Sarson News

सरसों की अभिवृद्धि : किसानों की समृद्धि

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Dr. S. Ayyappan inaugurated the Basic Science Complex at ICAR-DRMR

Dr. S. Ayyappan, Secretary, DARE and DG, ICAR inaugurated the newly built Basic Science Complex at ICAR-DRMR, Bharatpur on 26th Feb., 2015. The basic science complex has bio technology lab, besides plant physiology and bio chemistry laboratories. He also visited the experimental fields along with Director and scientists. During the interaction meeting held with the staff, Dr. Ayyappan expressed his contentment for systematic laying out of experimental plots and cleanliness of farm. A multi-disciplinary research team effort is needed to address the emerging challenges in the field of rapeseed-mustard and research programmes should address the concerns of farmers to remain relevant, he opined. The stress should be given to efficiently utilize the resources to improve productivity of rapeseed mustard and the quality of services. He appreciated the achievements of the Directorate, especially for newly released varieties, seed production programme and technology dissemination through systematic linkages with line departments and effective extension approaches to reach out to large number of farmers that has built up the popularity of the Directorate in the country. However, he expressed his concern over the huge import of edible oil and said that rapeseed-mustard crop plays a vital role in the oilseed economy of the country. He called for developing definite road map for the future research and make all out efforts for enhancing the productivity of this important oilseed crop. He advised the scientists to work in a national perspective and carry out focussed targeted research in mission mode approach for achieving self sufficiency in oilseeds production of the country.

Dr. Dhiraj Singh, Director, ICAR-DRMR assured the Director General that the research work at the directorate will speed up with focusing on improving the production and productivity of rapeseed-mustard, increasing the quality of oil, improving the livelihood security of rapeseed-mustard farmers and to develop varieties of the crop suitable to diverse agro-climatic conditions and situations.

Dr. J. S. Sandhu, DDG (CS) visited ICAR-DRMR

Dr. J. S. Sandhu, Deputy Director General of the Crop Science Division of ICAR visited ICAR-DRMR on March 3, 2015. He visited experimental fields and appreciated the potential of newly released varieties especially RH 749 and Giriraj. He also had an interaction with scientists and staff. He said that enhancing production, productivity and quality of rapeseed-mustard crops under climate changes should be the priority of the Directorate. He emphasized to undertake the massive research work to address the wide spread problems of orobanchae in rapeseed-mustard. He also emphasized that the developed technology must reach to the farmers. He expressed his happiness for splendid work done by the Directorate for motivating the farmers of the country to adopt scientific production technology for enhancing the productivity through organizing a number of effective extension programmes. Dr. Sandhu, emphasizing the basic need of quality seeds for enhancing productivity, appreciated the joint initiatives taken by ICAR-DRMR, Bharatpur and DUVASU, Mathura to undertake massive seed production programme of new varieties in over an area of more than 100 acres at the Madhurikund farm of DUVASU, Mathura (UP).

Indian Council of Agricultural Research, New Delhi
ICAR-Directorate of Rapeseed-Mustard Research, Sewar, Bharatpur - 321 303, Rajasthan
(ISO 9001: 2008 प्रमाणित संस्था)

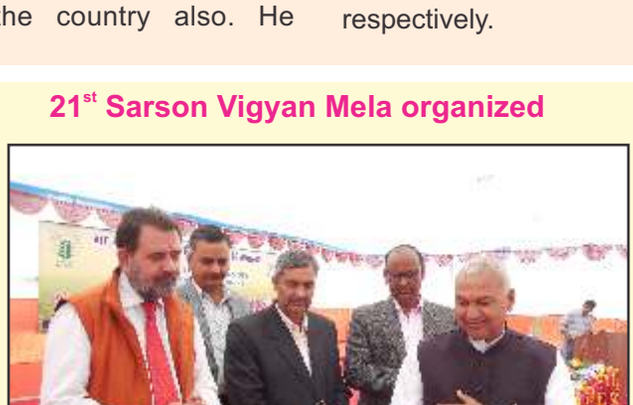
Foundation day organized

ICAR-DRMR celebrated its 21st Foundation day on October 20, 2014. Director, DRMR, in his foundation day lecture highlighted the journey of achievements and development of ICAR-DRMR ever since its inception and called upon the scientists for adoption of 20 point agenda and strive hard to bring more success to the Directorate. Dr Bhoori Singh and Dr. Fateh Singh, former Principal Scientist, ICAR-DRMR were the other dignitaries present on the occasion. While addressing the gathering, they appreciated the excellent efforts of Directorate being done for technology dissemination through different extension strategies especially capacity building of farmers and extension workers to upgrade their knowledge and skills in scientific cultivation of rapeseed-mustard that has contributed in increasing the productivity level of rapeseed-mustard not only in Bharatpur district but in the country also. He congratulated the Directorate for its association with hundreds of farmers directly and establishing the better linkages with all stakeholders which will be helpful in working for the development of farmers and motivate them farmers to adopt the scientific production technology for enhancing their profitability. A brain storming sessions was also organized on developing Indian mustard cultivars with horizontal resistance against major diseases such as Alternaria blight, Sclerotinia rot, etc.

The Directorate also recognized the contributions from its staff during 2013-14 and presented awards in various categories of employees. The best scientist award was given to Dr. Ashok Kumar Sharma, Sr. Scientist. Sh. Govind Singh in the technical staff category, while Sh. Mukesh Kumar and Sh. Tara Singh were awarded in the administrative and supporting staff category, respectively.

21st Sarson Vigyan Mela organized

ICAR-DRMR in collaboration with Department of Agriculture, Govt. of Rajasthan organized 21st Sarson Vigyan Mela sponsored under NMOOP for three days during Feb. 24-26, 2015 at ICAR-DRMR. Inaugurating the mela, Sh. Shiv Singh Bhont, Mayor of Bharatpur (Raj.) said that development of the country depends on development of its agriculture. Farmers should adopt the scientific technology developed by research institutions for enhancing the production and productivity of the crop. He also emphasized to adopt inter cropping for increasing income and reducing the risk.



On the second day, Dr. Dhiraj Singh, Director, ICAR-DRMR, while addressing the farmers, farmwomen, extension personnel present in mela, stressed for the need of better linkages among all institutions/agencies working for agriculture development and technology dissemination for effective and rapid transfer of developed technology of rapeseed-mustard. He also reminded about wide yield gap of rapeseed-mustard in different states and urged farmers to come forward for adoption of scientific technology enhancing oilseed production for making the country self-sufficient in the edible oilseeds.

The valedictory function was graced by Sh. Shital Sharma, Additional Director (NMOOP), Department of Agriculture, Govt. of Rajasthan as chief guest. He appreciated the efforts of ICAR-DRMR for technology dissemination by organizing number of effective extension programmes to reach out to large number of the farming community. He urged the farmers to participate in research development, extension programmes, visit

the research institutions, seek advices of scientists/experts and develop confidence in scientific technologies. He said that adoption of resource conservation technology for improving beneficial microbe population in the soil and reducing the cost of cultivation is the need of the hour. He emphasized for improving the quality of soil and water and advised for getting the soil health card prepared for balance use of fertilizers in crop production.

Director, ICAR-DRMR said, on the occasion, that youth should be motivated towards agriculture and appreciate the contribution of farm women in development of agriculture. He also urged the farmers to adopt improved varieties developed by the directorate. Dr. Amar Singh, In Charge, KVK, Kumher, Sh. R.B. Srivastav, Joint Director, Agriculture, Bharatpur division; Sh. Yogesh Sharma, Deputy Divisional Director (NHM); Sh. Deshraj Singh, DD, Agriculture (Bharatpur) also addressed the participants of mela.

