

IARI NEWS

IARI Hosts Innovative Farmers' Conclave 2025



Innovative Farmers' Conclave 2025 at ICAR-IARI to commemorate *Kisan Diwas*, the birth anniversary of Shri Chaudhary Charan Singh and celebrate the pivotal role of farmers in driving agricultural transformation

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During this quarter, the Institute organized the first Innovative Farmers' Conclave which served as a platform for dialogue with progressive farmers and also celebrated *Kisan Diwas* with leaders driving agricultural transformation. The research achievements during this period include the release of high-yielding soybean varieties, development of phytoglycogen enriched sweet corn lines, molecular insights into nutrient stress tolerance, comprehensive



mapping of arbuscular mycorrhizal fungal diversity in Northeast India, and development of rapid LAMP-based diagnostic tools for major crop diseases and pests. To strengthen linkages with industry, the Institute organized an Academia-Industry Meet in plant protection. Central Excellence on Agri-PV was inaugurated as a national knowledge hub for promoting science-based Agri-PV solutions across different agro-ecological regions. Student-oriented programs such as the National Agricultural Students' Sammelan and Deeksharambh were held for both continuing and newly admitted postgraduate students. Special

From Director's Desk

events were held to mark World Food Day, World Soil Day, *Kisan Diwas*, and Agricultural Education Day, with lectures by eminent experts. The Institute secured several externally funded research projects to strengthen its research activities. Under the Lab to Land initiative, patents and copyrights for IARI technologies were filed. Numerous training programs and demonstrations were organized for farmers and farm women, reflecting the Institute's continued commitment to research excellence, innovation, and societal impact.

I am sure that the information included in the newsletter would be useful to the farmers and stakeholders. I wish to congratulate all the scientists and staff of publication unit for bringing out the newsletter in time.

Ch. Srinivasa Rao
Director, ICAR-IARI



Genomics Boost Nutrition and Architecture in Maize

Enrichment of phytoglycogen in sweet corn kernels through genomics-assisted selection resulted in ~4.5-fold increase in recessive *sugary1*-based reconstituted hybrids. Early harvest resulted in lower phytate accumulation in grain and fodder of maize, resulting in higher bioavailability of minerals such as iron and zinc. Also, breeder-friendly co-dominant functional markers (MGU-br2M1, MGU-br2M2) for reduced plant height in maize were developed and validated for their use in molecular breeding.

(Hossain F and Vignesh M, Division of Genetics) (firoz.maize@iari.res.in)

Crop Varieties Released for Northern India

Crop	Variety	Yield Potential	Recommended Zone	
Soybean	Pusa Soybean 6	Average seed yield 21.4 q/ha	Haryana and Punjab	
Soybean	Pusa Soybean 21	Average seed yield of 22.5 q/ha	Haryana and Punjab	

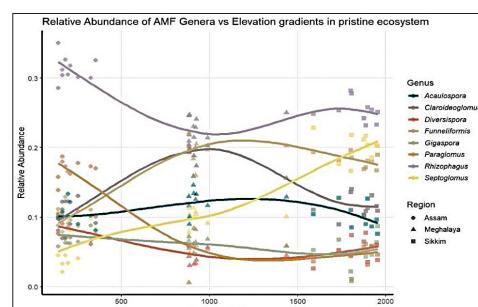
(Lal SK, Division of Genetics)
(sklal@iari.res.in)

(Talukdar A, Division of Genetics)
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Mapping Arbuscular Mycorrhizal Fungal (AMF) Diversity Across Elevation Gradients in Northeast India

A comprehensive microbial study characterised the diversity and distribution of AMF in pristine ecosystems in Sikkim, Meghalaya, and Assam by using Illumina sequencing of 30 soil samples across a wide elevational range. Sikkim exhibited the highest AMF richness, with *Glomeraceae* dominating most sites and distinct regional lineages such as *Paraglomus* in Assam and *Rhizophagus* in Sikkim. Community composition showed clear regional separation driven mainly by soil pH and organic carbon offering insights for soil health management and conservation.

(Bhowmik SN, Suman A and Ramakrishnan B, Division of Microbiology)
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Characterization of the diversity and distribution of arbuscular mycorrhizal fungi (AMF) across elevation gradients in North-eastern ecosystems (Sikkim, Meghalaya, Assam)

Fate of Fipronil and Imidacloprid in Sugarcane Soils

The environmental fate of fipronil and imidacloprid, applied individually and as a premix, was evaluated in three sugarcane-growing soils. Leaching studies showed that imidacloprid was more mobile than fipronil, with soil type exerting a stronger influence on leaching behaviour than pesticide co-presence. Degradation patterns in laboratory-incubated soils indicated no significant interaction effects between the two pesticides. Fipronil exhibited greater persistence in soils compared to imidacloprid, irrespective of single or combined application.

(Singh N, Division of Agricultural Chemicals) (neerasingh@iari.res.in)

LAMP-Based Diagnostic Tools for Rapid Detection of Rice Sheath Blight and Melon Fly

Two Loop-mediated Isothermal Amplification (LAMP) assays were developed for rapid and sensitive detection of major biotic threats. The rice sheath blight pathogen *Rhizoctonia solani* was detected using an assay targeting the *Major Facilitator Superfamily (MFS)* gene, while the melon fly *Zeugodacus cucurbitae* was identified using a *cytochrome c oxidase subunit I (COI)* gene-based LAMP assay. Both the assays showed high specificity, no cross-reactivity, and were validated across multiple samples, genotypes, and locations, enabling early and reliable field-level diagnosis.

