed material was appreciated by visitors including the Hon'ble Governor of Tripura, Shri Tathagat Roy, Chief Guest of the Inaugural Function.



Shri Tathagat Roy, Hon'ble Governor of Tripura and the Director of ICAR RC for NEHR visiting ICAR-NBPGR stall

PGR FOR FARMERS

Scientists-farmers interaction meeting

A scientists-farmers interaction meeting was conducted by ICAR-NBPGR, RS, Thrissur on Dec. 27, at a Malayarayan tribal hamlet at Maniyankinar Village in Peechi forest area of Thrissur district. This was to celebrate the 'Jai Kisan Jai Vigyan' week. Distribution of vegetable seeds for ensuring nutritional security of homestead was the highlight. Local landraces of drumstick, ivy gourd, vegetable banana (cv. 'Monthan'), cassava (IC616282 and IC616283) and improved varieties of okra, ash gourd, pumpkin, bitter melon, oriental pickling melon, Chinese spinach and yard-long bean were supplied to the interested farmers.

'Mera Gaon Mera Gaurav'

The flagship programme of the Prime Minister of India, 'Mera Gaon Mera Gaurav (MGMG)' was officially launched from October 2015, wherein agricultural scientists in the country are required to divide their attention between research and extension education to help in the success of 'lab to land' motto. The scheme envisages scientists to select villages as per their convenience and remain in touch with the selected villages and provide information to the farmers on technical and other related aspects in a time-frame

through personal visits or on telephone.

ICAR-NBPGR initiated activities under this programme.

The ICAR-NBPGR, RS, Bhowali, adopted Gadsiyari, Suri and adjoining villages (Matila, Oliagaon, Ookhina) in Tarikhet, Ranikhet and Almora districts.



Group discussion with farmers of Village Gadsiyari

Information was gathered on various aspects of farming from the farmers including, farmer household, land holdings, net sown area, cropping intensity, cropping systems, seed management systems, traditional agricultural knowledge and awareness about agrobiodiversity management. Interactions with the farmers were held on enabling policy issues facilitating mainstreaming biodiversity in production landscapes, aspects related to food sovereignty, agricultural production and household dietary diversity, etc.

TRAININGS

International training on DNA-based GMO detection

An international training program on 'DNA-based Genetically Modified Organism (GMO) Detection for Seed Testing and Certification' for a delegation of eight officials from the Government of Nepal, was organized at ICAR-NBPGR, New Delhi from Nov. 30 to Dec. 12, 2015, sponsored by International Food Policy Research Institute (IFPRI). The program primarily aimed to benefit the interest of Nepal. It covered current scenario, recent national and international developments in the area of GM crops, evolution of regulatory regimes, risk assessment and management strategies associated with biosafety issues and post-release monitoring. The training program had gracious presence of experts and policy makers, including Dr S.R. Rao, Advisor, Department of Biotechnology & Member Secretary, Review Committee on Genetic Manipulation; Dr Manoranjan Hota, Director, Ministry of Environment, Forests and Climate Change; Dr Vibha Ahuja, Chief General Manager, Biotech Consortium India Limited; Dr A.K. Singh, Head, Division of Genetics, ICAR-Indian Agricultural Research Institute; experts from ISO17025:2005 accredited GMO testing laboratories and National Accreditation Board for Testing and Calibration Laboratories, as well as experts and faculty

from ICAR-NBPGR. The program included 17 expert talks and four panel discussions on emerging issues of management of plant genetic resources, issues in area of GMO detection, ISO accreditation of seed testing laboratories, biosafety issues pertaining to GM crops and related IPR issues. In the valedictory function, Dr J.S. Chauhan, Assistant Director General (Seeds), ICAR, distributed the certificates to participants in presence of Dr K.C. Bansal, Course Director, Dr Gurinderjit Randhawa, Course Coordinator and Dr Anjani Kumar from IFPRI.

Training workshops on transboundary movement of LMOs

Five training workshops on '*Strengthening Capacities of Enforcement Agency (Customs & Plant Quarantine Officials) for Transboundary Movement of Living Modified Organisms (LMOs)*' were organized by ICAR-NBPGR under the UNEP-GEF capacity building project on biosafety (Phase II). These trainings were held on Nov. 16-17, at NACEN, Chennai; on Nov. 19-20, at NACEN, Mumbai; on Nov. 26-27, at NACEN, Kolkata; on Dec. 8-10 and 16-18, at ICAR-NBPGR, New Delhi. The workshops were convened by Drs Shashi Bhalla and Celia Chalam.

