

IARI NEWS



IARI Reaches Farmers: Promoting Balanced Fertilizer Use and Soil Health Management for Sustainable Agriculture



During this quarter, major research accomplishments included the identification of genetic stocks for high-phytase maize, silkless baby corn, and high-oleic mustard; novel QTLs for rust-resistant wheat; development of improved sweetcorn hybrids, PRSV-resistant papaya, and high-yielding *kharif* onion; advances in microbial technologies, disease management, pearl millet regeneration, and wastewater remediation; creation of a CRISPR-Cas guide RNA design tool; and development of a Slow Digestibility Index for evaluating carbohydrate quality.

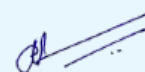
From Director's Desk

The Institute strengthened seed systems through a policy framework for Jharkhand, forged a landmark partnership with DMRC for India's first scientifically designed green belt metro line, and actively promoted balanced fertilizer use under the *Khet Bachao Abhiyan*. EduRank 2026 reflected IARI's academic excellence by ranking it 7th in Asia for Agricultural Sciences. The Institute marked the successful graduation of its first undergraduate batch. It also achieved strong campus placements and enhanced its research output through externally funded projects and high-impact publications. It also celebrated its 122nd Foundation Day and organized extensive capacity-building programs, *Kisan Goshthis*, exhibitions, and demonstrations for farmers, students, and other stakeholders.

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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 the Publication Unit for bringing out the newsletter in time.



Ch. Srinivasa Rao
Director, ICAR-IARI

Identification of Stable QTLs for Adult Plant Rust Resistance in Wheat

Identification of stable and novel QTLs on chromosomes 3BL, 5BL, 6AL, and 7BL associated with adult plant resistance to leaf and stripe rust in Indian wheat breeding lines provides valuable genomic resources for accelerating the development of durable rust-resistant wheat cultivars.

(Yadav R, Babu P, Gaikwad K, Kumar N, Kumar M, Division of Genetics)
(rajbiryadav@iari.res.in)

Genetic Enhancement and Germplasm Development in Maize

New double-recessive sweetcorn hybrids (sulsulsh2sh2) were developed through genomics-assisted introgression of the *sul* gene into elite *sh2* sweetcorn lines, resulting in ~72% higher sucrose and ~40% higher phytoglycogen content.

(Hossain F, Muthusamy V & Rajkumar U. Zunjare, Division of Genetics)
(firoz.maize@iari.res.in)

High-phytase genotypes such as PMI-Q1, PMI-PV7, and PMI-PV8 were identified as promising donors for maize biofortification and molecular breeding programs.

(Muthusamy V, Hossain F & Rajkumar U. Zunjare, Division of Genetics)
(vignesh@iari.res.in)

Novel sk1-ts4 and ts2-ts4 genetic stocks were identified as valuable germplasm resources for breeding silkless baby corn hybrids and advancing studies on the

hormonal regulation of maize floral development.

(Rajkumar U. Zunjare, Hossain F & Muthusamy V, Division of Genetics)
(rajkumaruz@iari.res.in)

Registration of a High-Oleic Indian Mustard Genetic Stock

The high-oleic (52.80%) double-zero Indian mustard genetic stock PDZ 21 (INGR25064), developed through pedigree breeding from LES 1-27 × PDZ-2, was registered as a valuable breeding resource, exhibiting low erucic acid (0.75%) and desirable linoleic (27.29%) and linolenic (11.17%) acid content.

(Saini N, Yashpal, Adhikari S, Nanjundan J, Vasudev S, Yadava DK, Division of Genetics)
(navin@iari.res.in)

Development and Release of Improved Horticultural Varieties

Pusa Madhu, developed by the ICAR-IARI Regional Station, Pune, and released for the National Capital Region (NCR), New Delhi, is a high-yielding (30–35 kg/plant), Papaya Ringspot Virus (PRSV)-resistant papaya variety.

(Saha S, Regional Station, Pune)
(swatikhan@iari.res.in)



Pusa Madhu

Pusa Kharif Pyaz (POS 20K), the first high-yielding kharif onion variety released by ICAR-IARI, New Delhi, is suitable for cultivation in the North Indian plains and produces compact, single-centered, dark red globular bulbs (120–140 g), matures in 95–100 days, yields 16–18 t/ha, and is also suitable for *rabi* cultivation.

(Khar A, Regional Station, Pune)
(anilkhar@iari.res.in)



Pusa Kharif Pyaz

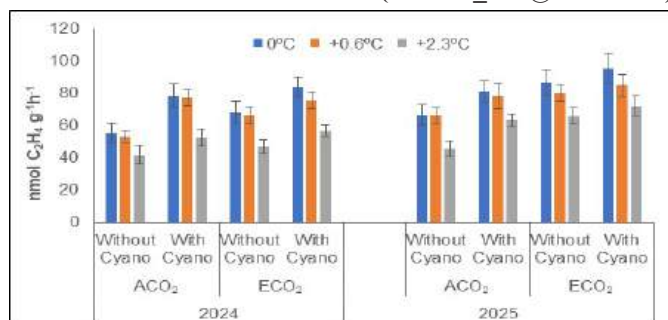
Microbial Technologies for Sustainable Crop Improvement

Microbial inoculation (by seed priming + soil drenching + foliar application) with *Anabaena laxa* and *Enterobacter cloacae* improved tomato fruit quality and yield by reprogramming the fruit microbiome and metabolome. Differential triggering of native microbial species led to increased lycopene (~2-fold), phenolics (7.13%) and floral volatiles through enrichment of isoprenoid and phenylpropanoid pathways by *A. laxa*, while *E. cloacae* enhanced lycopene, flavonoids, and fruity volatiles by promoting beneficial microbes associated with aspartate/chorismate metabolism and pectin degradation.

