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Groundnut Farmer Fair-cum-Exhibition

ICAR-DGR, with the financial support from NFSM, organised a Groundnut farmer fair-cum-exhibitionat ICAR-DGR, Junagadh on 1st October, 2018. Junagadh Agricultural University, Department of Agriculture, Govt. of Gujarat, ATMA, Junagadh, NGOs, and dealers of agricultural implements, inputs, irrigation systems and accessories have participated in the mela and exhibited their technologies and materials. More than 800 farmers from the different villages of Junagadh, Gir-Somnath, Amreli and Rajkot had attended the mela. Besides, 24 farmers from Odisha also participated in the mela. Dr. A. R. Pathak (Vice Chancellor, Junagadh Agricultural University), the chief guest of the function urged the groundnut farmers to adopt new improved varieties, crop production and protection practices besides intercropping/ crop rotations to make the groundnut cultivation more sustainable and profitable.

Dr. R K Mathur, Director, Indian Institute of Oil Palm, Pedavegi, the special guest of the function, highlighted the need for enhancing the edible oil production in the country.

Dr. Manoranjan Dutta, Advisor, NFSM had explained different schemes and supports being extended by the Government to the farmers for doubling their farm income. He also insisted for higher production of groundnut to meet out ever increasing oil demand of India. Dr. Radhakrishnan, Director, ICAR-DGR has urged the farmers to adopt the improved production technologies and further mechanization to make the groundnut cultivation more remunerative. Pamphlets in local language on the integrated white grub control, management of micronutrient deficiencies, Aflatoxin management, storage pest management in groundnut and health benefits of groundnut were distributed to the farmers. Dr. V. P. Ramani, Project Incharge, AICRP on Micro Nutrient, Anand Agricultural University, Anand delivered a lecture on "Management of micronutrient deficiencies in groundnut" and had interaction with the farmers. Progressive farmers and Sarpanch from different villages adopted by the ICAR-DGR under Mera Gaon Mera Gaurav programme shared their experiences on controlling of white grub as per technological interventions extended by the ICAR-DGR.

Screening of groundnut germplasm accessions for iron chlorosis

In India, Groundnut covers an area of 45 lakh hectares with a production of 67lakh tons and a productivity level of 1484 kg/ha. Iron chlorosis is more prevalent abiotic stress in the Saurashtra Region of Gujarat, Marathwada region of Maharashtra and parts of Rajasthan, Tamil Nadu and Karnataka states in India and causing 16-32% yield losses in groundnut. Iron is an important micronutrient and plays critical role in respiration, photosynthesis, and chlorophyll biosynthesis. In calcareous soils, high calcium carbonate interferes with plants for the uptake of iron and leads iron chlorosis in groundnut crop. Iron deficiency causes reduced photosynthetic pigments and enhancement of carotenoids over chlorophylls leading to appearance of yellow color of leaves. The screening of germplasm collections under iron limitation during *rabi*-summer2016, accessions: NRCG 14459, NRCG 14467, NRCG 14475, NRCG 14479 and NRCG 14395 were found tolerant to iron chlorosis as per visual chlorotic rating (3).

Fig: Field screening groundnut germplasm accessions for iron chlorosis

Inputs: Gangadhara K, Narendra Kumar, Ajay BC and Rathnakumar AL

Mineral composition of advanced breeding lines

Micronutrient malnutrition arising from dietary deficiency is serious health issues in present days. The most striking of these are iron (Fe) and zinc (Zn) deficiencies contributing to global burden of diseases. This calls for immediate remedial measures of micronutrient deficiencies or hidden hunger. Crop biofortification is a sustainable approach in alleviating malnutrition. Considering the high nutritional value of groundnut, biofortication approach can helps in improving the mineral content. Profiling of advanced breeding lines for mineral concentration and identifying advanced breeding lines with improved yield and minerals becomes important breeding objective.

In this direction, nutrient analysis was carried out in 23 advanced breeding lines using Atomic Absorption Spectrophotometer (Perkin Elmer AA 400). The advanced breeding lines PBS 15041 had the highest grain zinc content of 40 ppm followed by PBS 15058 and PBS 15059 (>36 ppm) each, whereas the lowest zinc content was found in PBS 15014 (22 ppm). The manganese content varied from 7 to 8 ppm.