The mustard crop competition, kisan gosthies, visit of experimental field, exhibitions, etc. were also organized on all the three days. About 25 exhibitions stalls were put by different departments/ research institutes, input dealers, etc. for educating the visiting farmers about their technology, products, etc.

The winners of crop competition, kisan Prashnotharies, progressive farmers were also felicitated in mela. More than 3500 farmers, farm women, extension workers, etc. from Rajasthan, Uttar Pradesh, Haryana and Madhya Pradesh participated in the mela. ◆

Mustard Seed Production Mela organized

ICAR-DRMR, Bharatpur organized a Kisan Mela with a focus on seed production of mustard in collaboration with Pt. Deen Dayal Upadhyaya Pashu-Chikitsa Vigyan Vishwavidyalaya evam Go Anusandhan Sansthan (DUVASU) at its Madhuri-Kund farm, Mathura on 3rd March 2015 sponsored by Department of Agriculture and Cooperation (DAC), Ministry of Agriculture, GoI, New Delhi under NMOOP with a financial assistance of Rs. 4.00 lakh. The production technologies of mustard, other Rabi crops and animal health improvement were exhibited by ICAR-DRMR, DUVASU and KVK, Mathura. The mela was inaugurated by the Deputy Director General (CS), ICAR, Dr. J. S. Sandhu as chief guest.

Addressing the gathering, Dr. Sandhu said that It is imperative to attract youth towards agriculture with enhanced use of IT for faster and precise dissemination of technologies. Adoption of organic farming including conservation agriculture (zero tillage) with recycling of bio-resources including weeds, good quality manure with use of gobar gas/ bio-gas plants and solar pumps could reduce the use of pesticides.

Dr. Manoranjan Datta, consultant, NMOOP said that participatory research with active involvement of farmers may be adopted by the research institutes for easy adoption of technologies by the target groups. Dr. Dhiraj Singh, Director, said that production of quality seed at Government farms including SAUs could ensure the supply to the farmers. Central and State Seed Producing agencies should avail such facilities through MoUs. Vice Chancellor, DUVASU, Prof. A.C. Varshney said that Integrated farming with rearing of live stock and crop production will be a better option for sustainable agriculture in rainfed/semi-arid zones. Dr. J.P. Singh, consultant, NMOOP urged the farmers to adopt multiple/mix cropping system for better risk management. The participants were also addressed by Dean & Director Extension, DUVASU.

More than 1500 farmers including about 100 women from 4 major mustard growing states namely Haryana, MP, Rajasthan and UP participated in the mela along with scientists from ICAR-DRMR, faculty of DUVASU, officials of UP State and officials from DAC, personnels from seed industry participated in the Mela. A publication entitled "Improved Agronomic Practices for Cultivation of Rapeseed–Mustard in India" brought out by ICAR-DRMR, Bharatpur was released during the mela. More than twenty five farmers including seed growers were honoured for their contribution in improving the productivity of mustard. A number of progressive farmers expressed their confidence and acknowledged the services rendered by DRMR and DUVASU with the help of Ministry of Agriculture & Cooperation Govt. of India.

The seed production plots were visited by farmers and dignitaries. Everyone who had visited the seed production plots appreciated the efforts made to cater the need of mustard seed. ◆

ICAR-DRMR CONTRIBUTED FOR FLOOD RELIEF FUND OF JAMU AND KASHMIR

ICAR-DRMR contributed one day salary of its staff in flood relief fund of Jamu and Kashmir. A sum of Rs. 52,986/- (Rs. Fifty two thousand nine hundred eighty six only) was contributed for flood relief in J&K. ◆

National Seminar on "Strategic interventions to enhance oilseed production in India" organized

The National Seminar on "Strategic interventions to enhance oilseed production in India" was organized jointly by Indian Society for Oilseed Research, Hyderabad and ICAR-DRMR, Bharatpur, during Feb 19-21, 2015, at ICAR-DRMR, Bharatpur. Dr. Arvind Kumar, Vice-Chancellor, RLBCAU, Jhansi & DDG (Education), ICAR, New Delhi inaugurated the seminar as chief guest. Dr. Singh, while delivering Dr. M.V. Rao Lecture on "Stakeholders access to oilseed technologies towards self sufficiency",said that increased availability of vegetable oils warrants the highest commitment of all stakeholders (farmers, scientists, policy makers, NGOs, KVKs, private sectors industry, etc.). There is urgent need to launch a special mission on oilseeds with greater accountability and commitment to boost the domestic production of vegetable oils in the country and thus minimize the dependency on imports. Dr. Dhiraj Singh, Director, ICAR-DRMR, Bharatpur in his presentation dealt about the "Rapeseed mustard scenario: Future strategies for enhancing and productivity sustainability". He has presented overall status of Rapeseed and mustard in India at state and district level. He elaborated research status, achievements, technologies generated and their dissemination. He also discussed about constraints and future prospects of the crop. Dr. K.S. Varaprasad, Project Director, IIOR, Hyderabad presented the "Interventions for enhancing oilseeds production in India". He demonstrated the area, production and yield of oilseed crops and share of different states in oilseed production. He suggested the strategies to enhance the area, productivity and resource use efficiency of oilseed crops.

The participants included majority of stake holders from India oilseed economy which covers the scientist working on different oilseed crops, progressive farmers, persons from oil mills, people from state department of agriculture, media personnel's, policy makers etc. ◆

Swach Bharat Abhiyan

In compliance of "Swach Bharat Abhiyan" of Hon'ble Prime-Minister, 'Swachta campaign' was inaugurated by Director, ICAR-Directorate of Rapeseed-Mustard Research on the birth anniversary of Mahatma Gandhi on 02.10.2014. On this occasion, Dr. Dhiraj Singh gave a presentation elaborating issues and aspects of the campaign. Later, Director with all staff members performed the cleaning of Directorate premises. Cleaning of offices, laboratories, guest house, residential complex and farm area and outside Directorate premises was also performed on weekly basis. The farmers visiting the Directorate were also educated about the Swachta campaign in their daily life and agricultural operations. The emphasis on regular cleaning is being followed by the Directorate. ◆

World Toilet Day

World Toilet Day was observed by the Directorate on Nov 10, 2014. On this occasion, Director ICAR-DRMR highlighted facts related with personal and public hygiene and its importance, diseases caused due to open defecation and challenges and issues before us. Dr. P.K. Rai, Principal Scientist gave an elaborate presentation highlighting different issues related with personal hygiene. ◆

TECHNOLOGY ASSESSMENT AND DISSEMINATION

Capacity building of extension workers/ farmers/input dealers through training programmes

Training Programmes for extension workers

In its endeavour to develop team of trained extension workers with upgraded knowledge and skills about scientific technology of rapeseed-mustard for effective and rapid transfer to the farming community, ICAR-DRMR organized 12 training programmes of 2 to 5 days duration on "Scientific production technology of rapeseed-mustard" for field level extension functionaries of States Department of Agriculture. Dr. Ashok Kumar Sharma organized and coordinated these training programmes as Course Director. A total of 268 extension personnel of Rajasthan, Madhya Pradesh and Uttar Pradesh were provided training for refreshing and upgrading the knowledge and skills about scientific technology of rapeseed-mustard.