(Varsha D, Somvanshi V and Prasanna R, Division of Microbiology)
(radhapr@iari.res.in)

A two-year study demonstrated that cyanobacterial biofilm (*Anabaena torulosa*–*Bradyrhizobium japonicum*) significantly enhanced nodulation and biological nitrogen fixation in cowpea (*Pusa Sukomal*) under elevated CO₂ (550 ppm) and warming (+0.6°C and +2.3°C), offsetting the decline in nitrogen fixation caused by elevated temperature.

(Chakrabarti B, Division of Environmental Sciences)
(bidisha_env@iari.res.in)

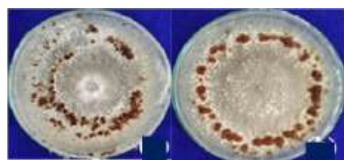


Nitrogen fixation in cowpea under different treatments

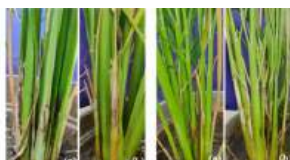
Effector Genes Driving Virulence in *Rhizoctonia solani*

Candidate protein effectors AG1IA_05730 and AG1IA_02692 were deduced to play a significant role in the virulence and genetic diversity of *Rhizoctonia solani*, the causal agent of rice sheath blight disease. Characterisation of *R. solani* isolates revealed variation in aggressiveness, structured by geography and genetics. Effector gene profiling indicated that AG1IA_02692 contributed to early infection stages, while AG1IA_05730 sustained pathogenicity throughout disease progression. Weak virulent isolates showed minimal induction, reinforcing the link between effector activity and disease severity. These genes were identified as molecular markers of virulence and potential targets for functional validation, offering new strategies for durable resistance breeding.

(Vanapalli LSS and Shanmugam V, Division of Plant Pathology)
(shanmugam@iari.res.in)



Colony morphology of i) highly virulent (RIRS-K) and ii) less virulent (RIRS-PT) *Rhizoctonia solani* isolates of rice



Sheath blighting on rice cv. PB-1121 induced by i) highly virulent (RIRS-K) and ii) less virulent (RIRS-PT) *Rhizoctonia solani* isolates of rice

Pathogenicity Genes *Fow1* and *Fow2* Drive *Fusarium* Virulence in Tomato Wilt

Candidate pathogenicity genes *Fow1* and *Fow2* were confirmed to drive virulence and genetic diversity in *Fusarium* spp. from tomato. Tomato wilt epidemics were confirmed to be driven by diverse *Fusarium* species, including *F. oxysporum*. Highly virulent isolates such as *F. pernambacanum* and *F. incarnatum* exhibited constitutive, sustained expression of *Fow1* and *Fow2*, correlating with symptom progression from early wilting to plant collapse.

(Agrawal JK, Vanapalli LSS, Akansha and Shanmugam V, Division of Plant Pathology) (shanmugam@iari.res.in)



Colony morphology and conidial characteristics of i) highly virulent (TOFU-CPCT-5) and ii) less virulent (TOFU-CPCT-7) *Fusarium* isolates of tomato

Integrative Genomic Insights into Population Structure and Diapause Regulation in *Chilo partellus*

Studies on *Chilo partellus* revealed low-to-moderate genetic diversity, extensive gene flow, and weak population structuring across India, providing a framework for area-wide pest management. The first high-throughput RNA sequencing generated the comprehensive transcriptome of hibernating diapause in *C. partellus* and identified key genes regulating stress response, hormonal signalling, metabolism, and energy homeostasis. Together, these genomic resources enhance understanding of pest adaptation and support the development of genomics-assisted, sustainable management strategies.

(Dhillon MK, Jaba J, Tanwar AK, Ashok K, Goginani SP, Singh SK, Jaiswal S, Shashank PR, Ramaiah M, Iquebal MA and Kumar D, Division of Entomology)
(mukeshdhillon@iari.res.in)

Development of an Efficient Tissue Culture Regeneration Protocol in Pearl Millet

An efficient and reproducible tissue culture regeneration protocol was developed for pearl millet, improving explant response and regeneration efficiency. The optimized protocol focuses on enhancing explant response, regeneration frequency, and reproducibility-key bottlenecks in pearl millet tissue culture systems. This advancement overcomes key barriers to genetic transformation and genome editing,

providing a robust platform for developing improved pearl millet lines with desirable traits, including enhanced shelf life and climate resilience.

(Kumar RR, Mishra N, Bharat S, Goswami S, Vinutha T and Singh SP, Division of Biochemistry) (ranjeetranjaniari@gmail.com)



Steps for regeneration of pearl millet calli

PhytoEdit: An Integrated Web Platform for CRISPR-Cas Guide-RNA Designing

PhytoEdit is a plant-focused CRISPR-Cas genome editing platform integrating gRNA design, off-target analysis, secondary structure prediction, multiplexing, binary vector selection, CAPS marker design, and automated reporting. Supported by PhytoEditDB, which contains genomic resources from seven crops (*Arabidopsis thaliana*, *Oryza sativa*, *Glycine max*, *Cicer arietinum*, *Brassica juncea*, *Cenchrus americanus*, and *Cajanus cajan*), it enables efficient, precise, and streamlined genome-editing workflows, addressing the limitations of existing animal-oriented tools for crop improvement and functional genomics. PhytoEdit (<https://phytoedit.com>) offers an integrated, end-to-end CRISPR workflow for plant scientists, encompassing guide-RNA design, T0 plant genotyping, and InDel validation within a single platform.