S No	Advanced breeding line	Zn (ppm)	Mn (ppm)	Cu(ppm)	K (%)	P (%)
1	PBS 11077	27	10.6	9.3	0.73	0.44
2	PBS 14065	33	13	11.6	0.74	0.49
3	PBS 14078	34	16	12	0.85	0.54
4	PBS 15007	30	13.6	10.3	0.79	0.39
5	PBS 15014	22	7.3	9.3	0.78	0.33
6	PBS 15022	31	11	10.6	0.76	0.45
7	PBS 15027	26	11.3	10.3	0.78	0.47
8	PBS 15041	40	18	13	0.66	0.45
9	PBS 15044	26	10	9.6	0.75	0.43
10	PBS 15055	28	8.3	9.3	0.82	0.41
11	PBS 15058	36	11.3	11.3	0.82	0.49
12	PBS 15059	36	13.3	11.6	0.7	0.43
13	PBS 15061	25	11.3	10	0.88	0.44
14	PBS 16013	29	10	12.3	0.81	0.44
15	PBS 16016	26	11.3	9.6	0.8	0.45
16	PBS 16021	30	12.3	9	0.69	0.47
17	PBS 16022	33	16	12.6	0.74	0.43
18	PBS 16023	32	12.6	13.3	0.71	0.42
19	PBS 16029	29	12.3	11.3	0.7	0.36
20	PBS 16035	26	8.6	9.33	0.78	0.42
21	PBS 16038	23	10.6	10.6	0.71	0.42
22	PBS 30001	33	14.3	9.3	0.71	0.41
23	PBS 30044	31	11	12	0.9	0.42

The advanced breeding line PBS 15041 had the highest manganese content (18 ppm) followed by PBS 14078 (16 ppm) and PBS 16022 (16 ppm) while the advanced breeding line PBS 15014 (7 ppm) had the lowest copper content. Two of the advanced breeding lines *viz.,* PBS 16023 and PBS 15041 had 13 ppm of copper content. Potassium content was in narrow range, two advanced breeding lines PBS 30044 and PBS 30044 had 0.9 %. Highest phosphorous was found in three advanced breeding lines PBS 14078, PBS 15058 and PBS 14065 (0.5 %).

Inputs: Gangadhara K, Singh AL, Sushmita Singh, Ajay BC and Vidya Chaudhari

Promising advanced breeding lines for confectionery in groundnut

Globally about 48 per cent of the groundnut is used for food purpose and 52 per cent for oil extraction. Groundnut is primarily used for oil extraction; it is also consumed directly because of its high food value. Confectionery groundnut with premium edible grade has great demand all over the world. The use of edible large/bold seeded groundnut kernels is generally referred as confectionery, and Hand Picked Selection (HPS) groundnut. India has immense potential for exporting confectionery and large seeded groundnut. Edible groundnuts are consumed or utilized in a variety of ways. Important among them are peanut butter, roasted and salted kernels, preparation of candies and kernels are flaked as cake or biscuit decoration. Quality requirements for confectionery purpose are kernels of large, uniform in shape and size, bright dark tan or light rose colour, high protein content, high sugar content, low oil content, ease of blanching, good shelling percentage, high pod yield, high HKW and high oleic/linoleic acid (O/L) ratio with free aflatoxin.

Breeding program in groundnut in this direction resulted in the development of advanced breeding lines, PBS 19013, PBS 19015, PBS 19018, PBS 29079 B, PBS 29082, PBS 29124, PBS 29167, PBS 29196, PBS 29197, PBS 29212 and PBS 29219 with good confectionery quality traits viz., large seediness (KL: >1.5 cm and KW: >0.7 cm), good protein (>30%), good sugar (>5 %), moderate oil (42- 48%), uniform pod size and shape, higher HKW (> 50 gm), good pod yield per plant (> 10 gm) and good shelling percentage (> 60 %).