VIGILANCE AWARENESS WEEK



Lecture on 'Preventive vigilance as a tool of good governance' organized at ICAR-NBPGR, New Delhi on October 30, 2015. From left to right, Dr K.C. Bansal, Mr Ravinesh Kumar, Mr Girish Bhatt and Mr Vivek Purwar

Vigilance Awareness Week was observed from October 26-31, 2015 at headquarters and regional stations of ICAR-NBPGR, to create awareness among staff and to check corruption. At the headquarter, the programme was initiated with a pledge ceremony administered by Dr K.C. Bansal, Director on October 26, and posters and banners were displayed at prime locations within the campus. An essay writing competition on the topic '*Corruption - a cancer and ways for its eradication*' was held on October 28, wherein 15 participants representing various staff categories participated. Among them, Mr Shivam Kumar (PGR student) was adjudged 1st, Mr.



Mr Shivam Kumar (PGR student) receiving the 1st prize from Mr Ravinesh Kumar for essay writing competition

Sahadev Kuwardadra (PGR student) was 2nd, Mr K.D. Joshi (Assistant Chief Technical Officer) and Ms Arti Kumari (Skilled Contractual) secured 3rd position. A lecture was also organized on October 30. Mr Ravinesh Kumar, Director, DARE and Chief Vigilance Officer, ICAR, New Delhi, delivered a lecture on 'Preventive vigilance as a tool of good governance'. Mr Girish Bhatt, Under Secretary (Vigilance), ICAR, New Delhi was the Guest of Honour. This was followed by a mime on corruption played by the PGR students of PG School, ICAR-IARI, New Delhi. All the 10 regional stations of ICAR-NBPGR, also observed Vigilance Awareness Week.

FORTHCOMING EVENT



1ST INTERNATIONAL AGROBIODIVERSITY CONGRESS 2016

Science, Technology, Policy and Partnership

November 6 - 9, 2016 | New Delhi, INDIA

The Indian Society of Plant Genetic Resources (ISPGR) and Bioversity International, New Delhi, in collaboration with Indian Council of Agricultural Research (ICAR), Protection of Plant Varieties and Farmers' Right Authority (PPV&FRA), National Biodiversity Authority (NBA), National Academy of Agricultural Sciences (NAAS) and Trust for Advancement of Agricultural Sciences (TAAS), with support from Global Crop Diversity Trust (GCDT), Japan International Research Centre for Agricultural Science (JIRCAS), International Centre for Research in Semi-Arid Tropics (ICRISAT) and International Maize and Wheat Centre (CIMMYT) are organizing the 1st International Agrobiodiversity Congress (IAC 2016) from November 6-9, 2016 in New Delhi, India. The objective of the Congress is to provide a platform to all the stakeholders engaged in genetic resource management to deliberate on thematic issues of global importance, with major emphasis on rational and effective use of agrobiodiversity for food, nutrition and environmental security. For details about the Congress, please visit the website at <http://www.iac2016.in>. Last date for abstract registration is April 30, 2016.

PERSONNEL NEWS

Deputation Abroad

Dr Sundeep Kumar, Senior Scientist, Division of Genomic Resources, ICAR-NBPGR, New Delhi visited University of Barcelona, Spain, to attend the '2nd Face-to-Face Meeting of the Expert Working Group on Wheat Phenotyping'. He also made presentation on "QTL mapping for traits associated with terminal heat tolerance in spring wheat", in the 'EPPN Plant Phenotyping Symposium', November 10-12, 2015.

New Appointment

Dr Kuldeep Tripathi joined as Scientist at ICAR-NBPGR, New Delhi, w.e.f. October 9, 2015.

Retirements

Mr Bhuvnesh Kumar, Technical Officer, Division of Germplasm Conservation, ICAR-NBPGR, New Delhi, superannuated on December 31, 2015.

Mr Anil Kumar Agarwal, Finance and Accounts Officer, ICAR-NBPGR, New Delhi superannuated on December 31, 2015.

Transfers

Dr (Ms) S. Sheelamary, Scientist, Division of Germplasm Evaluation, ICAR-NBPGR, New Delhi, transferred to ICAR-Sugarcane Breeding Institute, Coimbatore, w.e.f. November 30, 2015.

Dr C.S. Raghav, Assistant Chief Technical Officer, Division of Germplasm Evaluation, ICAR-NBPGR, New Delhi, transferred as Programme Coordinator, to KVK, West Siang, Basar, Arunachal Pradesh w.e.f. December 17, 2015.

Awards

Dr J.C. Rana, Head, Division of Germplasm Evaluation, ICAR-NBPGR, New Delhi, received the 'Dr R.B. Ekbote Award' in recognition of his significant research contribution in the area of plant breeding and genetics. The award consists of a citation and a token cash award of ₹ 5,000. The award was conferred to him during the foundation day celebrations of Agharkar Research Institute, Pune, on November 18, 2015.

Published by:

Director, ICAR-NBPGR, New Delhi-110 012, India

Compilation and editing :

Anuradha Agrawal, Kavita Gupta, Lalit Arya and Gaya Charan

Computer assistance:

Vijay Kumar Mandal