(Maya B, Division of Plant Pathology) (bishnu@iari.res.in) and
(Barman S, Shashank PR, Diksha D, Sharma SK, Gupta N, Kumar A, Dhillon MK and Ray S, Division of Entomology) (shashank@iari.res.in)

Understanding Acquisition and Mobilization of Phosphorus in Rice

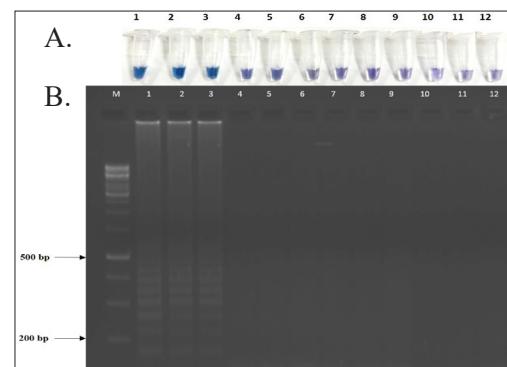
Low phosphorus use efficiency in rice increases cultivation costs and environmental risks, highlighting the need for improved nutrient uptake mechanisms. A comparative study of Pusa-44 and its *Pup1* QTL-derived near-isogenic line (NIL-23) under contrasting phosphorus conditions revealed that *Pup1* regulates stress-induced alternative splicing during phosphorus starvation. Approximately 20 genes showed both differential expression and tissue-specific splicing changes, particularly with decreased splicing in roots and increased splicing in shoots of NIL-23. These findings highlight the role of splicing regulation in phosphorus homeostasis associated with *Pup1* and suggest new molecular strategies to improve nutrient-use efficiency and stress tolerance in rice.

(Kumar S, Division of Biochemistry) (sureshkumar@iari.res.in)

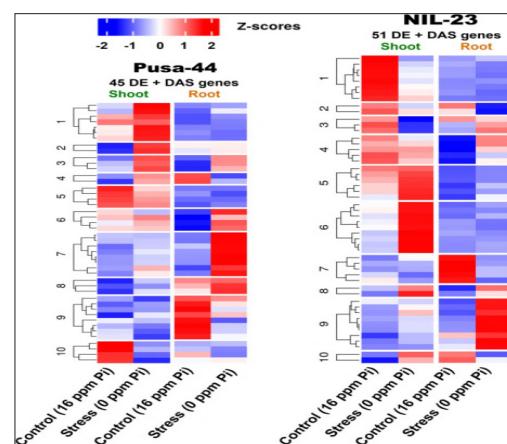
miRNA-mediated Isoprenoid and Root Growth Regulation under Nitrogen Starvation in Emmer Wheat

Nitrogen starvation in *Triticum dicoccum* (emmer wheat) is associated with distinct changes in miRNA expression linked to nitrogen use efficiency and stress adaptation. miRNA-sequence analysis revealed regulation of genes involved in nitrogen metabolism, signal transduction, root development, and secondary metabolism, with a strong emphasis on isoprenoid biosynthesis. Differentially expressed miRNAs targeting CYP450s, terpene synthases, polyphenol oxidases and lignin biosynthetic genes indicate metabolic reprogramming under low nitrogen conditions. Consistent increases in anthocyanin and carotenoid levels across emmer wheat genotypes suggest a miRNA-mediated adjustment of isoprenoid metabolism to alleviate oxidative stress.

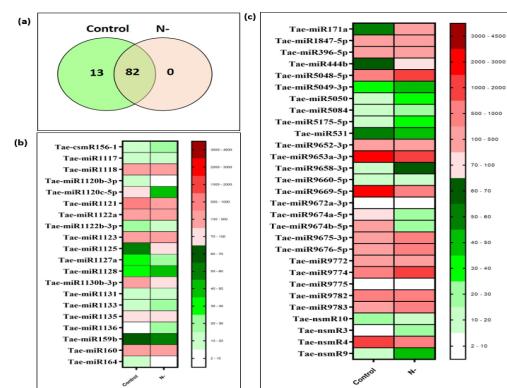
(Sathee L, Division of Plant Physiology) (lekshmy@iari.res.in)



Specificity (A and B) of LAMP assay. **A.** Visual detection of LAMP reaction using HNB dye; **B.** Agarose gel electrophoresis of LAMP products. **M:** 100 bp molecular marker, Lane 1–3: *Rhizoctonia solani* isolates (TP3, TP10, TP18) 4–5: *Ustilaginoidea virens* (Uv2_4G, Uv403), 6–7: *Fusarium fujikuroi* (F32, F55), 8–9: *Bipolaris oryzae* (Bo1, Bo4), 10–12: *Bipolaris sorokiniana* (Bs112, Bs69)



Heat map of the genes/transcripts showing differential expression (DE) and differential alternative splicing (DAS) in root and shoot tissues of Pusa-44 (stress-sensitive) and NIL-23 (stress-tolerant) rice genotypes



(a) Venn Diagram showing number of differentially expressed transcripts and heat maps (b, c) showing expression pattern of differentially expressing miRNAs from miRNAseq analysis of *Triticum dicoccum* (D17) under nitrogen deficient and sufficient conditions.