Inputs: Praveen Kona, Gangadhara K, Narendra Kumar, Ajay BC

Application of paclobutrazol increases number of flowers and pods per plant and pod yield of groundnut

Excessive vegetative growth due to cloudy weather during rainy season is one of the major constraints to get higher pod yield of groundnut in Gujarat. Excessive vegetative growth leads to poor/ unsynchronised flowering and peg setting and mature pods per plant (Nigam, 2015). To counter excessive vegetative growth farmers sow groundnut at wider spacing (60 or 75 cm) instead of recommended 45 cm in Virginia bunch varieties which leads to less than optimum plant stand and overall yield reduction on area basis. Therefore, there is need to identify suitable hormone for retarding vegetative growth and increase number of flowers and pods per plant to increase crop yield. Keeping in view above, a field experiment was conducted during kharif 2017 to evaluate the effects of growth hormones on productivity of groundnut. The objective of study was to enhance the yield of kharif groundnut by enhancing the number of flowers and mature pods per plant and retarding the excessive vegetative growth. The treatments were: control (water spray), paclobutrazol@75 ppm, paclobutrazol@100 ppm, NAA@40ppm, and GA@ 20ppm. The experiment was conducted in randomized block design with three replications. The groundnut variety GJG 22 was sown on 16th June, 2017 at 45 x 10 cm spacing.

Application of paclobutrazol@100 ppm was found to reduce plant height at harvest significantly as compared to control. LAI was also reduced remarkably at 45 DAS with the application of paclobutrazol@100 ppm but not much differences was found in LAI at 75 DAS as compared to control as the paclobutrazol treated plants grew rapidly about 20 days after the treatment. Similarly, treatment with paclobutrazol@100 ppm increased number of flowers (76.3), immature (5.1) and mature (13.4) pods per plant as compared to control (65.2, 2.9, and 12.0, respectively). The increase in yield attributes with the application of paclobutrazol@100 ppm resulted into significant increase in pod yield which was 12.7 percent higher as compared to control. However, haulm yield was decreased with the application of paclobutrazol@100 ppm (3509 kg/ha) as compared to control (3970 kg/ha).

Fig. Groundnut crop sprayed with paclobutrazol@ 100 ppm (left) and control (right) at 45 days after sowing

Reference: Nigam, S.N., 2015. Groundnut at a Glance. Accessed at:
http://oar.icrisat.org/8455/1/Groundnut%20at%20a%20Glance.pdf; dated 14th December, 2018.

Inputs: Ram A Jat and Zala PV

Phytic acid to zinc molar ratio: A governing factor for bioavailability of zinc

Zinc, one of the most essential micronutrient mineral elements, is among the major culprits for malnutrition the deficiency of which is occurring worldwide. Efforts are made to enhance the zinc content in edible plant parts, the starting point in a food chain. Biofortification as a potent alternative to feed the growing population with improvement in nutritional value of food products, is performed through agronomic, conventional breeding and biotechnological methods. Though the overall enhancement in the level of zinc content is achieved, there still remain limitations at the level of bioavailability due to presence of anti-nutrients of which phytic acid is of major concern. The Phytic acid (*myo*-inositol 1,2,3,4,5,6-hexakisphosphate) is the primary source of inositol and stored phosphorus in seeds. Phytic acid has a strong chelating tendency and reduces the availability of mineral nutrients and vitamins due to lack of phytase enzyme in the digestive tract of human beings. Thus, even if the Zn content in kernel is improved, the level of phytic acid is required to be low so that the bioavailability of Zn is not restricted.

As per WHO, diets with phytate/zinc molar ratio over 15 are low bioavailable diets with 15% zinc absorption. However, diets with molar ratio under 5 have higher level of zinc absorption (50%). Thus, we need to identify the genotypes with high Zn density and low phytate which would reflect a lower molar ratio for phytic acid and Zn, thereby enhancing its bioavailability. At ICAR-DGR, screening for genotypes with such trait is undergoing. Among the high Zn density groundnut cultivars, Tirupati 3 was found to have comparatively lower phytic acid content while there are some other genotypes with moderately high Zn content (45-55 ppm) but have sufficiently lower phytic acid (MH4, JL 24) thereby reflecting their potential for improvement in terms of Zn content as their molar ratio will be lower.

Inputs: A L Singh, Sushmita and Gangadhara K.