Two days training programmes sponsored by DAC, New Delhi : ICAR-DRMR organized 8 two days training programmes on "Scientific production technology of rapeseed-mustard" for field level extension functionaries of State Department of Agriculture from one district of Madhya Pradesh, 4 districts of Uttar Pradesh and one district of Rajasthan in 4 batches (2 training programmes simultaneously) during October 2014 - March 2015. These training programmers were sponsored by DAC, MoA, Govt. of India under Annual Action Plan for Implementation of Frontline Demonstrations (FLDs) and other related activities on oilseeds during 2014-15. In 2 days training programmes, a total of 161 extension personnel including Agriculture Supervisor/Technical Assistant/Assistant Agriculture Officers/ATM/BTM from the selected districts namely, Morena (23-24 Dec.14 for 40 personnel) district of Madhya Pradesh; Algarh & Mathura (16-17 Jan.15 for 40 personnel) and Agra & Firozabad (27-28 Jan.15 for 40 personnel) districts of Uttar Pradesh and Bharatpur (18-19 Feb. 15 for 41 personnel) district of Rajasthan were trained.

Five days training programmes sponsored by State Institute of Agriculture Management (SIAM), Rehamankhed, Lucknow (UP) : Keeping in view of importance of rapeseed-mustard crop for Uttar Pradesh, State Institute of Agriculture Management, Lucknow also realized the need of extensive training of extension personnel of Uttar Pradesh in scientific technology of rapeseed-mustard. Therefore, ICAR-DRMR also organized 4 training programmes of 5 days duration each for extension personnel from different districts of Uttar Pradesh sponsored by SIAM, Lucknow.

In five days training programmes, a total of 107 extension personnel from selected districts namely Firozabad, Mathura, Agra & Etah (9-13 Feb. 2015 for 31 personnel); Kasganj, Aligarh, Mainpuri & Etah (9-13 March 2015 for 28 personnel); Rampur, Muradabad, Sambhal, Amroha, Bijnor & Bulandsahar (16-20 March 2015 for 26 personnel) and Kanpur Nagar, Kanpur Dehat, Kannoj & Farukhabad (23-27 March 2015 for 22 personnel) districts of Uttar Pradesh participated.

The participants were trained on recent advances in rapeseed-mustard technology, scientific agronomic practices, fertilizer management, varietal selection, insect-disease management, adoption process and extension approaches, etc through lectures-cum-discussion and practical-cum-field visit sessions. Participants appreciated the efforts of ICAR-DRMR for upgrading the knowledge and skills about recent research developments in the field of rapeseed-mustard.

Director, ICAR-DRMR, Dhiraj Singh said that extension personnel are important link between scientists and farmers and urged the participants to keep regular contacts with farmers and provide them timely advice about right technology suited to their farming situation. ◆

Training for farmers

ICAR-DRMR organized a 4 days training programme during March 13-16, 2015 for 32 farmers of Morena district sponsored by ATMA, Morena (MP). Besides, a 2 days farmers' training programme was also organized under ICAR seed project during Jan. 23-24, 2015, wherein 35 farmers from Alwar district of Rajasthan participated. These farmers were provided extensive training about scientific production technology of mustard with emphasis on integrated nutrient, insect, disease, weed management and agriculture management through these programmes.

Training for Input dealers

Many extension studies reported that input dealers (seeds, pesticides, fertilizers, machinery etc) are also important source of information to the farmers. It is felt that input dealers need to be trained and made aware of the new technologies and developments in rapeseed-mustard cultivation so that they communicate the same to the farmers to come in their contacts. Therefore, ICAR-DRMR organized 2 training programmes on "Scientific cultivation of rapeseed-mustard" during 2-3 March 2015, wherein 30 input dealers of Bharatpur district of Rajasthan participated.

Participatory Varietal Selection and Evaluation (PVSE) conducted

A number of improved mustard varieties have been developed by research stations for different agro climatic conditions and there is a need to communicate the production potential and performance of the developed and released varieties to the end users i.e. farmers. The extension workers of States Department of Agriculture have the prime responsibility of educating and motivating the farmers about adoption of improved and latest released varieties. Therefore, it is essential that extension workers have the complete knowledge and confidence in varieties developed by research stations.

Many a times, extension workers may not have access to or information about the performance of new varieties. Another problem is that variety testing programmes are often conducted on-station and they are not able to see the performance. As a result, there may be lack of confidence among extension workers about the performance of varieties and they feel difficulty to convince the subsistence farmers, who comprise the majority of the rural farming population to test number of varieties at their own field and then identify the suitable varieties for famers' condition. ICAR-DRMR has regularly been making efforts to improve communication among, scientists, extension workers and farmers through different programmes so that they develop confidence about the performance of newly released varieties or technologies. In its efforts, ICAR-DRMR adopted Participatory Varietal Selection and Evaluation (PVSE) approach, which includes "researcher-managed" trials, as an effective strategy for developing confidence of extension workers and accelerating the dissemination of improved varieties.

Keeping in view of this, an on-station Participatory Varietal Selection and Evaluation (PVSE) programmes was conducted at ICAR-DRMR with 120 extension workers of Rajasthan and Uttar Pradesh who participated in the training programmes organized by ICAR-DRMR. The programme was organized and coordinated by Dr. Ashok Kumar Sharma, Sr. Scientist, Ag. Extn. The selected extension workers evaluated 10 Indian mustard varieties for grain yield and other agronomic characteristics in researcher-managed demonstration/trials at ICAR-DRMR during 2014-15 to identify best performing high-yielding varieties for dissemination to farmers. Extension workers were asked to rate the varieties on 0 to 10 scale for minimum to maximum on characteristics like number of branches per plant, number of pod per branch, number of seed per pod, oppressed siliquae, bold seeded, tolerance to frost, dwarf ness of plant, tolerance to disease and pests, etc. On the basis of evaluation and scoring, RH 749 (78 MPS) DRMRIJ 31 (76 MPS), NRCDR 02 (74), NRCHB 101 (73 MPS), RH 406 (71 MPS) were most preferred by the participating extension workers. The participants appreciated such efforts of the Directorate to motivate them by "Seeing is believing" principle of PVSE.

ICAR-DRMR adopted five villages for development through increasing the mustard productivity

In its endeavour "Towards Villages" ICAR-DRMR adopted 5 villages namely, Dhor, Sinpini, Neotha, Gudawali and Seorawali of Bharatpur districts of Rajasthan for their development through increasing the mustard productivity by carrying out different extension activities. A multi-pronged strategy involving frontline demonstrations, trainings, farmer-scientist interactions, farm schools, kisan ghoshtis, etc was adopted for spreading the awareness about improved technology of mustard and motivating the farmers to adopt them. Five teams of scientist were constituted by the Director of ICAR-DRMR for regular monitoring and contacting farmers of these adopted villages. Farmers of these villages also visited the experimental fields and technology park at the Directorate. They also participated in 21st Sarson Vigyan Mela.

Five Sarson Field Schools organized.

ICAR-DRMR organized successfully 5 Sarson Farm schools in five adopted villages namely, Dhor, Sinpini, Neotha, Gudawali and Seorawali of Bharatpur districts of Rajasthan for effective transfer of mustard production technology to the targeted farmers during Oct. 2014-March 2015. These schools were organized for empowering farmers with knowledge and skills about use of scientific production technology of rapeseed-mustard, making farmers experts in their own fields, sharpening the farmers' ability to make critical and informed decisions and helping farmers learn how to organize themselves and their communities through demonstrations of improved components of mustard and regular visits/ interaction meetings with farmers during different crop stages in the selected villages. Dr. Ashok Kumar Sharma, Sr. Scientist organized and coordinated these 5 farm schools as Nodal Officer. Farm schools provided opportunities for learning by doing. The scientists, as a technically competent persons led group members through the hands-on exercises. The farmers learnt optimally from field observation and experimentation. In regular sessions, from sowing till harvest, groups of farmers observed and discussed the growth of crop, integrated nutrient management, integrated insect-pest and disease management practices, weed management, abiotic stress management, etc. In this cyclical learning process, farmers developed the expertise that will enable them to make their own crop management decisions.

