रा.बी.वि.एवं प्रौ.संस्थान समाचार

NISST News

भा.कृ.अनु.प. – राष्ट्रीय बीज विज्ञान एवं प्रौद्योगिकी संस्थान, मऊ (उ.प्र.)

ICAR- National Institute of Seed Science & Technology, Mau (U.P.)

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Advancing Seed Science for Sustainable Food Security

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Director Message

It gives me immense pleasure to share the Newsletter of ICAR - National Institute of Seed Science and Technology, highlighting the recent progress and status of seed research activities at the Institute. Seed is the most critical and cost-effective input in agriculture, and our continued efforts are focused on strengthening the scientific, technological, and extension dimensions of seed systems in the country.

During the current period, the Institute has made significant advancements in seed quality enhancement, seed health management, seed priming technologies, and the standardization of testing protocols. Special emphasis has been laid on climate-resilient seed technologies, and promotion of improved seed production practices to ensure higher productivity and sustainability.

As a recognized Member of the International Seed Testing Association (ISTA), the Institute adheres to internationally accepted seed testing standards and protocols. This recognition strengthens our commitment to maintaining global benchmarks in seed quality assurance and enhances the credibility of our testing services at both national and international levels. Student research remains a vital component of our academic and scientific activities. The Institute actively guides postgraduate students and research scholars in emerging areas such as seed physiology, molecular characterization, seed health diagnostics, and seed enhancement technologies. Through hands-on laboratory training, field experimentation, and thesis research, we are nurturing the next generation of seed scientists and professionals who will contribute to strengthening the seed sector.

In addition to research and training, the Institute enthusiastically celebrates important national and agricultural observance days, including Kisan Diwas, Rashtriya Ekta Diwas, Constitution Day, Mahila Kisan Diwas, and Swachhta Pakhwada. These celebrations promote awareness about farmers' welfare, national unity, constitutional values, gender empowerment, and environmental responsibility among staff, students, and stakeholders.

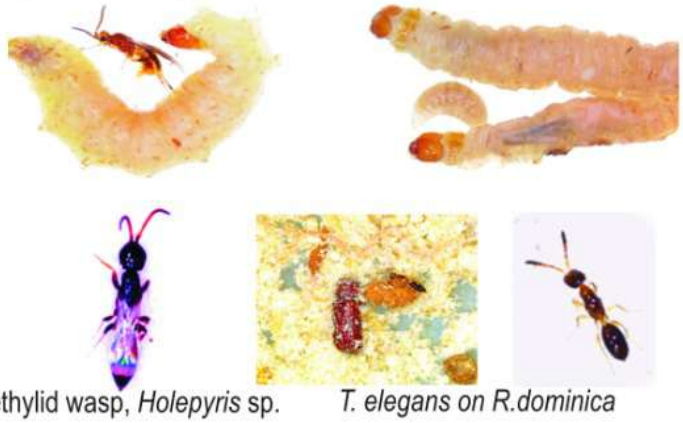
I sincerely appreciate the dedicated efforts of our scientists, technical staff, students, and collaborators in advancing seed science research. Together, we remain committed to delivering quality seed technologies that support national food security, farmers welfare, and sustainable agricultural development.

A.Anandan
(Director)