National Agricultural Students' Sammelan

A landmark event was organized by the ICAR on October 27, 2025, under the aegis of the Department of Agricultural Research and Education (DARE), Ministry of Agriculture & Farmers' Welfare, in which the Minister of Agriculture & Farmers Welfare and Rural Development, Shri Shivraj Singh Chouhan, engaged in a direct dialogue with the agricultural education community including students, scientists and Vice-Chancellors from agricultural universities across the country.



Hon'ble Minister of Agriculture & Farmers Welfare and Rural Development, Shri Shivraj Singh Chouhan, delivering a speech during the National Agricultural Students' Sammelan

ICAR-IARI and Western Sydney University Strengthen Academic Partnership

ICAR-IARI, New Delhi, hosted a senior delegation from Western Sydney University on October 10, 2025, to advance collaboration in agricultural education, research and innovation. Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, welcomed the delegation led by Prof. Ian Andersen, Pro Vice-Chancellor (Research and Enterprise), highlighting the shared agro-climatic contexts between India and Australia that enable joint research in crops, coastal agriculture and climate resilience. The discussion focused on expanding the existing dual-degree Ph.D. program to undergraduate and master's levels, alongside faculty exchanges, sabbaticals, and student mobility. Both the Institutions explored aligning Pusa LaunchPad with WSU LaunchPad to promote agri-startups and innovation.



IARI senior officials with high-level delegation team from Western Sydney University (WSU)

IARI Alumni Association Lecture

As part of the IARI Alumni Association (IAA) Eminent Expert Lecture series, the IAA, in collaboration with the ICAR-IARI, New Delhi, organized an enlightening lecture entitled "Options for Entrepreneurship for Agricultural Graduates" on October 31, 2025. The lecture was delivered by Dr. G.R. Chintala, Former Chairman, NABARD.



Felicitation of Dr. G.R. Chintala, Former Chairman, NABARD by President IAA

IARI Deeksharambh-2025

In compliance with the 6th Dean's committee recommendations and UGC guidelines, ICAR-IARI organised IARI Deeksharambh-2025, the Students' Induction-cum-Foundation program, for newly admitted PG and PhD students for the 2025-26 academic session.

The program for IARI was conducted from November 28-December 04, 2025. Director, ICAR-IARI, Joint Director (Education) & Dean and other The Graduate School (TGS) functionaries addressed the students on December 03, 2025. A similar induction program for IARI Assam and Jharkhand campuses was also held from November 28-December 11, 2025.



Glimpses of different events carried out during IARI Deeksharambh-2025

2nd Foundation Day Lecture of IAA

The IARI Alumni Association (IAA) organised its 2nd Foundation Day Lecture on December 02, 2025, followed by an Alumni Meet. The lecture was delivered by Dr. R. A. Mashelkar, former Director General of the Council of Scientific and Industrial Research, on the theme “Innovation’s Holy Grail: More from Less for More”. He emphasised that equitable access to quality education, despite income inequality, is a critical enabler of innovation-led development.



Dignitaries and guests during the IAA Foundation Day lecture

SPARDHA 2025-Annual Sports Meet

The Post Graduate Students' Union (PGSSU) of ICAR-IARI organized the SPARDHA 2025 - Annual Sports Meet from December 19-22, 2025, at the Vasant Hostel Ground, IARI, New Delhi. Almost 450 students participated in the event which was inaugurated by Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi.



Inauguration of SPARDHA 2025- Annual Sports Meet by Director, ICAR-IARI



Students' participation in SPARDHA 2025



Field Day on IFS Models

ICAR-IARI, Assam organized a Field Day-cum-training on “Scientific Integrated Farming Systems” on December 08, 2025 at Gogamukh, Assam, with participation of 300 farmers. Experts highlighted IFS benefits, farm mechanization, government schemes and distributed small farm implements to promote sustainable agriculture in the north-east.

Field Day on Chrysanthemum

The Division of Floriculture and Landscaping organized the Chrysanthemum Field Day on December 31, 2025, with participation of over 100 stakeholders

from farming, industry, government departments, media, and academia. Popular chrysanthemum varieties such as Pusa Guldasta, Pusa Shwet, and Pusa Sundari were showcased during the event.



Chrysanthemum in full bloom stage

Kisan Goshthis

Division / KVK	Date	Program Focus	Beneficiaries
Agricultural Extension	• October 14 & 24, 2025	• Improved IARI varieties for <i>rabi</i> season under MGMSG at Lahchoda village, Baghpat and Bulandshahr (U.P.)	111
KVK Gurugram	• October 01, 11, 31, 2025 • November 19, 2025 • December 13, 2025	• Importance of <i>swacchta</i> & waste to wealth • <i>Kisan Goshthi</i> during live telecast of launch of PMDDKY and other schemes • National Unity Day • Live telecast of PM <i>Kisan Samman Nidhi</i> program • <i>Kisan Chaupal</i>	617
Agricultural Physics	• December 01, 2025	• Weather-based agromet advisory, crop residue management, drone technology & precision agriculture at Bulandshahr, U.P.	30
Agronomy	• October 16-December 08, 2025	• Programs on “Fermented Organic Manure” under Maruti CSR at Ballia, Ghazipur (U.P.), Guna (M.P.), KVK Varanasi, KVK Anand, DGR Junagadh, IISSST Mau	650



Kisan Goshthi organized by the Division of Agronomy

Commemoration of Important Days

World Food Day

The Division of Food Science and Postharvest Technology celebrated World Food Day on October 16, 2025, commemorating the 80th anniversary of FAO. It was organized under the theme “Hand-in-Hand for Better Foods and a Better Future,” the event highlighted the importance of collaboration in ensuring global food security. It reaffirmed IARI’s commitment to innovative agricultural and postharvest technologies for sustainable and healthy livelihoods.