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

A Slow Digestibility Index Reveals Structural Determinants of Glycemic Quality in Starch

A comparative study of staple carbohydrates identified pearl millet as a superior slow-digesting source with the highest slowly digestible starch (SDS) content (22.48%), crystallinity (33.1%), and phenolic content. Chickpea showed maximum retrogradation (87.24%), while SDS and retrogradation were strongly correlated ($r=0.95$). The newly developed Slow Digestibility Index provides a framework for evaluating carbohydrate quality and supporting the development of low-glycemic staple-based foods for metabolic health.

(Veda Krishnan, Division of Biochemistry) (vedakrishnan@iari.res.in)

Heat Stress Tolerance Assessment in Indian Mustard Using AI-Based Phenotyping

A multimodal phenotyping study evaluated 168 Indian mustard genotypes for heat-stress tolerance under controlled conditions. Integrating RGB, thermal, hyperspectral, fluorescence, pollen, and root imaging with AI-based trait extraction enabled a comprehensive assessment of heat responses. The workflow supported genotype ranking and tolerance modelling. Two AI-enabled tools, *MuSeC* for mustard seed counting using YOLOv26 and *MuSiC v2.0* for automated siliqua detection/counting, were also developed.

(Dass M, Division of Plant Physiology) (madhurima.das@icar.org.in)

Electrochemical Technology for Remediation of Congo Red-contaminated Wastewater

Electrochemical oxidation using graphite electrodes effectively degraded Congo red dye from wastewater. The process achieved 98.4% removal efficiency at a concentration of 0.5 ppm within 40 minutes at a current density of 2.1 mA cm⁻² and 20 V. This low-cost, eco-friendly approach enables efficient dye degradation, reduced toxicity, and potential scalability for sustainable industrial wastewater treatment.

(Kundu M, Kumar A, Krishnan P and Vashisth A, Division of Agricultural Physics) (monikak@iari.res.in)



ICAR-IARI Earns Global Distinction

ICAR - IARI, New Delhi, has achieved a significant global milestone in the EduRank 2026 rankings. In the Agricultural Science category, ICAR-IARI, New Delhi, secured 1st rank in India, 7th rank in Asia, and 47th rank globally, reaffirming its leadership in agricultural research and education.



ICAR-IARI, New Delhi dominates DDA Horticulture Examination

Out of the 75 positions, twenty students from ICAR-IARI, New Delhi, were selected for the post of Section Officer (Horticulture) in the Delhi Development Authority (DDA).

Also Dr. Niutpal Saikia, Ph.D. student, Division of Agronomy, joined as ADO, Assam.



IARI Scholars Clinch IAUA Outstanding Ph.D. Thesis Award

Dr. Shilpa S. Selvan and Dr. Manojit Chowdhury from the Division of Agricultural Engineering, ICAR-IARI, New Delhi, were conferred the prestigious Indian Agricultural Universities Association (IAUA) Outstanding Ph.D. Thesis Research Award 2025.



Boot Camp Session for the IARI UG Final Year Students

Pusa Launchpad-the Placement Cell at ICAR-IARI, New Delhi, organized a Boot Camp for UG students (2022-2026) at Professor V.L. Chopra Auditorium, NIPB, New Delhi, on May 29, 2026. The primary focus of the



Participation of the ICAR- IARI UG final year students at the Boot Camp Session

camp was to enhance students' readiness for placement, covering topics ranging from resume writing to career guidance.

Farewell Function AGRICOS 22-26 for the Pioneer Batch of UG Students

The farewell function for the first and pioneer batch of undergraduate students was organized by the Graduate School, IARI and PGSSU on June 29, 2026. The batch was admitted in 2022-23 to four-degree programs, including B.Sc. (Hons.) Agriculture at ICAR-IARI, New Delhi, Assam and Jharkhand, B.Sc. (Hons.) Community Science and B.Tech. (Agril. Engg.) at ICAR-IARI, New Delhi, and B.Tech. (Biotechnology) at ICAR-NIPB, New Delhi and ICAR-IIAB, Ranchi. Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi, was the chief guest and Dr. Anupama Singh, Joint Director (Education) and Dean, ICAR-IARI, New Delhi, was the Guest of Honour for this celebration. The awards were presented to the meritorious students in recognition of their outstanding academic and co-curricular/extra-curricular achievements.



Presentation of awards to UG students during the AGRICOS 2022-26

Pre-Placement HR Orientation Program

ICAR-IARI, New Delhi organized a Pre-Placement HR Orientation Program on May 05, 2026, with a focus on "Enhancing Employability & Industry Readiness of Students". Around 100 students from UG, PG, and PhD



Dr. Bhaskar Reddy, Advisor - Agriculture, FICCI



Ms. Sonal D'Souza, Associate Manager, Partnerships-Alliance of Biodiversity International and CIAT, New Delhi

programs actively participated in the event. The session featured distinguished experts including Chief Guest Dr. Bhaskar Reddy, Advisor - Agriculture, FICCI, and Guest of Honour Ms. Sonal D'Souza, Associate Manager – Partnerships, Alliance of Bioversity International and CIAT, New Delhi.

Campus Placement Drive

EduDAG, a research-based consulting company, conducted a campus placement meeting at Pusa Launchpad, ICAR-IARI, New Delhi, on June 05, 2026 for the final-year (batch 2022) UG students of ICAR- IARI, New Delhi. After rigorous rounds of group discussion and interviews, Mr. Lakshit Yadav (B.Tech., Agril. Engg.) was selected as Operation Executive, Ms. Shatabadi Jena (B.Sc., Ag. Hons.) and Mr. Chitaranjan Ganga (B.Sc., Ag. Hons.) as Career Advisors.