Research Highlights

Harnessing natural enemies for the biological management of seed-infesting pests

Stored-product insect pests pose a serious threat to global food security by infesting stored seeds, causing economic losses and reducing seed viability. Sustainable seed protection emphasizes biological control as part of integrated pest management (IPM), alongside cultural, mechanical, and botanical methods. Several natural enemies *Xylocoris flavipes*, *Uscana* sp., *Anisopteromalus calandrae*, *Habrobracon hebetor*, *Theocolax elegans*, *Holepyris* sp., and *Pyemotes* sp.were recorded from stored cereals, legumes, and dried nuts collected around Bengaluru, Karnataka, India. Among them, *H. hebetor* (PQ774890; BOLD: AAZ2679), *T. elegans* (PV124339; BOLD: ADU2431), and *Holepyris* sp. (PV324756; BOLD: ADT2789) were confirmed using CO1 barcoding (~658 bp). *Uscana* sp. (Hymenoptera: Trichogrammatidae) parasitized 13-day-old eggs of *Callosobruchus maculatus* on pigeon pea and cowpea, achieving 42% parasitism and reducing seed infestation from 100% to 78.67%, with improved germination (82.33%) and seedling vigour (1643.3). *A. calandrae* (Hymenoptera: Pteromalidae) a larval parasitoid of *C. maculatus*, showed increased emergence with higher mating pairs (4.623.8 adults). *H. hebetor* (Hymenoptera: Braconidae) parasitized larvae of *Plodia interpunctella* and *Corcyra cephalonica*, with emergence rising from 2.2 in 1st instar to 25.0 in 4th instar hosts. The predator *Xylocoris flavipes (Hemiptera: Anthocoridae)* suppressed *Sitophilus oryzae* and *Tribolium castaneum* populations by attacking eggs and early stages. *Theocolax elegans (Westwood)* (Hymenoptera: Pteromalidae) parasitized larvae of *S. oryzae* and *Rhyzopertha dominica*, while *Holepyris* sp. (F:Bethylidae) targeted *Oryzaephilus surinamensis*. The ectoparasitic mite *Pyemotes sp. (Trombidiformes: Pyemotidae)* caused complete mortality in pulse beetle cultures. These findings highlight the potential of parasitoids and predators for effective stored-product pest management. Furthermore, host developmental stage and parasitoid reproductive parameters were identified as crucial factors influencing parasitism success, providing valuable insights for the optimization of post-harvest integrated pest management strategies.



Bethylid wasp, *Holepyris* sp. *T. elegans on R.dominica*

George *et al*., 2025

Enhancing soybean seed yield through biopriming with liquid biofertilizers

The present study highlights the effectiveness of biopriming soybean seeds with liquid biofertilizers as a sustainable, economically viable, and agronomically efficient approach. The results clearly indicate that seed treatments using EM culture, phosphate-solubilizing bacteria (PSB), and Rhizobium significantly enhanced yield attributes, seed yield, seed quality, and soil health compared to the application of recommended chemical fertilizers alone. Furthermore, the integration of these biofertilizers through biopriming not only improved crop productivity but also contributed to better nutrient availability and soil biological activity. The findings demonstrate that this approach can effectively reduce reliance on synthetic fertilizers while promoting environmentally friendly and climate-resilient agricultural practices.

Manjanagouda *et al*., 2025

Biogenic iron nanoparticles as a new priming solution to improve seed germination and vigour in pigeon pea (*Cajanus Cajan* L.).

The present study demonstrates the potential of green-synthesized biogenic iron nanoparticles as an efficient and sustainable seed priming agent for pigeon pea. The results clearly indicate that priming seeds with an optimal concentration of 50 ppm significantly improved germination percentage, seedling growth, and overall seed vigour, while simultaneously reducing the incidence of abnormal and non-viable seedlings. These positive effects may be attributed to enhanced nutrient bio availability, stimulation of metabolic and enzymatic activities, and improved utilization of iron during the early stages of plant development. The use of biogenic iron nanoparticles thus facilitates better seed performance and establishment of healthy crop stands.

Kurdekar *et al*., 2025

Enhancing rapeseed germination by nano zinc oxide and zinc sulfate particles under interrupted irrigation

The study evaluated the effect of zinc oxide nanoparticles and zinc sulfate, applied singly or in combination, on the seed germination traits of four spring rapeseed cultivars three open-pollinated varieties (Delgan, Zafar, and RGS003) and one hybrid variety (Hayola 50) under varying drought stress conditions imposed on the mother plants. The experiment was conducted over two years using a split plot design, and several germination and vigor indices were assessed. The results indicated that the combined foliar application of zinc sulfate and zinc oxide nanoparticles (at 5 ppm) to the mother plants at three growth stages germination, flowering, and pod formation generally improved germination performance, particularly under drought stress conditions.

doi.org/10.1038/s41598-025-31616-8

Awareness programmes

Empowering farmers through sustainable practices, a programme on Fermented Organic Manure (FOM) was organized in collboration with ICAR-Indian Agricultural Research Institute, New Delhi. Project titled "*Evaluation, Promotion and Dissemination of Fermented Organic Manures for Sustainably Enhancing the Productivity of Major Cropping Systems in India and Reducing Environmental Footprints.*" The programme was conducted at ICAR-National Institute of Seed Science and Technology, Mau (U.P.). A total of 300 farmers attended, and 20 kg of Fermented Organic Manure (FOM) along with wheat seed was distributed to each farmer.