Seasonal specificity in groundnut cultivars with physiologically adaptive traits

Groundnut is a major oilseed crop and is covering a larger area under rainfed cultivation. Though crop is grown during both *Kharif* and summer season, it has variable responses on different physiological and biochemical attributes which collectively contribute to yield. The yield has been a major criteria for selection of cultivar, however physiological traits such as water use efficiency (WUE), net photosynthesis (P_N), transpiration rate (*E*) and chlorophyll fluorescence (Fv/Fm) are more useful for the improvement in growth and yield per resource use and hence useful in selection for broader environment (Singh et al.2014). Though, the groundnut breeding programme in India introduces a few new cultivars every year, most of them lack in physiological evaluation resulting in poor adaptability of these under wider climatic conditions.

Recently a study conducted taking 60 Indian groundnut cultivars showed a large variation in physiological traits P_N, stomatal conductance (gs), *E*, WUE, SCMR and Fv/Fm in leaves during mid of the pod filling stage (70-75 days) of the crop and were the main deciding factors for pod yield. The cultivars with high P_N and pod yield, high P_N and WUE, high P_N and gs, high P_N and Fv/Fm, high P_N and chl and high SCMR and pod yield have been identified to help the farmers in increasing productivity. The cultivars GG 20, CSMG 884, TPG 41, Kadiri 3, S 230, RS 1, JSP 19, ICGS 5, Chitra, LGN 2, TG 17, Tirupati 3, GG 12, ALR 3,UF 70-103, SG 99, TG 37 A possess superiority in more than four physiological traits and hence can increase production in India. Based on overall performance the groundnut cultivars Tirupati 3, TG 37A, SG 99 and TPG 41 are suitable for cultivation in summer while cultivars GG 20, Tirupati 4 and JL 501 are suitable during *Kharif* season.

Inputs : Singh AL and Sushmita

39th Foundation Day Celebrated

The ICAR-Directorate of Groundnut Research, Junagadh celebrated its 39th Foundation on 1st October 2018. Dr. A. R. Pathak (Hon. Vice Chancellor, Junagadh Agricultural University) was the chief guest of the function. Dr. R K Mathur, Director, Indian Institute of Oil Palm, Pedavegi was the special invitee on the occasion. In his welcome address, Dr. Radhakrishnan T., Director, DGR, illustrated the glorious past 39 years of the institute and urged all the employees to work together to achieve the future goals of the institute for enhancing the productivity of groundnut and make it more remunerative. In his foundation day lecture "Edible oil scenario- A way forward", Dr. R. K. Mathur explained about the vegetable oil consumption and production scenario in India. He elaborated on the use and improved production technologies of oil palm for reducing the edible oil imports. In his closing remarks, Dr. Radhakrishnan T., Director, DGR emphasized on the health benefits of high oleic peanut and urged all the scientific and technical staff to work hand-in-hand for betterment of the lives of peanut farmers. On the occasion, four retiring employees of groundnut, two technical, PA to Director and TSL category were honored with mementoes.

नगर राजभाषा कार्यान्वयन समिति (नराकास)-जूनागढ़ की वर्ष 2018 की द्वितीय छमाही बैठक

दिनाँक 27 सितम्बर, 2018 को 'नगर राजभाषा कार्यान्वयन समिति' (नराकास)-जूनागढ़ की वर्ष 2018 की द्वितीय छमाही बैठक, भाकृअनुप-मूँगफली अनुसंधान निदेशालय, जूनागढ़ में आयोजित की गयी | बैठक में इस निदेशालय सहित कुल 19 सदस्य कार्यालयों ने भाग लिया | इस बैठक में डॉ. सुनीता यादव, उप-निदेशक (कार्यान्वयन), गृह मंत्रालय, राजभाषा विभाग (पश्चिम), नवी मुंबई, विशेष अतिथि के रूप में उपस्थित रहीं | यह बैठक डॉ. राधाकृष्णन टी, निदेशक, भाकृअनुप-मूँगफली अनुसंधान निदेशालय, जूनागढ़ एवं अध्यक्ष, नगर राजभाषा कार्यान्वयन समिति, जूनागढ़ की अध्यक्षता में आयोजित की गयी | डॉ. सुनीता यादव, उप-निदेशक (कार्यान्वयन), गृह मंत्रालय, राजभाषा विभाग (पश्चिम), नवी मुंबई ने नराकास के सभी सदस्य कार्यालयों को राजभाषा विभाग की वेबसाइट (http: //www. rajbhasha.nic.in) पर उपलब्ध विभिन्न सामग्री एवं पुरस्कार योजनाओं कि विस्तृत जानकारी देते हुए इनका अधिक से अधिक उपयोग करने के लिए सभी सदस्यों को प्रेरित किया |