Students' participation in the Campus Placement Drive

Lectures at the Institute

Climate Change Adaptation in Drylands

ICAR-IARI, New Delhi, in collaboration with the Indian Agricultural Association (IAA), organized an eminent expert lecture on April 28, 2026, delivered by Prof. Kadambot Siddique, Hackett Professor, University of Western Australia, on "Innovations in Adaptation to Climate Change in Dryland Agriculture". Prof. Siddique highlighted innovative climate adaptation strategies for dryland and rainfed agriculture and appreciated

the industry-oriented, research-intensive learning opportunities available to IARI students.

Biochar for Sustainable Agriculture and Environment

Prof. Siddique delivered another lecture on the topic "Biochar for Sustainable Agriculture and Environment", on April 27, 2026, at Division of Agronomy, where he emphasized the role of biochar in improving soil health, enhancing carbon sequestration, promoting sustainable farming systems and future potential for collaborative programs.



Prof. Kadambot H.M. Siddique with staff and students of the Division of Agronomy

Value Chain-led Agriculture & Food Science for Better Nutrition

ICAR-IARI and IAA jointly hosted a lecture on "Value Chain-led Agriculture & Food Science for Better Nutrition" on June 03, 2026, delivered by Dr. Vishweshwaraiah Prakash, Former Director, CFTRI, and Distinguished Scientist, CSIR-India. Drawing on the concept of *Panchatatva*



Dr. Vishweshwaraiah Prakash, Distinguished Scientist, CSIR-India, being honored by Director, ICAR-IARI



Lecture by Prof. Siddique on "Innovations in Adaptation to Climate Change in Dryland Agriculture"

(the five fundamental elements), he emphasized the integration of agriculture, food processing, nutrition, health, and sustainability. Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, highlighted the Institute's innovation-driven approach and its role in nurturing over 450 agri-startups.

AI-enabled Extension System

Division of Agricultural Extension organized an interactive program on June 29, 2026, featuring Dr. I.B. Singh, President and CEO, Smart Innovation Corporation, USA, on the role of AI and digital technologies in agricultural extension. The program highlighted AI-enabled crop advisories, weather forecasting, pest surveillance, and market intelligence, while emphasizing collaboration among research, industry, and extension systems for digital agriculture.



Dr. I.B. Singh, President and CEO, Smart Innovation Corporation, USA, with staff and students of Division of Agricultural Extension



Field Days and Outreach Activities Summer Vegetables Field Day

The ZTM & BPD Unit, in collaboration with the Division of Vegetable Science, ICAR-IARI, New Delhi, organized the Summer Vegetables Field Day on May 05, 2026, under the theme “Strengthening Partnerships in Vegetable Seed Sectors”. Around 50 representatives from seed industries, progressive farmers, and FPOs



Organizers and participants at the Summer Vegetables Field Day

participated. Improved hybrids and open-pollinated varieties of muskmelon, bitter gourd, cucumber, chilli, and tomato were showcased.

Improved Wheat Varieties at Mega Farmers' Fair

ICAR-IARI Regional Station, Indore, demonstrated improved bread and durum wheat varieties at the Mega Farmers' Fair on June 14, 2026, held alongside the *Khet Bachao Abhiyan*.



Hon'ble Union Minister of Agriculture & Farmers' Welfare and Rural Development, Shri Shivraj Singh Chouhan, at Mega Farmers' Fair

PM-KISAN 23rd Instalment Broadcast and Farmers' Seminar

ICAR-IARI, New Delhi, organized the live telecast of the PM-KISAN 23rd instalment program and a Farmers' Seminar on June 20, 2026. Experts highlighted natural farming, soil health, and sustainable agriculture as part of the *Khet Bachao Abhiyan*. Dr. Mansukh Mandaviya, Chief Guest, Hon'ble Union Minister of Labour & Employment and Youth Affairs and Sports highlighted the Government's commitment to farmers' welfare, natural farming, and sustainable agriculture. Dr. M.L. Jat, Director General, ICAR, emphasized the '*Khet Bachao Abhiyan*' for soil health and sustainable farming.



Dignitaries and participants at the farmers' seminar

Khet Bachao Abhiyan under the MGMG Program

As part of the ICAR-led National campaign “*Khet Bachao Abhiyan*” for promoting the ‘Balanced Fertilizer Use Campaign’, ICAR-IARI scientists visited the

MGMG village clusters in Uttar Pradesh, Delhi and Haryana and organized *Kisan Goshthi's* for farmers. ICAR-IARI contributed significantly to this campaign, covering 700 villages involving 540 scientists working under ICAR-IARI in New Delhi, its off campuses at Assam and Jharkhand, Regional Centres and KVKs. Discussions were carried out on natural farming, crop diversification, the role of farm organic manure in sustainable agriculture, reducing chemical dependency, integrated fertilizer management, efficient use of fertilizer, soil health card utilization and green manure practices. ICAR-IARI, New Delhi, organized a Farmers' Seminar on April 27, 2026, at Hapur, Uttar Pradesh, under the MGMG program and Balanced Fertilizer Use Campaign. The event was attended by nearly 314 farmers. Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi, emphasized soil testing, balanced nutrient management and sustainable farming. The Division of Microbiology supplied more than 400 packets of Pusa Decomposer, 800 kg of Pusa mycorrhiza and 950 packets + 500 bottles of biofertilizers to farmers through MGMG, Balanced Fertilization and Save the Farm related campaigns and visits to villages by scientists.