Launch of Pradhan Mantri Dhan Dhanya Krishi Yojana (PMDDKY)

ICAR-National Institute of Seed Science & Technology, Mau on 11th October, 2025 in connection with the launch of Pradhan Mantri Dhan-Dhanya Krishi Yojana (PMDDKY) and the Pulses Mission by the Hon'ble Prime Minister of India. The programme also included input distribution under the SCSP scheme. The event began with registration followed by a welcome address by Dr. Anjani Kumar Singh. Technical sessions covered improved crop management, oilseed production, natural farming practices, NPSS, government flagship schemes, and GST benefits. Participants also viewed the live telecast of the national launch programme. Shri Ashok Singh addressed the gathering as Chief Guest, and Dr. A. Anandan, Director, emphasized the importance of quality seed for sustainable agriculture. The programme concluded with distribution of wheat seed to 517 farmers.


PM-Kisan Samman Nidhi Release and Input Distribution

The ICAR-National Institute of Seed Science and Technology (NISST), Mau organized a Farmers' Awareness-cum-Training Programme on 19th November, 2025. The live telecast of the 21st instalment release of PM-Kisan Samman Nidhi by the Hon'ble Prime Minister of India was organised at NISST, Campus. The programme also included input distribution under the SCSP scheme. The event featured technical sessions on improved rabi crop practices, quality seed production and certification, natural farming, latest wheat varieties for Eastern Uttar Pradesh, and Government flagship schemes. Dignitaries appreciated ICAR-NISST's efforts in strengthening farmer outreach and promoting scientific agriculture. Participants viewed the live telecast of the PM-Kisan Samman Nidhi instalment release, followed by the Presidential Address by the Dr. A. Anandan, Director (NISST) highlighting seed research and farmer empowerment initiatives. The programme concluded with a visit to the demonstration farm and distribution of quality seeds to 500 farmers under SCSP.


SCSP/TSP/NEH

A one-day programme for the distribution of quality seed under the SCSP programme was organized under the chairmanship of Dr. A. Anandan, Director, ICAR-National Institute of Seed Science and Technology, Mau. A total of 900 quintals of wheat seed comprising the varieties HD 2967, HD 3249, DBW 187, and DBW 222 were distributed to 4,500 beneficiary farmers, including 2,482 male and 1,018 female farmers, across the districts of Mau and Ghazipur. In addition, 58 quintals of chickpea seed (variety HD 3043) were distributed to 1,160 beneficiary farmers, of whom 902 were male and 258 were female. These interventions significantly contributed to improving the seed replacement rate, enhancing crop productivity, and strengthening the livelihood security of SC farmers in the target regions.


TSP at Ooty

A one-day training programme on "Quality Seed Production and Input Distribution" was organized by the ICAR-National Institute of Seed Science and Technology in collaboration with the ICAR-Central Potato Research Instituteunder the TSP Scheme. The programme was chaired by Dr. A. Anandan, Director, ICAR-NISST, Mau. About 100 Toda tribal farmers participated in the programme and were acquainted with various technologies of potato cultivation and the importance of quality seed production. The participants were also sensitized to the improper use of pesticides, particularly in vegetable-growing tracts, and were informed about advanced technologies to enhance income from their

land. Staff from ICAR-Krishi Vigyan Kendra, TNAU, the Joint Director of Horticulture, The Nilgiris, the Head of ICAR-CPRI, Ooty, and scientific staff from ICAR-CPRI and ICAR-NISST delivered talks on various aspects of seed production. Inputs including quality potato seed, tarpaulin sheets, and a kit containing five biological inputs were distributed to all the participants.