नगर राजभाषा कार्यान्वयन समिति (नराकास)-जूनागढ़ की आगामी बैठक अप्रैल, 2019 में होना प्रस्तावित है | इसके अंतर्गत विभिन्न सदस्य-कार्यालयों को राजभाषा के उत्थान हेतु, अपने कार्यालय में राजभाषा से सम्बंधित प्रतियोगिताएँ कराने का प्रस्ताव रखा गया | डॉ. राधाकृष्णन टी, अध्यक्ष, नगर राजभाषा कार्यान्वयन समिति (नराकास),जूनागढ़ ने अपने सम्बोधन में खुशी जाहिर करते हुए कहा कि इस बैठक में पिछली बैठक के मुकाबिले सबसे अधिक 19 सदस्य कार्यालयों ने भाग लिया है | तथा आगामी बैठक में भी अधिक से अधिक उपस्थिति की कामना की | नगर राजभाषा कार्यान्वयन समिति में उपस्थित सभी सदस्य कार्यालयों से हिंदी में अधिक से अधिक कार्य करने की अपील की एवं सभी कार्यालयों में हिंदी में कायों को बढ़ावा देने हेतु सुझाव भी दिए | उन्होंने कहा कि सदस्य कार्यालयों के प्रमुख को नराकास की छमाही बैठक में उपस्थित रहना आवश्यक है | तत्पश्चात डॉ. राधाकृष्णन टी, अध्यक्ष, नगर राजभाषा कार्यान्वयन समिति (नराकास) ने नराकास जूनागढ़ को नई ऊंचाइयों तक पहुंचाने की दिशा में सभी सदस्य-कार्यालयों के सहयोग की अपेक्षा व्यक्त की |

हिंदी सप्ताह

भा. कृ. अनु. प. - मूंगफली अनुसंधान निदेशालय, जूनागढ़ द्वारा हिंदी सप्ताह का आयोजन दिनाँक 14.09.2018 से 20.09.2018 तक निदेशालय में किया गया | हिंदी सप्ताह के दौरान निदेशालय में एवं निदेशालय के बाहर निम्नलिखित प्रतियोगिताओं का आयोजन किया गया | दिनाँक 14.09.2018 को हिंदी सप्ताह का सुभारम्भ किया गया| निदेशालय में दिनाँक 17.09.2018 को हिंदी में श्रुति लेखन प्रतियोगिता का आयोजन किया गया | इस प्रतियोगिता में निदेशालय के वैज्ञानिक,तकनीकी एवं प्रशासनिक वर्ग से सम्वन्धित अधिकारियो एवं कर्मचारियों ने भाग लिया | दिनाँक 17.09.2018 को ही हिंदी में निबंध लेखन प्रतियोगिता का आयोजन श्री प्रेमानंद विद्या मंदिर स्कूल जूनागढ़ में निदेशालय द्वारा कराया गया | इस प्रतियोगिता में स्कूल के कक्षा 8, 9 और 10 के विद्यार्थियों को सम्मिलित किया गया |

निदेशालय में दिनाँक 18.09.2018 को हिंदी में गद्यांश पाठन प्रतियोगिता का आयोजन किया गया | इस प्रतियोगिता में निदेशालय के वैज्ञानिक,तकनीकी एवं प्रशासनिक वर्ग से सम्वन्धित अधिकारियो एवं कर्मचारियों ने भाग लिया | दिनाँक 19.09.2018 को हिंदी में निबंध लेखन प्रतियोगिता इस निदेशालय किया गया | इस प्रतियोगिता में निदेशालय के वैज्ञानिक, तकनीकी एवं प्रशासनिक वर्ग से सम्वन्धित अधिकारियो एवं कर्मचारियों ने भाग लिया | दिनाँक 20.09.2018 हिंदी सप्ताह के आयोजन का समापन किया | इस अवसर पर सभी विजेता प्रतियोगियों को निदेशक महोदय द्वारा पुरुस्कार दिए गए |