Dignitaries and participants at World Food Day celebration

World Soil Day

A Soil Painting Art Competition was organized on November 28, 2025, for the UG and PG students, at the Division of Soil Science and Agricultural Chemistry to commemorate World Soil Day 2025. Subsequently, another event was celebrated on December 05, 2025, under the theme “Healthy Soils for Healthy Cities”. The program was jointly organized by the Division of Soil Science and Agricultural Chemistry, ICAR-IARI, and the Delhi Chapter of the Indian Society of Soil Science. The event witnessed the participation of more than 50 school students from New Delhi.



Prize distribution to school students at ICAR-IARI



Soil painting art competition on World Soil Day 2025

Agricultural Education Day

The Graduate School celebrated Agricultural Education Day on December 03, 2025, marking the birth anniversary of Dr. Rajendra Prasad. Shri Hemendra Mathur, Chairman, FICCI Taskforce on Agri Start-ups, delivered a lecture on “Agritech as the Core Pillar of Agricultural Transformation,” urging students to become change agents and leaders. He emphasized *Viksit Krishi* as a key to achieving *Viksit Bharat*. A painting competition for NCR school students was also organized to inspire careers in agriculture and agri-entrepreneurship.



Participation of school students in a painting competition to celebrate Agriculture Education Day

Krishi Shiksha Diwas

Krishi Shiksha Diwas was organised by KVK Gurugram on December 03, 2025 at the Government School, Shikohpur. School students were motivated to pursue agricultural education for their future careers. A total of 150 students and teachers participated in the program.



Students at *Krishi Shiksha Diwas* organised by KVK Gurugram

Innovative Farmers' Conclave 2025

The Innovative Farmers' Conclave 2025 was inaugurated on December 23, 2025 at ICAR-IARI, commemorating *Kisan Diwas* and the birth anniversary of Shri Chaudhary Charan Singh, the "Kisanon ke Masiha." Hon'ble Union Minister Shri Shivraj Singh Chouhan

emphasized farmers as the backbone of nation-building, vital to food security and sustainable development. Shri Bhagirath Choudhary, Hon'ble Minister of State for Agriculture & Farmers Welfare, Government of India, paid rich tributes to Shri Chaudhary Charan Singh, describing him as an honest leader who dedicated his life to farmers' welfare. Dr. M.L. Jat, Secretary, DARE & Director General, ICAR, addressed farmers as the "Real Jewels of the Nation". He emphasized that *Kisan Diwas* is not merely a symbolic occasion but a reminder of the central role of farmers in nation-building. On this occasion, two books documenting farmer innovations were also released.



Release of publication by Shri Bhagirath Choudhary, Hon'ble Minister of State for Agriculture & Farmers Welfare, Government of India



Dr. Ch. Srinivasa Rao, Director ICAR-IARI, with innovative farmers

Swachh Bharat Abhiyan at Different Divisions

A cleanliness drive was conducted at different Divisions of IARI main campus, regional station and off campuses between September 15-October 02 and December 16-31, 2025 with active participation from students and staff. Dr. Ch. Srinivasa Rao, Director, ICAR-IARI joined the event, motivating members from various divisions and campuses. He emphasized the significance of the *Swachh Bharat* and Clean India missions, encouraging everyone to adopt cleanliness as a regular practice for a cleaner and greener future.

CAPACITY BUILDING

Training Programs and Workshops

Division / Unit/KVK/ Regional Station	Date(s)	Title of Program
Agricultural Extension	<ul style="list-style-type: none"> • October 01, 2025 • December 01-05, 2025 	<ul style="list-style-type: none"> • Workshop on 'Bright Spots of Food Systems Sustainability in India' was organized and a lecture was delivered by Dr. Julie Fortin, Scientist, Institute of Social Sciences in Agriculture, University Hohenheim, Germany • Enhancing personal effectiveness of technical staff (T-1)
ZTM & BPD Unit in collaboration with the CCUBGA & Division of Microbiology	<ul style="list-style-type: none"> • November 03-06, 2025 	<ul style="list-style-type: none"> • Cultivation and Downstream Processing of Spirulina Biomass Towards Developing Value-Added Products & Exposure to Commercial Ventures
Agronomy	<ul style="list-style-type: none"> • October 07-10, 2025 • December 08-22, 2025 	<ul style="list-style-type: none"> • Organic Farming • Integrating Soil, Water & Climate
Regional Station, Karnal	<ul style="list-style-type: none"> • October 16, 2025 	<ul style="list-style-type: none"> • World Food Day-linked training program
Agricultural Economics	<ul style="list-style-type: none"> • November 04-06, 2025 • November 24-27, 2025 	<ul style="list-style-type: none"> • International training program on "Advanced Econometric Models and its Applications to Estimate Expenditure Elasticities using Households Consumption Survey Data" • International training program on "The International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT)"
Biochemistry	<ul style="list-style-type: none"> • November 28, 2025 • December 18, 2025 	<ul style="list-style-type: none"> • Workshop on "Role of Artificial Intelligence in Advancing Food Science and Nutritional Biochemistry" • Workshop-cum-hands on "Isolation and Characterization of Edible Oils and Importance of Blending"
Regional Research Centre Dharwad	<ul style="list-style-type: none"> • December 05, 2025 	<ul style="list-style-type: none"> • Improved Soybean Cultivation & Input Distribution under SCSP
KVK Gurugram	<ul style="list-style-type: none"> • October 01, 2025 • November 10-14, 2025 • November 27-28, 2025 • December 02-08, 2025 • December 10-11, 2025 • December 10-16, 2025 	<ul style="list-style-type: none"> • Understanding ICT Tools for Receiving Better Advisory Services • Establishment of Nutri-garden to Achieve Nutritional Security at Household Level • Value Addition in Millets • Dairy Management for Quality Production • Income Generation Activities for Empowerment of Women • Mushroom Production Technology
Agricultural Engineering	<ul style="list-style-type: none"> • December 01-10, 2025 	<ul style="list-style-type: none"> • Training on 'Modern Tools and Technologies for Improving Livelihood of NEH Farmers' under the ICAR-IARI NEH program