Kota tribal farmers

A one-day Tribal Sub-Plan sponsored training on 'Quality Seed Production and Input distribution' was organised by ICAR-National Institute of Seed Science and Technology, RS, Bengaluru, in collaboration with ICAR-Central Potato Research Institute, RS, Ooty. About 100 Kota tribal farmers participated in the programme and were acquainted with the knowledge about aspects like importance of quality seeds for potato cultivation, different diseases and its management etc. The farmers were also sensitized about availability of advanced technologies in vegetable production, value addition and post harvest technologies for a sustainable income. The inputs like tarpaulin, a kit of five biological inputs inclusive of phosphobacteria, *Trichoderma viride* etc; seedlings of tea, thyme and rosemary were distributed to all the participants.


Officers training programme

The ICAR - National Institute of Seed Science and Technology organized a three-day training programme on "Seed Quality Enhancement Techniques for Higher Crop Productivity" from 15-17th October, 2025 at its Regional Station, GKVK Campus, Bengaluru. The programme was sponsored by the Karnataka State Department of Agriculture. The training was attended by 24 field-level officers, including Assistant Directors of Agriculture and Agriculture Officers from Department of Agriculture. Govt of Karnataka. The programme was inaugurated by Smt. Deepaja S. M., Joint Director of Agriculture (Extension, Training and E-Governance), with Dr. K. C. Narayanaswamy, Registrar and Dean (PGS), University of Agricultural Sciences, GKVK, Bengaluru as the Chief Guest. Dr. A. Anandan, Director, ICAR-NISST, Mau presided over the programme. The training covered seed quality parameters, physiological and genetic seed enhancement techniques, seed health testing, and quality evaluation protocols. Participants were also provided hands-on exposure to modern seed testing methodologies and laboratory practices to facilitate effective field-level adoption.

ATMA, Kaimur, Bihar

A five-day training programme on 'Quality Seed Production', sponsored by ATMA, Kaimur, Bihar, was conducted for 24 farmers from 6th to 10th October 2025. The programme aimed to enhance farmers' understanding of scientific seed production practices and improve the overall quality of seed materials produced at the local level. Participants were trained on crop selection, isolation distance, rouging, field inspection and post-harvest handling techniques. The training equipped the farmers with practical skills to adopt improved methods for achieving higher seed purity and productivity


ATMA, Bettiah, Bihar

A five-day training programme on 'Quality Seed Production Techniques', sponsored by ATMA, Bettiah, Bihar, was organized for 21 farmers from 17th to 21st November 2025. The programme focused on strengthening farmers' practical knowledge of scientific seed production methods, including proper field preparation, varietal selection, isolation practices and pest and disease management in seed crops. Participants also received hands-on guidance on post-harvest procedures to ensure high seed purity and improved germination quality.


ATMA, Kishanganj, Bihar

A five-day training programme on 'Quality Seed Production Techniques', sponsored by ATMA, Kishanganj, was conducted for 20 farmers from 24th to 28th November, 2025. The training focused on improving farmers' understanding of scientific seed production practices, including varietal selection, isolation distance, field management and disease control in seed crops. Participants were also trained in post-harvest handling and storage techniques to ensure better seed quality and enhanced crop productivity.

Kisan Diwas

The birth anniversary of India's fifth Prime Minister and Farmer's leader Shri Chaudhary Charan Singh was celebrated as National Farmers Day (Kisan Diwas) on 23.12.2025 at ICAR-National Institute of Seed Science & Technology, Mau. Over 300 farmers from nearby villages attended the program. The awareness about the Viksit Bharat - Guarantee for Rozgar and Ajeevika Mission : (VBG RAM G) Bill, 2025 was created. Farmers were informed that it is a significant change in the rural employment policy and provide statutory guarantee of wage employment for rural families to 125 days per financial year and aims to promote empowerment, inclusive development, convergence of schemes and service delivery in a saturated manner, thereby strengthening the foundation of a prosperous, capable, and self-reliant rural India.


Rashtriya Ekta Diwas

ICAR-NISST, Mau celebrated Rashtriya Ekta Diwas on 31st October, 2025 to commemorate the birth anniversary of Sardar Vallabhbhai Patel. Institute Scientific, administrative, technical staff members participated in the pledge, unity run, and talks on 'Ek Bharat, Shreshtha Bharat,' reaffirming our commitment to national unity and integrity.