Swachhta Pakhwada

Swachhta Pakhwada was Conducted at ICAR-DGR from 16-31st December 2018. Dr. Thirumalaisamy acted as chairman of swachhta committee for overseeing the daily activities under the swachhta drive. This cleanliness drive consisted of a series of activities like Mera Gaon Mera Gaurav- Visit to Luvasar village, digitalization of office records and weeding out of old records, preparation of compost pit behind farm office, cleaning behind office premises, cleaning of sewerage line at residential colony, uprooting of weeds (*Parthenium* sp.) in children's park and pruning of trees and collection of leaf litter on either side of road near DGR Residential quarters and other activities were done. The staff of DGR actively participates in all the activities to make it a grand success.

Industries Interface Meeting

Giving credence to the increasing importance and potentials of the Public-Private Partnerships in achieving higher groundnut productivity, efficiency, and diversification of value-added products and exports, and popularizing technologies, ICAR-Directorate of Groundnut Research has organized an Industries Interface meeting at this Directorate on 29 December, 2018. Dr. A. R. Pathak, Hon. Vice-Chancellor of Junagadh Agricultural University was the chief guest. Besides, Dr J. B. Misra, Technical Adviser, IOPEPC; Dr. P. K. Rai, Director (Actg.), ICAR-DRMR and Director, DGR, Junagadh were the other dignitaries. The participants include the researchers, and thirty representatives from different entrepreneurs from different parts of India and representative from the Saurashtra Oil Mills Association (SOMA). The aim of this interface meeting was to address the issues concerning export, value addition, need of polarizing high oleic groundnut oil, need of application and popularization of low-cost biofertilizers for enhancing productivity of groundnut, etc. Problems faced by the groundnut confectionery industries (sound kernels, kernel shape, colour of testa, seed size, etc.), were covered by distinguished speakers and participants.

Dr. Radhakrishnan T., Director, ICAR-DGR thanked all the delegates, which have contributed to the success of the meeting and hoped that this would surely mark a milestone in furthering the cause of all stakeholders of groundnut in increasing the productivity, popularizing the available technologies which will provide benefits to both farmers and industries through joint partnerships.

Visits Abroad

Dr. A.L. Singh, Principal Scientist, ICAR-DGR, attended the International Zinc and Phosphorus Symposia at Leuven, Bel gium during September 2018.Dr. A. L. Singh was deputed to attend both of these symposia in Leuven, Belgium by the ICAR and DARE, New Delhi and DGR, Junagadh (without any financial support). Dr Singh, who is working on the mineral nutrition and associated stresses in groundnut for the past 33 years, attended the same and made presentation on "The zinc content in peanut seed is governed by its size and Ca and P Nutrition" and "Phosphorus efficient cultivars and their role in increasing peanut productivity in India" and also submitted the deputation report, which may help in execution of the Zn bio-fortification and P nutrition research in India. Actions suggested for overcoming P and Zn deficiency include-1. Identification of crop cultivars with high Zn and Fe densities, and vitamins to alleviate the 'hidden hunger' of micronutrient malnutrition 2. Established a special technical committee on Zn rich agricultural product production technologies 3. Increase Zn fertilization area and production of Zn rich grains 4. Sensitive and specific biological markers of Zn status in human and animals 5. Pre cycling and development of efficient fertilizers with lower environmental risks 6. Identification of P, Zn and Fe, efficient genotypes that yield better in a soil that limits yield for standard genotype. 7. Re-delineation of P- deficiency in soils and crops of India 8. Exploitation of root exudation of organic acids for solubilizing Fe- and Al-bound P and its acquisition by root on acids and calcareous soils.