Impact of farm School : The farm schools are playing important role in enhancing the knowledge of the farmers and motivating them to adopt the improved technology. Since the Directorate has been organizing the farm schools in different villages for last 3 years, therefore. The impact of Sarson Farm School was also studied through pre and post knowledge and adoption test based on 120 respondents (15 respondents from each of the Farm Schools) participated in 8 farm schools organized in different districts of Bharatpur during 2012-2013 which shows that there was knowledge improvement from 30 to 75 per cent for different aspects, while improvement in adoption level of recommended technologies was 20 to 60 per cent.

Four Farmers Interest Groups (FIGs) organized

Farmers' organizations of all types have an important role in agriculture development. Keeping in view, ICAR-DRMR has been continuously working for formation of crop based Farmers Interest Groups (FIGs) and 4 FIGs comprising more than 25 farmers each in 4 selected villages namely Dhor, Sinpini, Gudawali and Seorawali-Saharai of Bharatpur district was organized during October, 2014. Dr. Ashok Sharma, Sr. Scientist organized and coordinated these 4 FIGs as Nodal Officer.Farmers were made aware about importance of scientific cultivation in mustard production through lectures, discussion and consultations by the scientists during crop season and motivated them for adoption of scientific recommendation of mustard cultivation. The technology introduced to the farmers through the training and lectures were also demonstrated to them in their own village through technology demonstration plot. The extension efforts of the directorate are made more effective through the mediation of FIG's.

Development of e-publication for promoting scientific cultivation of mustard

Now-a-days E-publications are becoming extremely popular and preferences among scientists and extension workers are increasing dramatically. The e-publishing is easy and inexpensive. The digital publication of e-folders/extension bulletins/ books can be read via the internet. Files may be viewed online, loaded onto CDs, mobiles and electronic readers, or even emailed directly to computer. Unlimited space on the internet makes it easy for everyone to maintain files. Keeping in view of the several advantages of e-Publication, ICAR-DRMR designed and developed 6 "e-Bulletins for e-Learning Extension Module for mustard cultivation" on different aspects of scientific cultivation of mustard for rapid and wide spread of the technology through the use of ICT. These e-Bulletins publications were prepared, designed and developed by Dr. Ashok Kumar Sharma, Vinod Kumar and Dhiraj Singh on "Agronomic management practices in rapeseed-mustard crop", "Improved varieties of rapeseed-mustard", Weed management in rapeseed-mustard ", Nutrient management in rapeseed-mustard crop", Insect management in rapeseed-mustard" and " Disease management in rapeseed-mustard ".

"Sarson School on AIR" programme gained widespread appreciation

The popular transfer of technology programme "Sarson School on AIR" has gained widespread appreciation from all stakeholders for contributing effectively and rapidly in transfering of scientific technology rapeseed-mustard to the farmers and extension personnel. ICAR-DRMR has been organizing this programme since 2002 for popularization of rapeseed-mustard production technology through use of wide coverage and reach of All India Radio (AIR) network. For dissemination of rapeseed-mustard production technology among the farmers in a timely manner, 24 instructional modules of different aspects of mustard production were developed by which were broadcasted coinciding with the different stages of crop growth of mustard at weekly intervals from September 2014 to February 2015 through 10 All India Radio (Akashvani) stations of Jaipur, Alwar, Kota, Swai Madhopur, Suratgarh & Jhalawar of Rajasthan; Gwalior of Madhya Pradesh; Agra, Mathura, and Rampur of Uttar Pradesh, that benefitted to thousands of farmers of Rajasthan and parts of Uttar Pradesh and Madhya Pradesh. The programme was designed, organized and coordinated by Dr. Ashok Kumar Sharma, Sr. Scientist as Nodal Officer. Dr. Dhiraj Singh, Director, ICAR-DRMR urged the farmers to regularly listen the programme for upgrading their knowledge and provide the feed back to the Directorate for making more effective and farmer friendly.

Front line demonstrations (FLDs) on mustard conducted

During 2014-15, 100 FLDs on varietal and sulphur components in Indian mustard were conducted in different villages of Bharatpur district of Rajasthan to show the impact and production potential of these technological components on farmers' field and for effective transfer of mustard production technologies. Regular monitoring visit and scientists-farmers meetings were organized for motivating the farmers to observe the performance of the newly released varieties viz., RH 749, DRMRIJ 31 and NRCDR 02. These FLDs were conducted and organized by Dr. Ashok Kumar Sharma Sr. Scietist and I/c, TAD, unit. Farmers appreciated the performance the demonstrated varieties.

Visitors Advisory Services of DRMR.

Under Visitors Advisory Services, successfully organized/ coordinated 37 interaction meetings and counselling sessions on rapeseed-mustard cultivation for visiting groups from Rajasthan, Uttar Pradesh, Madhya Pradesh and Gujarat consisting of 1306 stakeholders including 1166 farmers, 76 farm women, 34 students and 36 extension personnel/ teachers. The visiting groups were educated/ trained through lectures, visits to technology park, experimental fields, museum and also provided literatures. Besides, other visiting farmers were also provided timely technical advice to their problems in mustard cultivation.

Model Training Course (MTC) Organized

ICAR-DRMR successfully organized 2 Model Training Course (MTC) during 2013-14 sponsored by Directorate of Extension, Department of Agriculture & Cooperation, Ministry of Agriculture, Government of India, New Delhi.

A MTC was organized on "Advances in Eco-friendly Management Practices for Sustainable Rabi Oilseed Production" during December 03-10, 2014" to refresh and upgrade the knowledge and skill of participants in advances in eco-friendly management practices for sustainable rabi oilseeds (rapeseed-mustard, safflower and linseed) production.

A total of 20 officers of State Department of Agriculture from Chhattisgarh (1), Himachal Pradesh (2), Madhya Pradesh (1), Maharashtra (2), Odisha (3), Punjab (2), Rajasthan (6), Uttar Pradesh (2) participated in this MTC. The study of impact of MTC showed that there was 69.15% average improvement in knowledge of participants after the training. There were 90% trainees whose expectations from the course were fulfilled to a great extent as they found the course useful with respect to their role and responsibilities. The 80% participants rated the course as excellent, 20% as very good.

The second MTC was organized on "Modern perspectives of conservation agriculture for sustainable crop production" during January 28-February 04, 2015 to augment the participants' knowledge and skill on technical, organizational, institutional and economic aspects of conservation agriculture.

A total of 20 officers of State Department of Agriculture from Assam (4), Chhattisgarh (2), Himachal Pradesh (4), Madhya Pradesh (1), Odisha (2), Rajasthan (5), Uttar Pradesh (2) participated in this MTC. The study of impact of MTC showed that there was 91% average improvement in knowledge of participants after the training. There were 85% trainees whose expectations from the course were fulfilled to a great extent as they found the course useful with respect to their role and responsibilities. The 90% participants rated the course as excellent, 10% as very good. As Course Director, these MTCs were organized and coordinated by Dr. Ashok Kumar Sharma, Sr. Scientist, Ag. Extn. Dr. Dhiraj Singh, Director, ICAR-DRMR said that in order to realize the productivity potential of the currently available improved technologies, the upgrading the knowledge and skills of agriculture officers through these MTCs will give a boon to transfer of technology from research stations to the farming communities.

Winter school organized

ICAR-DRMR, Bharatpur organized a 21 days winter school on "Strategies to enhance oilseed brassica production under climate and resource constraints scenario", during Nov 11-Dec 1, 2014. Twenty five participants from 9 states participated and completed the training successfully. Inaugurating the school, Dr. Dhiraj Singh, Director, ICAR-DRMR reiterated the need for constant upgradation of knowledge and skills among the scientists of NARS system through trainings of this kind.