Distribution of biofertilizers to the farmers under the *Khet Bachao Abhiyan*

Kisan Goshthis

The Division of Agronomy, ICAR-IARI, New Delhi, organized a series of farmers' outreach programs from April 27–29, 2026, under the Maruti Suzuki India Limited-supported project on the Evaluation, Promotion and Dissemination of Fermented Organic Manures (FOM) to promote balanced nutrient management and sustainable agricultural practices. The farmers' meet was held on April 27, 2026, at Raisen, Madhya Pradesh, on April 28, 2026, at Village Panjh, Vidisha, Madhya Pradesh and on April 29, 2026, at the Sugarcane Research Centre, Bohani, Narsinghpur, Madhya Pradesh. Overall, more than 550 farmers participated in these outreach programs. Paddy seeds of improved varieties were distributed to farmers in the Ballia district of Uttar Pradesh and at

KVK Muradnagar, Ghaziabad, on May 26, 2026. Front Line Demonstrations (FLDs) on FOM-based nutrient management in moong bean were conducted on May 05, 2026, in the Morena and Vidisha districts of Madhya Pradesh, promoting sustainable nutrient management through farm organic manures.



Farmers participation and distribution of seeds at the *Kisan Goshthi*

Biofertilizer Awareness Stalls during *Jan Kalyan Shivirs*

The Division of Microbiology, ICAR-IARI, New Delhi, participated in the *Jan Kalyan Shivirs* during June 18-20, 2026, across five locations in Delhi. More than 500 farmers, farm women, students, and rural youth were sensitized on biofertilizers, microbial technologies, soil health, and climate-resilient, sustainable farming through awareness activities and technical literature distribution.

Commemoration of Important Days

122nd Foundation Day Celebration of ICAR-IARI, New Delhi

ICAR-IARI, New Delhi, celebrated its 122nd Foundation Day on April 01, 2026. The Chief Guest Smt. Rekha Gupta, Hon'ble Chief Minister of the Delhi Government, lauded ICAR-IARI's contributions to sustainable agriculture. Shri Ravinder Singh, Hon'ble Minister for Social Welfare, Welfare of SC & ST, Cooperative, Delhi Government and Dr. M.L. Jat, Secretary (DARE) and DG (ICAR), emphasized collaboration, waste-to-fertilizer technologies, human capital development, farmer awareness, and judicious DAP use. Dr. Ch. Srinivasa Rao, Director, ICAR-IARI,

highlighted achievements in climate-resilient agriculture, digital technologies, farmer-centric innovations, and institutional excellence, including the NIRF 2025 No. 1 ranking, A+ NAEAB accreditation, and QS World Rankings 2026 (151–200).



Smt. Rekha Gupta, Hon'ble Chief Minister, Delhi Government and other dignitaries at Foundation Day



Felicitation of meritorious staff of ICAR-IARI, New Delhi, during the Foundation Day celebration

64th Foundation Day of the Division of Agricultural Physics, ICAR-IARI, New Delhi

The 64th Foundation Day of the Division of Agricultural Physics, ICAR-IARI, New Delhi, was celebrated on June 29, 2026. Dr. Soumya Bandyopadhyay, Director, MNCFC, and Dr. Gopal Kumar, Interim IWMI Representative for India and Bangladesh, delivered Foundation Day lectures focusing on agricultural physics, digital agriculture, water security, and geospatial technologies.



Dignitaries at 64th Foundation Day of the Division of Agricultural Physics, ICAR-IARI

World Intellectual Property Day

The Division of Agricultural Extension, ICAR-IARI, organized a special lecture on April 30, 2026, to commemorate World Intellectual Property Day (observed every year on April 26). Dr. Vikram Singh, Senior Scientist, IP & TM Unit, ICAR, delivered the keynote lecture on “IPR Issues”, highlighting the importance of protecting agricultural innovations while promoting technology transfer, licensing, and commercialization.



On this occasion, the ZTM & BPD Unit, ICAR-IARI, New Delhi, also organized a webinar on “Innovative Concepts: Transforming Ideas into Intellectual Property and Commercialization,” on April 30, 2026, which was attended by over 60 scientists, technical experts and students. The webinar focused on agricultural Intellectual Property Rights (IPR), Technology Disclosure Form (TDF) preparation, rate fixation and techno-commercialization.

World Environment Day

A plantation drive was organized by the Division of Agricultural Extension and the Division of Environmental Sciences on the occasion of World Environment Day on June 05, 2026. Dr. M.L. Jat, Director General, ICAR, along with Dr. D.K. Yadava, Deputy Director General (Crop Science) and Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi, planted saplings, reaffirming their commitment to ecological preservation and a greener future. On this occasion, the Water Technology Centre, ICAR-IARI, New Delhi, organised a cleanliness drive as part of the “*Ek Ped Maa Ke Naam*” initiative.



Dignitaries planting saplings on the occasion of World Environment Day



Cleanliness drive organized under the “*Ek Ped Maa Ke Naam*” initiative

CAPACITY BUILDING

Training Programs, Workshops and Conferences

Division / Unit/KVK	Date(s)	Program
ZTM & BPD Unit	April 01, 2026	Orientation Program on UPJA (Seed) and ARISE (Pre-Seed) Agribusiness Incubation Programs
The Graduate School	April 16, 2026	Joint workshop organized by ICAR-IARI and IAA as a follow-up on the recommendations of the National Seminar on “IARI Towards a World-Class Higher Education Institution”
	May 07–08, 2026	Workshop on ‘Students’ Guide to Science Communication’ (jointly organized by IARI and DKMA, ICAR)
Division of Agricultural Extension	May 14, 2026	Fostering an Inclusive Work Environment for Women
Krishi Vigyan Kendra, Shikohpur	May 18–22, 2026	Vocational Training Program on Scientific Dairy Farming
Division of Microbiology	May 18–22, 2026	Training Program on ‘Entrepreneurship Development in Biofertilizers and Microbial Solutions for Sustainable Agriculture’ (in collaboration with ZTM & BPD Unit)
Division of Soil Science & Agricultural Chemistry	May 25–27, 2026	Training Program on ‘Assessment and Management of Micronutrients in the Soil–Plant System’
The Graduate School	June 03, 2026	Training Program on ‘Foundations of Computing & Data Handling’ (jointly organized by The Graduate School, IARI and the Division of Computer Applications, ICAR-IASRI)
Division of Agronomy	June 04–05, 2026	Training Program on ‘Residual Pesticide Analysis’
Division of Food Science & Postharvest Technology	June 15–20, 2026	Training Program on ‘Developing Smart Snacks with Millets: A Wholesome Revolution’ (in collaboration with ZTM & BPD Unit)