Constitution Day

ICAR-National Institute of Seed Science & Technology, Mau observed Constitution Day (Samvidhan Diwas) on 26th November, 2025 in compliance with the Council's circular, with active participation from staff and students. The programme began at 11:00 a.m. with the collective reading of the preamble, reaffirming commitment to constitutional values, followed by an online quiz on the Constitution and Fundamental Duties through the designated portal. A talk on "Constitutional values and their relevance to citizens" was delivered by Shri Sudhakar Srivastava, AAO, at 11:10 a.m., and the programme concluded with a debate on "Rights and Duties Which is more important?", encouraging thoughtful interaction among participants.


Mahila Kisan Diwas

Mahila Kisan Diwas was celebrated at the institute on 15th October, where 20 women farmers actively participated in the programme. The event focused on empowering women in agriculture by providing insights into improved farming practices, resource management, and various government schemes designed to support women farmers. Interactive discussions and demonstrations helped to enhance their knowledge and encouraged greater involvement in agricultural decision-making and livelihood development.


Swachhta Pakhwada

The ICAR-NISST, Mau, organized Swachhta Pakhwada from 16-31st December, 2025. This swachhta awareness campaign included a number of events, including, swachhta pledge, the placement of a selfiee booth, a waste management workshop, plantation drive and signature drives among NISST resident and farmers. There was also a painting competition to raise awareness among kids and students. To create awareness about cleanliness among villagers and locals, a rally was organized. Kisan gosthi were organized to raise awareness of waste water management and farm waste management through organic farming and composting.




School students visits

ICAR-National Institute of Seed Science and Technology (NISST) in Kushmaur, Mau, Uttar Pradesh regularly hosts educational visits for school students to promote agricultural science and research. These educational excursion aim to give young learners valuable practical exposure to agricultural science, seed development, and innovative farming techniques. Such opportunities help students connect classroom knowledge with real-world applications and explore potential career prospects in the field of agricultural research. Students engage with scientists to learn about advanced seed science, crop research, and the visits included hands-on demonstrations and tours of laboratory facilities.

Design patent granted

Sivamma, P., Rao, P.V. K. J., Prasanthi, L. & Raju, N.V.N. (2025). Edible Film Making Machine for Paper Sweet. Design No. 413257-001 dated 18/12/2025

Awards, recognitions, and other notable achievements

Dr. Kalyani Kumari Senior Scientist (SST) received best oral presentation award (2nd position) in International Conference on "Sustainable Innovations in Agriculture, Vaterinary and Allied Sciences" organized by UAS, Raichur, Karnataka & NADCL, Baramulla, J & K (through online mode) from 29th to 31st December., 2025.

Dr. Manjanagouda S Sannagoudar, Scientist (Agronomy) received the Best Research Team Award from ICAR-IGFRI, Jhanshi on the occasion of its Foundation Day (1st November 2025).

Dr. Mamrutha H. M., Senior Scientist (Plant Physiology) has been awarded with best editor of the year 2025 for Plant Physiology Reports journal by Indian Society for Plant

Physiology (ISPP) at TNAU, Coimbatore, during 6th International Conference on Plant Physiology held from 15-18 Dec, 2025.

Manjanagouda S Sannagoudar, Scientist (Agronomy) has been awarded with the Best Research Paper Award on the occasion of the Foundation Day of ICAR-IGFRI (1st November 2025) for the publication entitled *"Livelihood and energy carbon dynamics of livestock-based integrated farming systems: Assessment and implications for sustainable farming"* published in *Farming Systems*, 4(1): 100183 (2025).

Dr. Shantaraju Senior Scientist (SST) received the Young Scientist Award at the International Conference on Sustainable Innovations in Agriculture, Veterinary and Allied Sciences (SIAVAS-2025) organized at UAS Raichur, Karnataka, during 29-31st December, 2025.

Dr. Banoth Vinesh, Scientist (GPB), received the Best Poster Presentation Award for his poster titled "Unravelling the Effect of Priming Technology for Enhancing the Planting Value of Barley (*Hordeum vulgare* L.) Seed" at the National Conference on Advances in Climate-Conscious Crop Science: Genetics, Genomics and Breeding, held from October 31 to November 02, 2025, at Bengaluru, India.