The Winter School was specially designed to decipher knowledge on soil-site requirement of Oilseed Brassica (OSB) crops, and thereby identification of potential areas for horizontal and vertical expansion, constraints in OSB production, management of genetic and natural resources, location specific suitable agronomic practices, use of primary and secondary data for developing strategies through popular crop models and transfer of OSB production technologies to farmers. The training strategy consisted of expert lectures, demonstrations, discussions, field visits and hands-on exercises to expose the participants on the recent advances in OSB production technologies and building location specific production practices. Dr. Basant Kumar Kandpal, Principal Scientist coordinated the winter school as Course Director.

Exhibitions organized

ICAR-DRMR organized 3 exhibitions displaying scientific technologies of rapeseed-mustard, research and development activities of ICAR-DRMR. More than 3000 farmers, farm women, extension personnel and student were educated through these exhibitions organized at CSWRI, Avikanagar on Nov. 12, 2014, Indian Institute of Oilseed Research, Hyderabad during Jan. 18-19, 2015 and Madhurikund farm on March 3, 2015. Visitors were also provided literatures on scientific cultivation of rapeseed-mustard and solutions for their problems faced by theme in adoption of scientific technologies.

IMPLEMENTATION OF TRIBAL SUB-PLAN & NEH COMPONENT PROJECT

Tribal Sub-Plan : ICAR-DRMR implemented Tribal Sub-Plan during 2014-15 for augmenting rapeseed-mustard production for sustainable livelihood security of tribal farmers in collaboration with CAU, Imphal (Manipur); BAU, Kanke (Ranchi), AAU, Jorhat (Assam) and RVSKVV, Gwalior (MP). The activities like participatory varietal selection/demonstrations and capacity building of tribal farmers and farmwomen, organizing field days/ kisan diwas, trainings, distribution of small farm implements, construction of water harvesting ponds, etc were undertaken in the jurisdiction area of respective universities for the benefit of selected tribal farmers.

Exposure trip-cum- training organized: Three exposure-cum- training to ICAR-DRMR of 3 days duration each for capacity building of the 75 tribal farmers, farm women and 4 extension staff for dissemination of scientific technology of rapeseed-mustard among them were organized at ICAR-DRMR jointly with RVSKV, Gwalior (18-20 Dec 2014 for 30 tribal farmers of Jhabua district of MP); BAU, Ranchi (20-22 Jan. 2015 for 25 tribal farmers and 5 farm women of Lohardaga, Pashim Singhbhoomi, Purvi Singhbhoomi and Ranchi districts of Jharkhand) and AAU, Jorhat (6-8 Feb. 2015 for 15 tribal farmers of Dhemaji and Karbi Along district of Assam) under the ICAR-DRMR Tribal Sub- Plan. Besides, one exposure trip-cum- training was also organized during Feb. 4-5, 2015 at ICAR-DRMR under ICAR Seed project, wherein 25 participants from tribal area of Udaipur district participated.

NEH component project : ICAR-DRMR also implemented NEH component project in Manipur & Tripura States for popularization of improved varieties of rapeseed-mustard.

Monitoring of TSP and NEH component project : The activities carried out by Central Agricultural University, Imphal Manipur under TSP and NEH component projects being implemented in collaboration of ICAR-DRMR were monitored by Dr. Dhiraj Singh, Director, ICAR-DRMR; Dr. Bhagirath Ram, Sr. Scientis , ICAR-DRMR; Dr. M. Premjeet, Director of Extension, CAU, Manipur along with other team personnel visited during Feb. 10-11, 2015 the cluster demonstrations of yellow sarson (YSH 401) and Indian mustard (NRCHB 101) conducted at Thoubal and Andro districts of Manipur. The performance of rapeseed-mustard in the demonstrations was satisfactory. A Farmer's Field Day programme was also organized at Poiroupat, Imphal. A series of lectures were organized on improved cultivation practices of rapeseed-mustard and emphasis was given to use less quantity of seed for sowing and to adopt line sowing practices in the region.

Implementation of DRMR-NGOs Linkage programme

ICAR-DRMR successfully implemented DRMR-NGOs Linkage programme for rapeseed-mustard technology dissemination with 10 NGOs of Bharatpur district to reach large number of rapeseed-mustard farmers of the district working with NGOs. The programme was coordinated by Dr. Ashok Kumar Sharma Sr. Scientist A series of different extension programmes like kisan ghoshtis scientist-farmers interactions, exposure visit of farmer to ICAR-DRMR were designed and implemented in collaboration with NGOs to make the farmers aware about scientific technology of mustard to enhance the productivity through their increased adoption.

Implementation of ICAR-DRMR-IARI National Extension Programme

Under the DRMR-IARI collaborative National Extension Programme for technology assessment and transfer, 25 successfully conducted demonstrations on pearl millet and sorghum in Kharif 2014 and wheat (HD 2894, HD 2967, HD 3059, HD 2985), carrot (Pusa Rudhira), spanich (Pusa Pragiti), pea (Pusa Bharati), supplied by IARI New Delhi in rabi 2014-15 in different villages of Bharatpur & Dausa district of Rajasthan and Firozabad district of Uttar Pradesh. Under the project farmers were also made aware about the importance of biogas unit for sustainable agriculture production. The Nodal Officer, Dr. Ashok Kumar Sharma, Sr. Scientist coordinated the programme and presented progress report of ICAR-DRMR-IARI collaborative programme in one day workshop of IARI National Extension Programme organized on Oct. 16, 2014 at IARI, New Delhi. The work done by ICAR-DRMR was highly appreciated by all concerned.

Besides, 3 demonstrations on improved varieties of carrot (Pusa Rudhira), spinach (Pusa Bharti) and pea (Pusa Pragati) were conducted at ICAR-DRMR farm during 2014-15. to show the production potential of these improved varieties to the visiting farmers, & extension personnel, participants of training programmes at DRMR. About 3000 farmers and farm women visited these demonstrations. The farmers appreciated the performance of demonstrated varieties. ◆

ICAR-DRMR KRISHI VIGYAN KENDRA

On and off-campus trainings: Fifteen on campus trainings including six sponsored from ATMA and 24 off campus trainings were organized at KVK on different aspects. Total 480 farmers were benefitted on campus trainings and 863 farmers and 164 farm women were benefitted through off campus trainings.

Front Line Demonstrations: Sixty FLD on mustrad var. NRCDR-2 (40), RH-749 (10) and Giriraj (10) covering 30 ha. area and 10 FLDs on wheat var. HD-3086 in 5 ha. area were conducted during Rabi 2014-15. Three field days were also organized.

Other Extension activities: Twenty on farm testing (OFT), 100 demonstrations for livestock health improvement, 03 Field Day, 02 Kisan Ghosthi, 01 Night Gosthi, 158 Farm advisory, 02 Exhibition/Exhibitional tour, 26 Lectures and about 100 activities on awareness programme were organized at KVK, Gunta-Bansur (Alwar) for benefits of farmers. 06 TV talks, 27 Film show and 22 Popular articles were published. With all these activities about 3347 farmers and 541 women farmers benefitted.

Scientific Advisory Committee (SAC) meeting: 2nd Scientific advisory committee (SAC) meeting of KVK was organized along with KVK Kotputli on 12 March 2015 under the chairperson of Dr. Madhuri Joshi, Dy-Director, Extension Education, SKN Agriculture University, Jobner. Dr. Pankaj Sharma, Senior scientist and Incharge KVK & SMs presented the annual progress report and action plan (2014-15).