Division / Unit/KVK/ Regional Station	Date(s)	Title of Program
Centre for Protected Cultivation Technology	• December 15, 2025	• Skill Development on Greenhouse Hydroponics & Aeroponics
Environmental Sciences	• December 15, 2025	• A brainstorming session on “Nano- and Microplastics in Agriculture and Food Systems”
Seed Science & Technology	• October 11- December 05, 2025	• SCSP-integrated farmers' trainings to a cumulative of 1770 farmers on improved <i>Rabi</i> crop production, seed and input distribution, crop residue management, protected cultivation, PM-KISAN awareness, processing of horticultural produce, and field days on improved fruit and vegetable varieties (Aligarh, Sitarganj, Karnal, Mandi, Shamli, Deoria, Chailchowk-Himachal Pradesh, New Delhi and Pusa-Bihar)



Participants at International training program on “Advanced Econometric Models and its Applications to Estimate Expenditure Elasticities using Households Consumption Survey Data”

Hands-on Training Program for School Students

A hands-on-training program was successfully conducted on November 28, 2025 for the students from different schools by Division of Plant Physiology and Division of Agricultural Physics, ICAR-IARI, with the objective of developing early interest in Agricultural Sciences in them.



Participation of students of different schools in the hands-on training program

ICAR-IARI Plant Protection Industry Meet

The School of Plant Protection at ICAR-IARI, New Delhi, successfully organized a one-day IARI Industry Meet on October 29, 2025, at the Prof. M.S. Swaminathan Library on the theme 'Innovations and Partnerships for Sustainable Plant Protection'. The meet aimed to strengthen academia-industry collaboration in plant protection research, education, extension and technology development. The meeting was chaired by Dr. Sanjay Kumar, Chairperson, ASRB, New Delhi, co-chaired by Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi and Prof. Anupam Verma, INSA Senior Scientist, graced the event as Guest of Honor. The meet witnessed participation of 40 representatives from 29 agro-industries, along with IARI scientists. Leading companies including UPL Limited, Corteva Agriscience, Syngenta Group, Bayer, PI Industries, Dhanuka Agritech, Rallis India, Crystal Crop Protection, Godrej Agrovet, Agrinovate India Pvt. Ltd., ATGC Biotech Pvt. Ltd., DCM Shriram Ltd., Chambal Fertilizers and Chemicals Ltd., among others, took part in the deliberations. Deliberations focused on collaborative research, technology transfer and industry-driven innovation in plant protection. In the concluding remarks, Dr. Ch. Srinivasa Rao reaffirmed IARI's commitment to strengthening 'Lab to Land to Market' linkages through sustained industry partnerships for sustainable crop protection and food security.



Dignitaries and participants in one-day IARI Plant Protection Industry Meet

Awareness Program on Microbiological Safety

An outreach program on 'Awareness of Microbiological Safety' was organized by the Division of Microbiology, ICAR-IARI, New Delhi, on December 22, 2025, under the aegis of the Academy of Microbiological Sciences and the Association of Microbiologists of India. The program was attended by 60 participants, including students, project staff, and hotel staff. It featured five technical lectures and a special industry lecture by the CEO of MD Biocoals Pvt. Ltd., focusing on food safety, hygiene, water safety, food-borne pathogens, and FSSAI guidelines.



Participants of the 'Awareness of Microbiological Safety' program

ICAR-IARI JHARKHAND HIGHLIGHTS

Kisan Mela-cum-Sangoshthi for Tribal Farmers

Under the *Janjatiya Gaurav Varsh Pakhwada 2025*, ICAR-IARI-Jharkhand organized a *Kisan Mela-cum-Sangoshthi* at Daurwa village, Barhi block, Hazaribagh, Jharkhand. The program aimed to empower tribal farmers by promoting scientific farming practices, creating awareness, and linking them with institutional support. The *mela* witnessed participation of over 200 farmers and concluded with the distribution of vegetable seed kits to tribal farmers.



Interaction of the farmers with the Chief Guest,
Shri Anand Sharma, IAS

Gardener Training Certificate Course

A 200-hour (25-day) Gardener Training Certificate Course, sponsored by the District Horticulture Department of Hazaribagh, was successfully conducted at the ICAR-IARI Jharkhand, from November 06 to December 04, 2025. During the program, 31 trainees (24 from Hazaribagh and 07 from Ramgarh) received intensive theoretical and hands-on practical training in scientific cultivation of flowers, vegetables and fruit crops.