Institute Seminars

Date	Topic	Speaker
22 Sept. 2018	Genetic Diversity for yield and water use efficiency related traits in groundnut	Dr. Gangadhara
	EMS induced variability for physico-quality traits in groundnut	
	Management of groundnut stem rot caused by *Sclerotium rolfsii*: a review update	Dr. Kona Praveen
	RPPI on project titled "Breeding for improvement of quality traits in groundnut"	
16 Oct. 2018	Deputation in Belgium for participation in ZnCrops2018 and PSP6 Symposia at KU, Leuven	Dr. AL Singh
	Genetic Variability analysis for yield, quality traits and foliar disease resistance in groundnut	Dr. Narendra Kumar
20 Oct. 2018	Ectopic expression of *AtDREB1A* gene shows improved soil moisture deficit stress tolerance in peanut by regulation of antioxidant mechanism and stress inducible genes in lysimetric system	Dr. Hiren Bhalani
13 Nov. 2018	Genetic transformation in crop improvement	Dr. Durga Vara Prasad
19 Nov. 2018	Orientation Seminar of newly joined scientists at ICAR-DGR	Dr. Raja Ram Choudhary, Dr. Keerti Rani, Dr. Aman Verma, Sh. Anant Kurella and Sh. Rupak Jena

Participation in Conference/Workshop/Seminar/Symposium/Training Programme

Name	Programme	Venue	Date
MK Mahatma	International Conference on Global Initiatives for Sustainable Agriculture & Allied Sciences (GRISAAS-2018)	RARI, Durgapura, Jaipur (Rajasthan)	28-30 October, 2018
	Biotechnology for future agricultural productivity	Navsari Agriculture University, Navsari	18th November, 2018
RA Jat	International Conference on Global Research Initiative for Sustainable Agriculture and Allied Sciences	Rajasthan Agricultural Research Institute, Durgapura, Jaipur, Rajasthan	28-30 October, 2018
SK Bera	National Genetic Congress on "Genetics for Sustainable Food Health and Nutrition Security	IARI, New Delhi	14-16 December, 2018
AL Singh	41st All India Botanical Conference on the "Ecological restoration, carbon sequestration and biotechnological approaches for biodiversity conservation"	Jiwaji Univ. Gwalior	25-27 October, 2018
	International Conference of Nutrition Society of India	ICMR-NIN, Hyderabad	15-17 November, 2018
	4th International Plant Physiology Congress	CSIR-National Botanical Research Institute, Lucknow	2-5 December, 2018
	5thInternational Symposium on Zinc (Zinccrops2018) for "Improving crop production and human health"	Katholieke Universiteit (KU), Leuven, Belgium	5-7 September, 2018

Name	Programme	Venue	Date
AL Singh	6th Symposium on Phosphorus in Soils and Plants (from molecular scale to ecosystem)	Katholieke Universiteit (KU), Leuven, Belgium	10-13 September, 2018
R Dey	MDP on Priority setting, Monitoring and Evaluation (PME) of Agricultural Research Projects	NAARM, Hyderabad	17-22 December, 2018
Narendra Kumar	Training of trainers programme under skill development training programme	ATARI, Kanpur	17-19 December, 2018

Personnel

New Joining

Dr. Aman Verma

has joined the ICAR-DGR as Scientist (Plant Biochemistry) on 10th October, 2018 upon completion of 108th FOCARS at NAARM, Hyderabad

Dr. Raja Ram Choudhary

has joined the ICAR-DGR as Scientist (Agronomy) on 10th October, 2018 upon completion of 108th FOCARS at NAARM, Hyderabad

Dr. Kirti Rani

has joined the ICAR-DGR as Scientist (Plant Breeding) on 10th October, 2018 upon completion of 108th FOCARS at NAARM, Hyderabad

Mr. Ananth Kurella

has joined the ICAR-DGR as Scientist (Plant Pathology) on 09th October, 2018 upon completion of 108th FOCARS at NAARM, Hyderabad

Mr. Rupak Jena

has joined the ICAR-DGR as Scientist (Plant Nematology) on 09th October, 2018 upon completion of 108th FOCARS at NAARM, Hyderabad

Superannuation

Sh. H.M. Hingrajia

Chief technical officer (CTO) superannuated on 30th September 2018

Dr. H.K. Gor

Chief technical officer (CTO) superannuated on 31st October 2018

Sh. G.G. Bhalani

Senior technical assistant (STA) superannuated on 31st December 2018

Obituary

Sh. P.B. Garchar

Technical officer (TO-Electrician) Passed away on 24th July 2018