Research Papers

Amaresh, Aswini, N., Krishnappa, G., Durai, A. A., Manimekalai, R., Swamy, H. M., Pathy, T. L., Vinayaka, Dhanya, V. G., Rathan, N. D., Nandakumar, S. (2025). Next-generation molecular breeding tools to harness higher genetic gains in sugarcane. *Planta*, 262(5), p.122

George, A., Ramya, R. S., Raghavendra, D., Ramya P., Manjanagouda, S. S., Shantharaja, C. S., Vanishree, G., Aruna, Y. R., Anandan, A. and Sanjay Kumar. (2025) Harnessing natural enemies for the biological management of seed-infesting pests. *Discov Appl Sci* 7, 1441.

Jadav, M. J., Kalyanrao, Patel, N. A., Patel, D. A. and Bera, K.M. (2025) Innovative approaches to standardize seed production for maximizing yield in chilli (*Capsicum annuum*) var.Anand Tej. *International Journal of Research in Agronomy*. 8(10): 637-643

Jadav, M. J., Kalyanrao, Patel, N. A., Patel, D. A., and Pandya, M. M. (2025) Study and analysis of impact of storage on different parameters of chilli seeds. *Journal of Experimental Agriculture International*. 47(11) 69-76.

Jayaswal, D., Prabha, R., Kumar, K., Kumar, D., Jayaswall, K., Anokhe, A., Singh, A. N., Kumar, S., Kansal, R. (2025). Whole genome sequencing and subtractive genomics of *Lipaphis erysimi*: a vital pest of *Brassica juncea*. *Journal of Plant Growth Regulation*. 8:1-5.

Kalyani Kumari, Kalyanrao, Banoth Vinesh, Anjani Ku. Singh, Pavithra, V., Sanjay Kumar and Sunil Kannujia (2025). Low-cost, farmer-friendly substrates for seed germination testing: evidence across major field crops. *Seed Research*, 53 (2): 125-132.

Krishnappa, G., Khan, H., Pathy, T. L., Gupta, A., Mahendru-Singh, A., Ahlawat, A. K., Patel, J. M., Biradar, S. S., Mamrutha, H. M., Khobra, R., Pandey, V., Singh, G. P., Tiwari, R. (2026). Deciphering low nitrogen tolerance of wheat in mega-environments using integrated multi-variate approaches. *European Journal of Agronomy*, 173, p.127919.

Mamrutha, H. M., Wadhwa, Z., Abhishek, R. R., Padmaja, A. S., Shetty, N., Rani, P., Ahlawat, O. P., Tiwari, R. and Nataraja, K. N. (2025). Unveiling the potential of fungal endophytes for abiotic stress mitigation in wheat. *Journal of Cereal Research*. 17 (3): 371-375.

Manjanagouda S. S., Vanishree, G., Shantharaja, C. S., Aravindan, S., Sripathy, K.V., Udaya Bhaskar, K., Bhojaraja Naik, K., Ramya, P., Anjitha George, Anandan, A. and Sanjay Kumar. (2025). Enhancing soybean seed yield through biopriming with liquid biofertilizers. *Indian Journal of Agronomy*, 70(3), pp.306-313.

Pathy, T. L., Vinu, V., Arunkumar, R., Krishnappa, G., Mahadeva Swamy, H. K., Valarmathi, R., Dhanapal, K., Amaresh, Govindaraj, P., Hemaprabha, G., Ram, B. (2025). Multi-trait index based elucidation of drought tolerance potential of *Saccharum spontaneum*. *Plant Physiology Reports*, pp.1-14.

Priyadarshini, P., Tilgam, J., Indu, Chand, S., Ramtekey, V., Jaiswal, D., Rana, M., Dwivedi, K. K., Ahmed, S. (2025). Accelerated breeding approaches for improved productivity and quality in dual-purpose oats. In accelerated plant breeding, Volume 5: Forage Crops 2025 Oct 31 (pp. 221-257). Cham: *Springer Nature* Switzerland.