Foundation day: 4th Foundation day of KVK Bansur was organised on 28.3.2015. The Chief guest Dr. Dhiraj Singh, Director, DRMR, Bharatpur delivered Foundation day lecture and highlighted the mandates of the KVKs and also said that the establishment of this KVK will greatly improved the efficiency of the technology dissemination in the area. Dr. Pankaj Sharma, Senior scientist and Incharge KVK welcomed the guests and presented the annual progress report and action plan (2014-15) of KVK. ◆

RESEARCH ACHIEVEMENTS

Development of Rapeseed-Mustard bibliographic information system

Vinod Kumar, PD Meena, Ashok Kumar Sharma, Pankaj Sharma and Dhiraj Singh

The advancement of research in the field of rapeseed-mustard diseases is clear to everyone. The numbers of articles are being published each year. Problem identification, future planning, implementation, and interpretation of individual research studies all depend on ready access to all of the relevant existing rapeseed-mustard diseases research knowledge. The development of web-based bibliography information system (RMBiblio), offers researchers easy and fast access of most comprehensive resource for research articles in rapeseed-mustard disease research. System supports a wide range of publication types, and has features like advanced search option, extraction of publications statistics based on a variety of visual form based queries, etc. Metadata formats suitable for describing scientific publications have been used in creating the database. Sophisticated & versatile searching facility has been implemented using MySql full text search options, the rows returned are automatically sorted with the highest relevance. HTML, CSS, was used for development of user interface. ◆

Constraints faced by extension workers in transfer of technology and their training needs

Ashok Kumar Sharma, Vinod Kumar, Rupender Kaur and Dhiraj Singh

1. **Constraints faced by extension workers :** A study was conducted based on data collected from 280 extension workers from Rajasthan (160), Uttar Pradesh (80) and Madhya Pradesh (40) who participated in training programmes organized by ICAR-DRMR during 2014-15 for identification of major constraints faced by them in transfer of technology to the farmers and their training needs. The study revealed that "lack of knowledge and skill about latest technological advances in the field of rapeseed-mustard" was the top most constraint reported by the 78.21 per cent respondents. The "lack of practical exposure to technology demonstration unit" was perceived second most important constraint by majority of respondents (75.71%). It was worth noting that 74.28 per cent respondents reported "non-cooperation and lack of interest of farmers to participate in extension activities/ programmes organized by the departments" as one of the major constraints in transfer of technology and accorded third rank in order of priority. In many studies, farmers reported the non availability and infrequent visits of extension workers in the villages" as important constraint faced by them. On the other hand, the 73.21 per cent extension workers reported that their geographical area of working was very large and it was difficult to visit fields and farmers of particular location regularly and frequently. The "involvement in other activities/ programmes of other departments more rather than extension activities of agriculture" was reported important constraint by 72.14 per cent respondents with fifth rank.

The extension workers are working for educating the farmers about agriculture technologies through using the different extension tools, methodologies and approaches but it was important to reveal that they were not trained well in using different extension tools of transfer of technology. The "lack of training in extension approaches/ methodologies" was perceived as one of the major constraints by 70.35 per cent respondents which placed at sixth rank. The "delay in receiving minikit demonstrations/ inputs to be given to farmers" was reported as seventh by 68.21 per cent respondents with seventh rank. The said that minikit demonstrations are not reached to the well in advance. It was most serious concern that respondents faced the problem of receiving inferior quality of inputs supplied by cooperative societies under minikit demonstrations as it was reported by 66.42 per cent respondents. The "non-availability of recommended inputs (seed, fertilizers, culture, fungicides, insecticides, etc.) in the market" was perceived as another important constraint by 64.64 per cent respondents with ninth rank.

The "delay in receiving of guidelines/ information about implementation of activities and budget release" was also perceived an important barrier by 63.57 per cent respondents with tenths in the proper and timely implementation of activities or programmes. The "dependency only on package of practices developed by the department for making recommendations to the farmers" also becomes a constraint in transfer of improved technology as perceived by 61.78 per cent respondents. However, one of the important findings of the study was the "lack of opinion leaders in the villages" as an important constraint perceived by the 60.00 per cent respondents.

2. Training needs of extension workers : The training need assessment shows that 86.42 per cent respondents had highest level of training in the aspects of "insect-pest and disease management" followed by areas of "management and use of fertilizers" by 82.14 per cent. The training in "selection of improved varieties, proper seed rate and sowing method" was given the third most important with 81.07 per cent. The training in "weed management" was the fourth ranked priority as reported by 77.14 per cent respondents. The 74.28 per cent accorded fifth rank priority to "management of abiotic stress and natural calamities"

The aspects like "seed and soil treatment, land preparation/ field management" were given importance for training by 72.14 respondents with the sixth rank. The 65.00 per cent respondents reported harvest, threshing and storage as seventh ranked in prioritization of the training needs. ◆

AWARDS / RECOGNITION

- **ICAR-DRMR was conferred with Mahindra Samardhi India Agri Award 2015** in recognition to a Public Sector Organization for its purposeful and noteworthy contribution to the field of agriculture having positive impact on the farming communities thus enabling them to rise. The award was given by Mahindra Group for promoting rapeseed-mustard cultivation especially in North-East states through zero tillage technique and motivating farmers to adopt scientific cultivation of rapeseed-mustard through development of voice based e-learning extension module for mustard cultivation, capacity building of a large number of farmers through organizing effective extension training programmes, organizing "Sarson School on AIR" programmes and making the quality seeds of improved varieties available to the farmers for varietal replacement that have opened the new path for farming community for their advancement.

- **Dr. Dhiraj Singh**, Director ICAR-DRMR was honoured with ISGBRD's Lifetime Achievement award for his contribution to rapeseed-mustard improvement in the country on Feb. 18, 2015.
- **Dr. Ashok Kumar Sharma** was conferred with Best Scientist Award of ICAR-DRMR, Bharatpur on the occasion of 21st Foundation Day of ICAR-Directorate of Rapeseed-Mustard Research, Bharatpur on Oct. 20. 2014 for significant contribution in research, extension and overall growth of the ICAR-DRMR for the year 2013-14. He also received the Best Extension Professional Award by Society of Extension Education, Agra for significant contribution in transfer of agriculture technology on the occasion of 7th National Extension Education Congress held at ICAR Research Complex, Umaim, Meghalaya during Nov. 8-10, 2014. The Best oral paper presentation award was also conferred to Dr. Ashok Sharma in 7th National Extension Education Congress.

- **Dr. Pankaj Sharma** received Fellow Award (FINSOPP) 2014 by Indian Society of Plant Pathologists, PAU, Ludhiana, India on Nov. 19, 2014. He was also awarded as Young Scientist Award 2015 by Indian Society of Genetic, Biotechnology Research & Development during International Conference at Banasthali Vidyapeeth. Feb 18-20, 2015
- **Dr. P.K. Rai** was conferred with Fellowship award of Indian Society of Mycology and Plant pathology, Udaipur during 36th Annual Conference and National Symposium held during Feb 12-14, 2015 at Agricultural College and Research Institute, Madurai, Tamil Nadu Agricultural University, Coimbatore.
- **Dr. Bhagirath Ram** received ISGBRD's Fellow award for his scientific contribution to rapeseed- mustard improvement in the country on Feb. 18, 2015.
- **Dr. V.V. Singh** was awarded fellow of the Indian Society of Genetics and Plant Breeding, New Delhi.
- **Dr. Pankaj Sharma and M.S. Sujith Kumar** received Best Poster Award during National Seminar on Strategic interventions to enhance oilseed production in India, organised by Indian oilseeds research, Hyderabad held at ICAR-DRMR, Bharatpur on Feb 19-21, 2015.