Participants during the training program on “Developing Smart Snacks with Millets: A Wholesome Revolution”



Participants at the follow-up workshop of the IAA-IARI National Seminar



Participants and resource persons during two-day Workshop on “Students’ Guide to Science Communication” (jointly organized by ICAR- IARI and DKMA, ICAR)



Participants during the five-day vocational training on
"Scientific Dairy Farming" at KVK Shikohpur



Participants during training on "Assessment and
Management of Micronutrients in Soil-Plant System"

National Forum on Solarization of Agriculture held at ICAR-IARI, New Delhi

ICAR-IARI, New Delhi in collaboration with the International Water Management Institute (IWMI), organized the National Forum on Solarization of Agriculture on April 21, 2026. The forum brought together scientists, policymakers, researchers, and stakeholders from the National Agricultural Research and Education System (NARES) and the CGIAR to deliberate on strategies to accelerate the adoption of solar energy in Indian agriculture. Dr. Alok Sikka, Emeritus Scientist, IWMI, and Former DDG (NRM), ICAR, underscored the importance of integrating solar energy with food, water, energy, and climate systems for sustainable resource management. Dr. Gopal Kumar, Interim Country Representative, IWMI India and Bangladesh, highlighted the role of farm-level solarization in achieving the goals of *Viksit Bharat* and net-zero emissions.



Dignitaries and participants in National Forum on Solarization of Agriculture

Rose Stakeholder Meet

The Rose Stakeholder Meet, held on May 22, 2026, brought together researchers, policymakers, industry representatives, and progressive farmers to discuss strategies for strengthening rose cultivation and India's floriculture sector. Dr. R.S. Paroda Chairman, TAAS and former Secretary, DARE & DG, ICAR, and Chief Guest of the program emphasized stakeholder collaboration for sustainable growth, while Mr. Kuldeep Saddy, Former Director (Horticulture), CPWD and President, The Rose Society of India, highlighted Dr. B.P. Pal's pioneering contributions to rose improvement.



Dignitaries and participants at Rose Stakeholder Meet

ICAR-IARI JHARKHAND HIGHLIGHTS

12th Foundation Day Celebrated at IARI-Jharkhand

The 12th Foundation Day of the ICAR-IARI, Jharkhand, was celebrated on June 28, 2026, at the Gauria Karma campus. Dr. M. L. Jat, Secretary, DARE, and Director General, ICAR, virtually addressed the gathering and inaugurated six new infrastructure projects worth approximately ₹20.55 crore, including academic, sports, health, shopping, and residential facilities. Dr. D. K. Yadav, Deputy Director General (Crop Science), ICAR, highlighted the importance of multidisciplinary research, precision agriculture, digital technologies, and effective technology transfer.



Director ICAR-IARI addressing the Staff on the 12th Foundation Day of ICAR- IARI-Jharkhand



Virtual inauguration of the Foundation Day celebration by Dr. M.L. Jat, Secretary (DARE) & DG (ICAR)



Felicitation of meritorious staff of ICAR-IARI, Jharkhand during the Foundation Day celebration

Meeting for Finalization of Jharkhand State Seed Policy

A high-level consultative meeting for the finalization of the draft of Jharkhand State Seed Policy was held on June 24, 2026, at Krishi Bhawan, Ranchi, under the guidance of Dr. Ch. Srinivasa Rao, Director, ICAR-IARI. Chaired by Shri Bidyanand Sharma Pankaj, Director of Agriculture, Government of Jharkhand, the meeting marked a significant step towards developing a comprehensive policy framework for strengthening the state's seed system.

The initiative builds upon the recommendations of the National Workshop on "Strengthening Research and Seed System for Enhancing Livelihood and Nutritional Security in Jharkhand" organized by ICAR-IARI in 2025.



Consultative meeting on the finalization of the draft of Jharkhand State Seed Policy at Krishi Bhawan, Ranchi

ICAR-IARI ASSAM HIGHLIGHTS

Fourth Institute Research Council (IRC) Meeting

The 4th Institute Research Council Meeting of ICAR–IARI Assam was held successfully during May 24–25, 2026, under the chairmanship of Dr. Ch. Srinivasa Rao, Director, ICAR–IARI, New Delhi.



4th Institute Research Council Meeting

Integrated Fish Farming Initiative Launched and Key Infrastructure Inauguration

On May 25, 2026, Dr. Ch. Srinivasa Rao, Director, ICAR–IARI, inaugurated the Institute's maiden integrated fish farming unit by releasing carp seed into newly



Launch of the integrated fish farming unit by
Dr. Ch. Srinivasa Rao



Inauguration of new infrastructure facilities at ICAR–IARI, Assam

developed fish ponds. On May 26, 2026, Dr. M.L. Jat, Secretary, DARE and DG, ICAR, inaugurated the Kulsi Girls' Hostel, Nilachal Boys' Hostel, Sports Complex and Farm Pond at ICAR–IARI, Assam, marking a significant milestone in strengthening the Institute's academic, research and student support infrastructure of the Institute.