Sandeep, S. N., Fathima, P. S., Yogananda, S. B., Suma, R., Shivakumar, K. V., Sowmyalatha, B. S., Gowda, P. T., Halli, H. M., Manjanagouda S Sannagoudar, Senthamil, E. and Gowdra, V. M. G. (2025). Trade-offs between global warming potential, eco-efficiency and water use efficiency under different establishment methods and nitrogen management strategies for sustainable rice production. *Science of The Total Environment*, 1004, p.180759.

Book Chapters

Kuldeep Srivastava, Shiv Prakash Shrivastav, K. Dhinesh Babu, Ajay Kumar and Sumit Chaudhary (2025) Agricultural Technology (Recent Breakthrough and Future Directions), Agri Root Publication House, Jaipur, Rajasthan (India), ISBN: 978-81-989311-2-2

Pratiksha Raj, Arunima Paliwal and Ajay Kumar (2025). Multispectral imaging and magnetic resonance on seeds; Advances in seed storage and Preservation (Science, Technology and Sustainability); Edited by J. S. Chauhan, Anoop Badoni, Vinay Chamoli, Madhwendra Kumar Pathak; Published by BioThink-National Academy of Bio Sciences, Dehradun; 90-111

Manju Panwar, Arunima Paliwal, Shreya Bajpai, Jasmine Kaur and Ajay Kumar 2025. Development of biosensor user using nanobiotechnology for detection of seed quality parameter; Advances in seed storage and Preservation (Science, Technology and Sustainability); Edited by J.S. Chauhan, Anoop Badoni, Vinay Chamoli, Madhwendra Kumar Pathak; Published by BioThink-National Academy of Bio Sciences, Dehradun; 137-162

Seminar/ Workshop/ Conference/ attented

Dr. Gopalareddy K Senior Scientist (SST) attended and delivered an oral presentation on "Elucidating the genomic regions controlling gluten quality in wheat through high-density SNP linkage mapping" during the 6th International Conference on Plant Physiology 2025 held from 15th-18th December, 2025 at TNAU, Coimbatore

Dr. Mamrutha H. M. Senior Scientist (Pl. Physiology) attended and delivered an invited talk on "Potential and Challenges of Genome Editing in Wheat" during 6th International Conference on Plant Physiology organized by Indian Society for Plant Physiology (ISPP) & TNAU, held from 15-18th Dec , 2025 at TNAU, Coimbatore.

Dr. Ved Prakash Rai Senior Scientist (GPB) Delivered an oral presentation entitled "Towards deciphering aroma biosynthesis pathways in kalanamak rice using transcriptome analysis." in National Conference on Advances in Climate-Conscious Crop Science: Genetics, Genomics and Breeding, held from October 31- November 02, 2025, at the University of Agricultural Sciences, GKVK, Bengaluru.

Dr. Anjita George, Senior Scientist (Entomology) attended and delivered an invited talk on Digestive physiology mediated host seed selection by *Callosobruchus maculatus* (F.) under storage conditions during International Conference on Plant Physiology (ICPP-2025) held from15-18th December, 2025 at TNAU, Coimbatore (Tamil Nadu).

Dr. Kalyani Kumari Senior Scientist (SST) attended International Conference on "Sustainable Innovations in Agriculture, Vaterinary and Allied Sciences" organized by UAS, Raichur, Karnataka & NADCL, Baramulla, J & K (through online mode) from 29 to 31st December, 2025.

Dr. Kalyani Kumari Senior Scientist (SST) attended online training programmme on "Basics of Data Analysis using R" organised by centre for e-Learning, Kerala Agril. University, Thrissur and Dept. of Agril. Statistics, College of Agri., KAU, Thrissur from 24 -28th Nov., 2025.

Dr. Samraj Scientist (Entomology) attended Foundation Course for Agricultural Research Service (FoCARS) training at ICAR-NAARM, Hyderabad from 11th August to 25th November 2025.

Dr. Channakeshav Scientist (Plant Pathology) attended Foundation Course for Agricultural Research Service (FoCARS) training at ICAR - NAARM, Hyderabad from 11th August to 25th November 2025.