PROMOTIONS / TRANSFER / NEW JOINING

New joining

Name	Designation	w.e.f
Dr. (Ms) Era Vidya	Scientist (Biotechnology)	13.10.2014
Ms. Reema Rani	Scientist (Biotechnology)	13.10.2014
Mr. Prashant Yadav	Scientist (Biotechnology)	13.10.2014
Mr. Ajay kumar Tandon	Junior Account officer	12.11.2014
Mr. P.K. Tiwari	Finance and Account officer	10.12.2014

TRANSFER/ PROMOTION

Name	From	To	W.e.f.
Mr. K.S Tanwar, F&AO	ICAR-DRMR, Bharatpur	ICAR-CAZRI, Jodhpur	20.10.2014
Dr. K.N Meena	TO	STO	02.12.2014

DISTINGUISHED VISITORS

Visitors	Date
Dr. S.S. Khanna, Ex-Vice Chancellor & Former Advisor, Planning Commission, New Delhi	08.11.2014
Dr. Anil Rai, Head & Pr. Scientist, Bioinformatics Division, IASRI, New Delhi	27.11. 2014
Dr. Sain Das, Ex-Project Director, DMR, New Delhi	03.12.2014 & 19.2.2015
Dr. J. P. Singh, Professor and Ex- Head, Department of Soil Science, CCS HAU, Hisar	03.12.2014
Dr. Ananda Raj, Director, IISR, Kozhikode, Kerala	09.01.2015
Dr. Nirmal Babu, Project Co-coordinator, AICRP on Spices, Kozhikode, Kerala	09. 01.2015
The Wyoming Leadership Education and Development (L.E.A.D.), USA	12.01.2015
Dr. Suman Govil, Advisor, Dept. of Biotech., GOI, New Delhi.	24.01.2015
Dr. Arvind Kumar, DDG(Edn)ICAR, New Delhi & VC, RLBCAU,Jhansi	19.02.2015
Dr. K.S.Varaprasad, Project Director, ICAR- IIOR & President ,ISOR	19.02.2015
Dr. P.R. Kumar, Ex-Director, NRCRM, Bharatpur	19.02.2015
Dr. D.M. Hegde, Ex-Director, DOR, Hyderabad	19.02.2015
Dr. C. Chattopadhyay, Director, ICAR-NCIPM, New Delhi	19.02.2015
Dr. S. Arulraj, Director, ICAR- IIOPR, Andra Pradesh	19.02.2015
Sri Chandrasekhar,The Hindu Business Line	19.02.2015
Dr. S. Ayyappan, Secretary (DARE) & DG, ICAR, New Delhi	26.02.2015
Dr. Shital Sharma, Additional Director (NMOOP), Deptt. of Ag., Raj.	26.02.2015
Dr. J.S. Sandhu, DDG, Crop Science, ICAR, New Delhi	03.03.2015

TRAINING ATTENDED

Topic	Venue/Date	Participant(s)
Professional attachment training (FOCARS)	N.R.C.P.B, New Delhi (27.8.2014-28.11.2014)	Dr. Ibandalin Mawlong
Professional attachment training (FOCARS)	N.R.C.P.B, New Delhi (27.8.2014-28.11.2014)	Sujith Kumar M.S
Executive development programme on leadership development	NAARM, Hyderabad (Jan. 19-23, 2015)	Dr. Dhiraj Singh

SEMINARS

Speaker	Topic	Date
Dr. Dhiraj Singh, Director	"Swachh Bharat Abhiyan" elaborating issues and aspects of the campaign	2.10.2014
Dr. Dhiraj Singh, Director	Presentation of vigiliance awareness week	27.10.2014
Dr. Dhiraj Singh, Director	National unity day	31.10.2014
Dr. Dhiraj Singh, Director and Dr. P.K. Rai, Pr Scientist	"World toilet day" highlighting different issues related with personal hygiene	10.11.2014
Dr. Dhiraj Singh, Director	Innovation action plan (IAP) -progress made by ICAR-DRMR	3.12.2014
Dr. Dhiraj Singh, Director	Science for Nation Building	28.02.2015

WORKSHOPS/SYMPOSIA/SEMINAR/MEETINGS ATTENDED

Workshops/symposia/seminar/meetings	Venue and date	Participant(s)
Workshop on IARI-SAU/ICAR institutes collaborative National Extension Programme.	ICAR-IARI, New Delhi Oct. 16, 2014	Dr. Ashok Sharma Dr. Pankaj Sharma
National symposium on Crop Improvement for Inclusive Sustainable Development.	PAU, Ludhiana Nov 7-9, 2014	Dr. V.V. Singh
7th National Extension Education Congress-2014 on "Translational Research-Extension for Sustainable Small Farm Development".	ICAR- Research Complex for NEH region, Umiam, Meghalaya Nov. 8-9, 2014	Dr. Ashok Sharma Dr. Vinod Kumar
Meeting on VISION 2014 and institute projects.	ICAR, Krishi Bhavan Nov 10, 2014	Dr. V.V. Singh
Workshop-cum-Review Meeting of NMOOP and NFSM for NE-states.	Directorate of Agriculture, Govt. of Assam, Guwahati Nov. 10-11, 2014	Dr. Ashok Sharma Dr. Vinod Kumar
National symposium on Plant health for sustainability in the field and horticultural crops.	Citrus Research Station, Dr YSR Horticultural University, Tirupati Nov. 18-20, 2014.	Dr. Pankaj Sharma

Workshops/symposia/seminar/meetings	Venue and date	Participant(s)
8th Review Meeting of 'ICAR -Network Project on Transgenic in Crops'.	ICAR-NRCPB, New Delhi Dec. 2-3, 2014	Dr. Ajay Kumar Thakur
Review meeting of BRL-II trial of transgenic mustard hybrid DMH 11 at DUSC.	New Delhi Dec. 23, 2014.	Dr. V.V. Singh
Review workshop and Action Plan of KVKs Zone VI.	MPUAT, Udaipur Dec. 24-25, 2014.	Dr. Pankaj Sharma
National Workshop on Mustard at State Institute of Agricultural Management (SIAM).	Durgapura, Jaipur Jan. 5-6, 2015	Dr. Dhiraj Singh Dr. S. S. Rathore
First meeting of state level standing committee of NMOOP	Pant Krishi Bhavan, Jaipur Jan. 07, 2015.	Dr. V.V. Singh
National Seminar on "Technologies for Enhancing Oilseeds Production through NMOOP".	ICAR-DOR, Hydrabad. Jan. 18-19, 2015	Dr. Dhiraj Singh Dr. Arun Kumar Dr. H.S. Meena
International conference on "Emerging Trends in Biotechnology and Sciences with Especial Reference to Climatic Change".	KVK Banasthali Vidyapith, Feb. 18, 2015	Dr. Dhiraj Singh Dr. Pankaj Sharma Dr. Bhagirath Ram
National seminar on strategic interventions to enhance oilseeds production in India.	ICAR-DRMR, Bharatpur Feb 19-21, 2015	Director, Scientists andstaff
One-day workshop on 'Training needs assessment for HRD nodal officers of ICAR'.	ICAR-NAARM, Hyderabad Feb 26, 2015	Dr. Ajay Kumar Thakur
3rd Rajasthan Science Congress.	Manipal University, Jaipur Feb.28 - Mar. 2, 2015	Dr. Dhiraj Singh Dr. Pankaj Sharma
36th All India Rabi Seminar on oilseeds, oil trade and industry organized by Central organization for oil industry and trade (COOIT).	Birla Auditorium, Jaipur March 15, 2015	Dr. Dhiraj Singh Dr. Pankaj Sharma