Receiving the certificate during Gardener Training program

ICAR-IARI ASSAM HIGHLIGHTS

Inauguration of New Facilities and Release of Wall Magazine

On December 09, 2025, Dr. Ch. Srinivasa Rao, Director, ICAR-IARI inaugurated key infrastructure facilities at IARI Assam, including a newly constructed goat shed, poultry shed, solar fish dryer and food processing laboratory. He also released the maiden wall magazine "Aquaterra", prepared by the ongoing Diploma (FAFM) students, at the ATIC building, encouraging experiential learning and student creativity.



Dr. Ch. Srinivasa Rao, Director, ICAR-IARI inaugurating key infrastructure facilities at IARI Assam



Release of maiden wall magazine "Aquaterra" by
Dr. Ch. Srinivasa Rao, Director, ICAR-IARI

RESEARCH GRANTS, TECHNOLOGY COMMERCIALIZATION AND AGRIPRENEURSHIP

Externally funded/Contractual/Consultancy Projects Sanctioned and Implemented (> ₹10 lakhs)

Project Title	Amount (₹ in lakhs)	Duration	Funding Agency	Principal Investigator
Direct benefit to Scheduled Caste (SC) community farmer of Haryana through providing advanced agricultural tools and machinery	183.0	October 2025-October 2026	RKVVY-RAFTAAR	Dr. Mukesh Kumar Singh, SS, IARI Regional Station, Karnal
Empowering scheduled caste communities in Haryana through quality seed production, distribution and capacity building	203.0	October 2025-October 2026	RKVVY-RAFTAAR	Dr. Sandeep Kumar, SS, IARI Regional Station, Karnal
Strengthening laboratory facilities to promote natural farming for enhancing human, soil and environmental health and achieving sustainable development goals (SDGs) in Haryana	600.0	October 2025-October 2026	RKVVY-RAFTAAR	Dr. Sandeep Kumar, SS, IARI Regional Station, Karnal
Transforming seed testing in Haryana: Development of high throughput spectral imaging laboratory	308.0	October 2025-October 2026	RKVVY-RAFTAAR	Dr. Sangita Yadav, PS, IARI Regional Station, Karnal
Establishment of state of art seed processing plant for enhanced availability of quality seed for farmers of Haryana	350.0	October 2025-October 2026	RKVVY-RAFTAAR	Dr. Ashwani Kumar, PS, IARI Regional Station, Karnal
Marker-assisted pyramiding of <i>Ascochyta</i> blight and <i>Fusarium</i> wilt disease resistance into chickpea mega varieties and fine mapping for <i>Fusarium</i> wilt resistance	71.16	October 2025-October 2028	Department of Biotechnology	Dr. Chellapilla Bharadwaj, PS, Division of Genetics
Promoting chickpea cultivation in rice fallows of the north eastern region of India with the development of new varieties using molecular breeding and genome editing	59.96	October 2025-October 2028	Department of Biotechnology	Dr. Neeraj Kumar, S, Division of Genetics
Monitoring and mapping of paddy residue burning in north central India using satellite remote sensing	50.05	November 2025-March 2026	PM-RKVVY	Dr. Vinay Sehgal, PS, Division of Agricultural Physics
Reducing uncertainty in emission of non-CO ₂ greenhouse gases from crop residue burning and emission factor for CO ₂ emission from urea application to soils	91.58	December 2025-June 2028	Ministry of Environment, Forest and Climate Change	Dr. Niveta Jain, PS, Division of Environmental Sciences
Develop scaling factors of methane and nitrous oxide emissions from rice cultivation for inventory of methane from rice cultivation and nitrous oxide from agricultural soils	75.59	December 2025-June 2028	Ministry of Environment, Forest and Climate Change	Dr. Arti Bhatia, PS, Division of Environmental Sciences

Project Title	Amount (₹ in lakhs)	Duration	Funding Agency	Principal Investigator
Contract Research Project				
Evaluation of nano MoP and NPK liquid fertilizer on growth, productivity and profitability of maize-wheat and pearl millet-mustard system	16.16	October 2025- October 2026	Combe Project Private Limited	Dr. Rajiv Kumar Singh, PS, Division of Agronomy
Conversion of waste from biomass pellet plants and compressed biogas (CBG) digestate into value-added product as phosphate rich organic manure (PROM) and fermented organic manure (FOM) as per Fertilizer Control Order (FCO)	11.87	November 2025- November 2026	Manikaran Power Limited	Dr. Livleen Shukla, PS, Division of Microbiology
Evaluation of PIF320 for post-harvest disease management in apple during ambient temperature and refrigerated condition	16.76	November 2025- November 2027	PI Industries Limited	Dr. Santosh Watpade, SS, IARI Regional Station, Shimla
Optimization of process parameters for novel green superfoods and their characterization	10.64	December 2025- December 2026	M/s Good & Happy Botanics Pvt. Ltd.	Dr. Dinesh Kumar, Head, Division of FS&PHT
Co-benefits of biochar and enhanced rock weathering application to cropped soils	62.77	December 2025- December 2027	CRIA-Carbon Removal India Alliance	Dr. Arti Bhatia, PS, Division of Environmental Sciences
Bio-efficacy evaluation of UPF-1317 against postharvest diseases of apple, banana and mandarin during storage	36.77	October 2025- September 2027	United Phosphorus Limited	Dr. Ram Asrey, PS, Division of FS&PHT
AINP on pesticide residues and contaminants	33.53	October 2025- September 2028	M/s Nichino India Pvt. Limited	Dr. Vandana Tripathy, PS, Network Coordinator
AINP on pesticide residues and contaminants	15.24	October 2025- September 2028	M/s Crop Science Limited	Dr. Vandana Tripathy, PS, Network Coordinator

Technology Commercialization

Under the Lab to Land initiative, 25 technologies developed by ICAR-IARI were commercialized to 61 industry partners, resulting in a total revenue generation of ₹59.32 lakhs.