Dr. Dilshad Ahmed Scientist (SST) attended Foundation Course for Agricultural Research Service (FoCARS) training at ICAR-NAARM, Hyderabad from 11th August to 25th November 2025.

AICRP on Seed (Crops)

SHUATS, Prayagraj: Shri Rajeshwar Rao N, Under Secretary (Seeds), Department of Agriculture and Farmers Welfare, Ministry of Agriculture and Farmers Welfare, Government of India, New Delhi, visited the Notified State Seed Testing Laboratory under the Department of Genetics and Plant Breeding at Sam Higginbottom University of Agriculture, Technology and Sciences (SHUATS), Naini, Prayagraj. During the visit, he was apprised of the ongoing projects, research initiatives, and advancements in seed testing and quality assurance. The laboratory's role in ensuring seed quality standards and supporting farmers through reliable testing services was highlighted. Shri Rao expressed satisfaction with the laboratory's functioning and commended the efforts undertaken to strengthen seed research, development, and quality enhancement activities.

SHUATS, Prayagraj: A seven-day Farmers' Training Programme on "Quality Seed Production, Seed Testing and Seed Storage" was successfully conducted from 07-13th December, 2025 at the Notified State Seed Testing Laboratory, Department of Genetics and Plant Breeding, Sam Higginbottom University of Agriculture, Technology and Sciences (SHUATS), Naini, Prayagraj. The programme was jointly organized by the Directorate of Research and the Department of Genetics and Plant Breeding, SHUATS, and sponsored by ATMA, Nalanda, Department of Agriculture, Government of Bihar. The training aimed to enhance farmers' knowledge and skills in scientific seed production, seed testing, storage, and adoption of modern agricultural technologies.

IGKV, Raipur: An appreciation award was conferred upon Dr. Ravindra Kumar Verma, Principal Scientist & I/c, AICRP on Seed (Crops), IGKV, Raipur, by the Director, BARC, Mumbai, in recognition of his outstanding contribution to the development of mutant paddy varieties at IGKV, Raipur.

AU, Kota: Dr. Bhuri Singh received the Young Scientist Award from ISASTR during the 12th International Conference on Agriculture and Veterinary Sciences (16-18th November, 2025), held in Goa.

SKNAU, Jobner: Dr. R. C. Meena was conferred the Eminent Scientist Award at the International Conference on Sustainable Innovations in Agriculture, Veterinary and Allied Sciences 2025, held at UAS, Raichur, during 28-31st December, 2025.

UAS, Dharwad: Dr. R. M. Kachapur, Associate Professor (GPB), Seed Unit, UAS, Dharwad, participated in the National Conference on "Advances in Climate-Conscious Crop Science: Genetics, Genomics and Breeding" held from 31st October to 02nd November, 2025 at GKVK, Bengaluru, organized by the Indian Society for Genetics and Plant Breeding in association with UAS, Bengaluru. He was awarded the Best Oral Presentation Award for his paper titled "From Lab to Farmers' Field: Success Story of Public Sector Bred Maize Hybrid 'Dharma' Area Spread and Economic Impact.

AAU, Jorhat: An exposure visit of 61 farmers was organised by AICRP on Seed (Crops) on 11th October, 2025 in connection with PMDDKY and Mission Pulse programmes.

PAJANCOA & RI, Karaikal: Organized a training programme on Post Harvest Handling of Seeds on 07.11.2025 under the HRD component of Quality Seed Production (ICAR Seed Project) of AICRP on Seed (Crops) and delivered a special lecture on classes of seed and varieties in a Farm school programme on Seed Production and Certification in paddy at Thennagudy, Karaikal on 06.11.2025

NISST Digital Seed Repository

ICAR–NISST, has designed and developed an institute-specific custom software/web-based repository for online seed sales, systematic maintenance of seed production related data, and registration of beneficiary SCSP farmers named as NISST e-Seed. The software enables monitoring of annual seed production as well as day-to-day seed sales at the institute. At present, the repository contains data for more than 25,000 farmers who have purchased seed either under subsidy or through direct purchase. Under the SCSP scheme, more than 10,000 farmers have benefited from the institute.