10th Foundation Day Celebration

ICAR–IARI, Assam, celebrated its 10th Foundation Day on May 26, 2026, in the presence of Shri Gyandendra Tripathy, Additional Secretary, DARE and Secretary, ICAR, along with distinguished guests and stakeholders. The celebration showcased the Institute's achievements in agricultural research, technology dissemination, entrepreneurship and sustainable development, reaffirming its commitment to ushering in a "Second Green Revolution" in Northeast India.



Award-winning staff of ICAR–IARI, Assam at the 10th
Foundation Day celebration

World Blood Donor Day

On the occasion of World Blood Donor Day, ICAR–IARI Assam organized a Blood Donation Camp on June 14, 2026, in collaboration with the Blood Centre, Lakhimpur Medical College and Hospital, Lakhimpur.



Blood Donation Camp

RESEARCH GRANTS, TECHNOLOGY COMMERCIALIZATION AND AGRIPRENEURSHIP

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

Externally Funded Projects

Project Title	Amount in Lakhs	Duration	Funding Agency	Principal Investigator
Regional awareness and knowledge exchange on natural farming through development and demonstration of diversified fruit farming systems (fruit + seasonal field, vegetable and flower crops)	38.00	April 10, 2026- April 09, 2028	ICAR National Mission on Natural Farming	Dr. Amit Kumar Goswami, SS, Fruit & Horticultural Technology
Assessment on climate change related agricultural losses for India's BTR-3 to UNFCCC	51.50	April 13, 2026- April 12, 2028	MoEF & CC	Dr. Soora Naresh Kumar, Head & PS, Division of Environmental Sciences
Assessment of homeopathic drugs <i>Calcarea carbonica</i> and <i>Silicea terra</i> at low-potency as bio-stimulants for enhancing early seedling vigour in Basmati rice variety suitable for sowing as direct-seeded rice	11.04	April 14, 2026- April 15, 2027	CCRH	Dr. Vijay Paul, PS, Division of Plant Physiology
Strengthening research-extension-farmer linkages: Inclusive evaluation and enhancement strategies for diverse agro-climatic regions	55.82	April 21, 2026- April 20, 2029	NASF - ICAR	Dr. Sitaram Bishnoi, SS, Division of Agricultural Extension
Optimal integration of additional features in genomic prediction model via AI/ML framework: A comprehensive investigation	10.80	May 05, 2026- December 31, 2028	ICAR Corpus Fund	Dr. Neeraj Kumar, S, Division of Genetics
GHG emission inventory from agricultural soils and rice cultivation for preparation of India's second and third biennial transparency report	93.62	May 11, 2026- May 10, 2029	MoEF & CC	Dr. Arti Bhatia, PS, Division of Environmental Sciences
Enhancing soybean rust resistance in DSb23 through gene pyramiding and early generation marker-assisted selection	45.87	May 14, 2026- May 13, 2029	DST	Dr. B. P. Mallikarjuna, SS, Division of Genetics
Inventory of greenhouse gas emission from Indian agriculture sector: crop residue burning and urea application to soils for preparation of India's second and third Biennial Transparency Report (BTR2 and BTR3)	78.45	May 14, 2026- May 13, 2029	MoEF & CC	Dr. Niveta Jain, PS, Division of Environmental Sciences
Field assessment of the efficacy of homoeopathy medicines as biostimulants for improving yield in mungbean	19.76	May 14, 2026- May 13, 2028	CCRH	Dr. Ruchi Bansal, SS, Division of Plant Physiology

Project Title	Amount in Lakhs	Duration	Funding Agency	Principal Investigator
Development of mild strain-cross protected mandarin planting material for management of citrus decline caused by <i>Citrus tristeza</i> virus in Northeast India	85.91	May 18, 2026- May 17, 2029	DBT	Dr. Kajal Kumar Biswas, PS, Division of Plant Pathology
Unravelling the genetic and toxigenic profile of aflatoxigenic <i>Aspergillus</i> species associated with maize in India and its management through non-toxigenic <i>Aspergilli</i>	56.11	May 22, 2026- May 21, 2029	DBT	Dr. Deeksha Joshi, PS, Division of Plant Pathology
Development of a rapid, cost-effective on-farm colorimetric kit for assessing biofertilizers and soil health	43.18	June 01, 2026- May 31, 2028	DBT	Dr. Vishwanath Rohidas Yalamalle, SS, Seed Science & Technology
Consolidating wheat and maize yield under changing climate condition through development and up scaling of environmentally sustainable indigenous technologies including improved varieties/hybrids: A self-sustainable system of project funding	79.58	June 01, 2026- May 31, 2029	ICAR Corpus Fund	Dr. Rajbir Yadav, PS, Division of Genetics
Development of an AI-based robotic precision transplanter for onion crop	70.17	June 12, 2026- December 11, 2028	DST	Dr. Dilip Kumar Kushwaha, S, Agricultural Engineering
Optimization, characterization and nutraceutical value labeling of traditionally fermented rice beer (Zutho) of Nagaland for sustainable development towards entrepreneurial and socioeconomic livelihood in North east India	20.57	June 25, 2026- June 24, 2029	DBT	Dr. Veda Krishnan, SS, Division of Biochemistry
Contract Research Project				
Impact of inland container terminal activities on environmental pollution and perception survey on surrounding community health	29.14	May 14, 2026- May 13, 2028	Delhi International Cargo Terminal Pvt. Ltd. (J.M Baxi Group)	Dr. Sunita Yadav, S, Division of Environmental Science
To evaluate residue/persistence of “Imidacloprid 180g/L + Penflufen 50g/L FS as seed treatment” on green gram and “Penflufen 154g/L + Terifloxystrobin 154g/L FS as seed treatment” on onion in different agroclimates	20.30	June 24, 2026- June 23, 2027	M/S Bayer Crop Science Limited	Dr. Vandana Tripathi, Network Coordinator, AINP on Pesticides Residues & Contaminants
Consultancy Project				
Scientific advisory and technical consultancy for the development of a sustainable green belt on the central verge	20.29	June 23, 2026- June 22, 2027	DMRC	Dr. Ajai Tiwari, PS, Division of Floriculture and Landscaping