Licensing of sprayable biopolymeric nano-conjugated double-stranded RNA (dsRNA) formulation

IP Management

In the last quarter, the unit filed four patents and five copyrights, the details of which are provided below.

PATENTS

Name of Innovation	Division	Status
Method for Preparing Soil Conditioner Compositions Through Microbial & Mineral Valorisation	Environmental Sciences	Filed
Silica Enriched Agri-Residue & Steel Slag Based Soil Conditioners & Method of Preparation	Environmental Sciences	Filed
Steel Slag-Based Soil Conditioner Compositions for Acidic Soil Reclamation and Heavy-Metal	Environmental Sciences	Filed
Low Calories Ultrasonicated Aonla Candy and Method of Preparation Thereof	Food Science and Postharvest Technology	Filed

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Name of Innovation	Division
Agri - Nutri Meter	Agricultural Extension
Agri Nutri Pocket Diary	Agricultural Extension
SeedliMorphX: Image Based Seedling Morphometric Analysis Tool (v1.0.0)	Seed Science and Technology
IPantESdb: Plant Environment Stress-responsive Gene Database	Genetics

ITMC Meeting

In the past quarter, one ITMC meeting was held on November 21, 2025, wherein 06 technologies for IP Protection and 33 technologies for commercialization were approved to be taken forward.

Incubation Activities

UPJA & ARISE 2025-26 MoU Signing Ceremony

On November 06, 2025, Pusa Krishi signed MoU's with 44 startups selected for seed and pre-seed funding under the UPJA and ARISE incubation programs. The MoU ensures financial assistance, mentorship and access

to ICAR-IARI's extensive research ecosystem, enabling startups to refine and scale their agri-innovations.

SHITIJ 2025-26

Under SHITIJ 2025-26, forty-seven startups were selected for Phase I, for which intensive training was conducted from September 23 to October 08, 2025. Later, 12 startups progressed to Phase II and Phase III, which focused on strengthening their investment and market readiness through targeted interventions. These phases included one-on-one mentoring sessions with domain experts to provide the startups with practical insights and strategic guidance.



Participants at UPJA incubation program

Entrepreneurship Development Program

The ZTM & BPD Unit, ICAR-IARI, in collaboration with concerned divisions, organized the following ADPs during the quarter:

Division	Duration	Program
Division of Vegetable Science	October 06-11, 2025	Entrepreneurship through Hybrid Seed Production of Vegetable Crops
CCUBGA, Division of Microbiology	November 03-06, 2025	Cultivation and Downstream Processing of Spirulina Biomass for Value-added Products
Division of Biochemistry	November 17-21, 2025	Microgreens Growing Practices: A Hands-on Approach
Division of Soil Science & Agricultural Chemistry	December 08-13, 2025	Pusa STFR Meter for Entrepreneurship in Soil Testing



Field visits of participants under ADP Program on 'Entrepreneurship development through hybrid seed production of vegetable crops'

Student Entrepreneurship Immersive Workshop

Pusa Krishi, in collaboration with the Division of Molecular Biology and Biotechnology at the National Institute for Plant Biotechnology (NIPB) organized a dynamic Student Entrepreneurship Immersive Workshop, exclusively for students of the Division on November 20, 2025. The workshop served as a foundational orientation into India's agri-entrepreneurship ecosystem, enabling students to decode career possibilities beyond conventional research and develop core entrepreneurial instincts.



Students at the Entrepreneurship Immersive Workshop

INSTITUTIONAL ACTIVITIES, AWARDS, PUBLICATIONS AND VISITS

INSTITUTIONAL ACTIVITIES

Meetings held during October-December 2025

Meetings	Date	Focus Points
CAG Exit Meeting	October 17, 2025	Subject Specific Compliance Audit-Management of Research & Development Activities in IARI
113 th Institute Joint Staff Council (IJSC) Meeting	October 30, 2025	To discuss matters related to staff welfare, administrative issues and institutional functioning.
EFC and Review meeting by Hon'ble Agricultural Minister (HAM)	December 05-06, 09-10 & 26, 2025	Review and discussion on formulation of new projects
1 st Unified Board of Management (BoM) meeting of ICAR-IARI	December 12, 2025	Discussion on key administrative, academic and strategic issues related to the integrated functioning and future growth of the Institute.
Three meetings of Senior Officers Council (SOC)	October-December, 2025	To review research, education and administration related activities, to improve interdepartmental coordination and plan for future initiatives and programs.