RESEARCH PAPERS PUBLICATIONS

1. Mawlong, I., Kumar, M.S. and Singh, D. 2014. Furan fatty acids: Their role in plant systems, Phytochemistry Reviews, 1-7.
2. Nanjundan, J., Kumar, A. Singh, K. and Singh, KH. 2014. Clustered siliquae in Indian mustard (Brassica juncea): Its inheritance and implication in mustard breeding. Indian Journal of Genetics and Plant Breeding, 74: 511-514.
3. Pratap, P, Thakur, A.K., Meena. P.D., Meena. H.S., Sharma, P., Singh, D. and Majumdar, R. 2015. Genetic diversity assessment in Indian mustard (Brassica juncea L) for Alternaria blight tolerance using SSR markers. Journal of Oilseed Brassica. 6(1): 175-182.
4. Priyamedha, Singh, B.K, Thomas Lijo, Manju Bala, Singh, V.V and Singh, Dhiraj. 2015. Status and perspective of canola quality rapeseed-mustard cultivation in India: a review. Journal of Oilseed Brassica 6(1): 142-151.
5. Rai, P.K., Singh, B.K, Singh, V. V. and Siddiqui, S. A. 2014. Ovule fertility and seed set in oilseed Brassicas. Vegetos, 27 (2): 229-232.
6. Rathore, S.S., Shekhawat Kapila, Kandpal, B.K., Premi, O.P., Singh, S. P. and Singh, D. 2014. Sulphur management for increased productivity of Indian mustard: A review. Annals of plant and soil research 17 (1): 1-12.
7. Rathore, S.S., Shekhawat Kapila, Meena Amit, and Singh, D. 2015. Growth, productivity and economics of coral-432 (Indian mustard hybrid) under different cropping system. Journal of oilseed Brassica 6 (1):202-208.
8. Sharma, P., Meena, P.D., and Singh, D. 2014. Epidemiology and management of Sclerotinia rot of Indian mustard (Brassica juncea L.). Plant Disease Research 29(2):223.
9. Sharma, P., Meena, P.D., Verma, P.R., Saharan, G.S., Mehta, N., Singh, D. and Arvind Kumar. 2015. Sclerotinia sclerotiorum (Lib.) de Bary causing Sclerotinia rot in oilseed Brassicas: A review. Journal of Oilseed Brassica 6 (S): 1-44.
10. Sharma, P., Sharma, A., Meena, P.D. and Singh, D. 2015. Patho-biochemical investigations on stem rot (Sclerotinia sclerotiorum) of Indian mustard (Brassica juncea L.). Journal of Oilseed Brassica 6 (1): 209-212.
11. Sharma, P., Verma, P.R, Meena, P.D., Kumar, V. and Singh, D. 2015. Recent research progress analysis of Sclerotinia rot (Sclerotinia sclerotiorum) of oilseed Brassicas through bibliography. Journal of Oilseed Brassica 6 (S): 45-125.
12. Supriya, Priyamedha, Singh, B. K., Bhagirath Ram, Kumar, A., Singh, V. V, Meena M. L. and Singh, Dhiraj. 2014. Development and evaluation of double low quality lines in Indian mustard (Brassica juncea L Czern & Coss). SABRAO J of Breeding and Genetics, 46 (2): 274-283.

From the Directors Desk

Greetings!

I am pleased to present this issue of Sarson News for the period of October 2014-March 2015 before you.

The Directorate was honoured with the visit of Secretary, DARE and DG, ICAR, Dr. S. Ayyappan and Deputy Director General (Crop Science), ICAR, New Delhi, Dr. J.S. Sandhu. Their appreciation for research achievements and conducting field experiment trials systemically and good works in labs has encouraged the scientists for contributing more for the cause of development of Brassica science. The inauguration of basic science complex by Dr. S. Ayyappan, Secretary, DARE and DG, ICAR on 26th Feb., 2015 has added a new era in infrastructure development of the Directorate.

To cater the need of our important stakeholders, farmers and extension workers, a number of extension programmes like trainings, Sarson School on AIR, scientists-farmers interactions, FLDs, visitors advisory services, exhibitions, etc. were organized. The untiring efforts of the scientists of the Directorate for technology dissemination have been appreciated and acknowledged by all corner of the society.

Let me congratulate all my scientists and staff for conferring this Directorate with Mahindra Samardhi India Agri Award 2015 in recognition to a Public Sector Organization for its purposeful and noteworthy contribution to the field of agriculture having positive impact on the farming communities thus enabling them to rise.

In compliance of “Swach Bharat Abhiyan” of Hon'ble Prime-Minister, 'Swachta campaign', inaugurated on the birth anniversary of Mahatma Gandhi on 02.10.2014, has become the regular feature of the Directorate. To remember the journey of development of the directorate, the celebration of its foundation day has become memorable event with participation of its ex-staff members and acknowledging the contribution of its staff.

Keeping in view of Directorate's strength and capability in working with farming community, Deptt. of Agriculture, Govt. of Rajasthan and Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India came forward and gave more support through providing financial assistance for successful organization of three days 21st Sarson Vigyan Mela at ICAR-DRMR and one day Seed Production Mela at Madhurikund farm (Mathura), wherein thousands of farmers from Rajasthan, Uttar Pradesh, Madhya Pradesh and Haryana participated and had meaning full learning while seeing the varieties and technology.

Adoption of five villages, organization of sarson farm schools, formation of farmers groups and regular interaction of scientists with farmers for spreading the awareness about improved technology of mustard will definitely give an impetus to transfer of technology programme and motivate the farmers to adopt scientific technology.

It was worth noting that about 75-78 per cent extension workers reported in a study that “lack of knowledge and skill about latest technological advances in the field of rapeseed-mustard” and “lack of practical exposure to technology demonstration unit” were the top most constraints. Therefore, in its endeavour to develop team of trained extension workers with upgraded knowledge and skills about scientific technology of rapeseed-mustard for effective and rapid transfer to the farming community, the Directorate organized 12 training programmes of 2 to 5 days duration for 268 field level extension functionaries of States Department of Agriculture of Rajasthan, Madhya Pradesh and Uttar Pradesh.

Keeping in view of importance of input dealers for farmers as source of information, Directorate organized 2 training programmes for input dealers to make them aware of the new technologies and developments in rapeseed-mustard cultivation so that they communicate the same to the farmers to come in their contacts. Such interactions will go a long way to make available the recommended inputs to the farmers.

The development of R-M bibliographic information system and e-publications will give the strength to digital communication of the Directorate. PVSE conducted by extension workers helped them in identification of suitable varieties. It was also a great opportunity for the Directorate to share the research developments of the crop with agriculture officers and Assistant Professors/ SMSs through organizing 2 Model Training Courses and one winter school.

The Implementation of linkage programmes of ICAR-DRMR with DUVASU, NGOs, KVK and IARI has also give the potency to the Directorate and has benefitted the thousands of farmers. The successful implementation of Tribal Sub Plan and NEH component project also add in one of the important achievements.

For the first time, we had also organized National Seminar on “Strategic interventions to enhance oilseed production in India” in collaboration of Indian Society of Oilseed Research, Hyderabad. A couple of our scientists were also recognized by professional societies/ organizations for their excellent contribution to the development of rapeseed-mustard.

I express my sincere thanks to all colleagues of ICAR-DRMR as well as other collaborating centres for making all out efforts for the development of crop and technology dissemination to end users.

Jai Hind

Contribution are invited for the next issue of Sarson News. The Sarson News intends to highlight only the latest and the most salient research findings, developments and achievements related to rapeseed-mustard. Suggestions to improve the News Letter are welcome.

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