1st Unified Board of Management (BoM) of ICAR-IARI, New Delhi

Meeting of Senior Officers Council

25th Annual Convention and National Conference

The Clay Minerals Society of India, New Delhi, in association with the Division of Soil Science and Agricultural Chemistry, ICAR-IARI, jointly organized the 25th Annual Convention and National Conference on “Application of Clay and Allied Sciences for Enhancing Nutrient Use Efficiency, Carbon Sequestration and Mitigating Climate Change” during December 18-19, 2025, at ICAR-IARI, New Delhi. The conference was inaugurated by Dr. M. S. Khera, Former Head, Division of SSAC, ICAR-IARI, with Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, as Guest of Honor. The event witnessed participation of over 100 eminent scientists, academicians, industry experts, and young researchers.

Dignitaries and Participants in 25th Annual Convention and National Conference of CMSI

Establishment of Agri Voltaic Facility (Agri-PV) at ICAR-IARI

Dr. M.L. Jat, Secretary (DARE) & Director General ICAR, inaugurated a 100 kWp Agri-Photovoltaic (Agri-PV) pilot project on December 18, 2025, established under the Centre of Excellence on Agri-PV at ICAR-IARI. The Centre of Excellence will function as a national knowledge hub for scaling science-based Agri-PV solutions across diverse agro-ecologies.



Dignitaries at the inauguration of Agri Voltaic Facility



Establishment of Agri Voltaic Facility (Agri-PV) at ICAR-IARI

IARI Hosts ICAR Central Zone Sports Meet 2025

The ICAR Central Zone Sports Meet 2025 was successfully hosted at the ICAR-IARI, New Delhi from December 12-15, 2025, with enthusiastic participation from 13 ICAR institutions. The inaugural function was graced by Dr. Sanjay Kumar, Chairperson, Agricultural Scientists Recruitment Board (ASRB) and the closing ceremony by Dr. M. L. Jat, Director General, ICAR, as the Chief Guest. Dr. Dinesh Kumar, Organising Secretary informed that 976 players participated, competing in 18 athletics events and 21 team events.

ICAR- IARI emerged as the overall champion of central zone sport meet. Ms. Pragya Meena from ICAR-IARI and Dr. Sharanbasappa from ICAR-IASRI were declared Best Athletes in the women's and men's category, respectively.



IARI with the overall championship of Central Zone Sports Meet

Awards and Honours

- Dr. O.P. Awasthi, Head & Principal Scientist, Division of Fruits & Horticultural Technology, received the Girdhari Lal Chadha Award and Dr. Amit Kumar Goswami, Senior Scientist, Division of Fruits & Horticultural Technology, was conferred the D.P. Ghosh Young Scientist Award-2025 in Fruit Science-2025 during November 06-09, 2025 from the Indian Academy of Horticultural Sciences during the 11th Indian Horticulture Congress held at University of Agricultural Sciences, Bengaluru.
- Dr. Alka Singh, Head & Principal Scientist, Division of Agricultural Economics, was awarded Economics Research Association Fellow-2025 and Dr. Praveen K.V., Senior Scientist, Division of Agricultural Economics, received the Young Agricultural Economist Award-2025 by the Agricultural Economics Research Association.
- Dr. Shashank P.R., Senior Scientist, Division of Entomology was selected as a Member of the National Academy of Sciences, India (NASI).
- Dr. Suresh M. Nebapure, Scientist, Division of Entomology was selected for the T.N. Ananthakrishnan Young Scientists Award-2025.
- Dr. Neeraj, Scientist, Division of Genetics, received the National

Academy of Agricultural Sciences (NAAS) Young Scientist Award.

- Dr. Naresh Kumar Soora, Head & Principal Scientist, Division of Environmental Sciences, Dr. Arti Bhatia, Principal Scientist, Division of Environmental Sciences, Dr. Vignesh Muthusamy, Senior Scientist, Division of Genetics and Dr. Amalendu Ghosh, Senior Scientist, Division of Plant Pathology were selected as NAAS Fellows.
- Dr. Hari Krishna, Scientist, Division of Genetics, Dr. Niharika Mallick, Scientist, Division of Genetics, Dr. Sujit Sarkar, Senior Scientist, Regional Station Kalimpong, West Bengal were elected as NAAS Associates.
- Dr. Kiran Gaikwad, Senior Scientist, Division of Genetics, received the Shri S.A. Dadlani Memorial Award.
- Dr. Ashish Khandelwal with associate developers Dr. Neera Singh, Dr. Shashi Bala Singh, Dr. Lata Nain, Dr. Tirthankar Banerjee and Dr. Balasubramanian Ramakrishnan, Division of Agricultural Chemicals, ICAR-IARI, New Delhi developed a technology 'Pusa Oiliphagous' which received technology certification from ICAR.
- IARI received, Smt. Chander Kanta Dagar Memorial Trophy, Soroja Chari Memorial Challenge Trophy and Rose Society Challenge Cup in different

sections during the Winter Rose Show 2025 organized by the Rose Society of India, New Delhi on December 20-21, 2025.

Publications with NAAS rating >10.0

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Visits of National & International Dignitaries to IARI



Visit of the Indonesian delegation to IARI on
October 03, 2025



Visit of German delegation to IARI on
October 07, 2025



Visit of the BMGF delegation to IARI on
October 17, 2025



Sri Lankan delegation visited IARI on October 30 and
November 03, 2025



Participants from 17 countries attended the 84th Know India Program at IARI on December 18, 2025



IRC-II experts visited Drone and Robotics Experiential Unit,
Big Data Analytics lab on December 30, 2025



Interaction of DG-ICAR with Heads of Divisions of IARI
during the Five Year Review Meeting on December 30, 2025

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