IP Management

In the last quarter, the unit filed one patent and two copyrights, the details of which are provided below:

Application No	Name of Innovation	Department	Status
202611073149	Portable Acoustic System for Non-destructive Detection and Classification of Maturity in Watermelon	Agricultural Engineering	Patent Filed
SW-24077/2026-CO	XRD SMARTLAB	Agricultural Physics	Copyright Filed
SW-24083/2026-CO	Sinchai Margdarshi Ver. 1.0	Agricultural Physics	Copyright Filed

Technology Commercialization

Under the Lab to Land Initiative, from April to June 2026, 23 technologies developed by ICAR-IARI, New Delhi, were commercialized to 27 industry partners, resulting in a total revenue generation of ₹54.80 lakh.

Student Internship

A total of 56 intern students joined the IARI Internship Training Program across various divisions of ICAR-IARI, New Delhi and its regional stations. The program generated a total revenue of ₹8.968 lakh.

Incubation Activities

ICAR Agri Uday Pre-incubation Program

A four-week pre-incubation program was organized by Pusa Krishi, ICAR-IARI, New Delhi in collaboration with ICAR-CRRI, Cuttack and ICAR-CIRCOT, Mumbai, from May 04-29, 2026. Topics like Problem Discovery and Technology Framing; Market Assessment, Financial Planning and Go-to-Market Strategy; Field Validation and Pilot Design; Legal, Intellectual Property (IP) and Regulatory Readiness; and Business Model Development through hands-on Business Model Canvas (BMC) sessions were covered to support early-stage innovators.

UPJA & ARISE Incubation Program

On April 17, 2026, IARI-Pusa Krishi launched its flagship startup incubation programs, UPJA and ARISE, designed to empower aspiring entrepreneurs with essential resources, mentorship, funding and guidance to transform innovative ideas into viable ventures. Under UPJA, startups can receive funding of up to ₹25 lakhs and under ARISE, up to ₹5 lakhs. Additionally, entrepreneurship-driven students selected under the program receive financial assistance of up to ₹4 lakhs. Out of 1,800 applications received by Pusa Krishi, 104 candidates were shortlisted for a one-month online training and mentoring program to be held in July 2026.

Masterclass Series for RABI startups

Pusa Krishi Masterclass Series for RABI Startups, organized under the RKVY-RAFTAAR scheme of the Ministry of Agriculture & Farmers' Welfare, was held online from June 05-15 2026. This intensive 10-day virtual workshop was tailored for CIC-recommended pre-seed and seed-stage startups. A total of 83 startups from nine RABIs, mentored by Pusa Krishi, ICAR-IARI, actively participated. In the past quarter, the Unit has enrolled two new industry partners and renewed the memberships of 11 existing partners.

INSTITUTIONAL ACTIVITIES

DG ICAR inaugurates three State-of-the-Art laboratories at ICAR-IARI, New Delhi

Marking World Environment Day, on June 05, 2026 three major facilities at ICAR-IARI, New Delhi, were inaugurated by Dr. M.L. Jat, Secretary, DARE and Director General, ICAR. The newly inaugurated facilities include the Next Generation Agricultural Extension Learning Centre at the Division of Agricultural Extension established under an ICAR Education Division-funded project; the Processing Laboratory at the Division of Food Science and Postharvest Technology and the Climate Resilient Green Agriculture Lab at the Division of Environmental Sciences funded by the ICICI Foundation for Inclusive Growth under its Corporate Social Responsibility (CSR) initiative.



Inauguration of three State-of-the-Art laboratories by Dr. M. L. Jat, Secretary, DARE & DG, ICAR

ICAR-IARI, New Delhi and Delhi Metro Rail Corporation (DMRC) sign MoU for Scientific Green Belt

ICAR-IARI, New Delhi, and DMRC signed a landmark MoU on April 21, 2026, to develop India's first scientifically designed green belt along the Delhi Metro Yellow Line. The agreement was formalized in the presence of Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, Dr. Viswanathan Chinnusamy, Joint Director (Research) and Sh. Manuj Singhal, Director, DMRC, along with other senior officials.



Signing of MoU for Scientific Green Belt between ICAR-IARI, New Delhi and Delhi Metro Rail Corporation (DMRC)

Samuhik Charcha under Sadhana Saptah

A Samuhik Charcha was organized under Sadhana Saptah (April 02-08, 2026) on April 08, 2026 on the vision of *Viksit Bharat 2047*. The program was chaired by Dr. Ch. Srinivasa Rao, Director, ICAR-IARI. The speakers highlighted the pivotal role of agricultural research and education in enhancing innovation, human resource development, and technological advancement.



Dignitaries in Samuhik Charcha under Sadhana Saptah

Meetings held during April-June, 2026

Meetings	Date	Details
Startup Inventors Meet 2026 by ZTM & BPD Unit, ICAR-IARI, New Delhi	April 29, 2026	To promote interactions between IARI scientists and startups for technology commercialization and 13 technologies were presented by five inventor-scientists, highlighting their commercial potential and scalability.
Meeting of Senior Officers Council	April-June, 2026	To review research, education and administration related activities, to improve interdepartmental coordination and plan for future initiatives and programs.
Pusa Krishi Haat (ATIC)	May 13, 2026	To discuss constraints of Pusa Krishi Haat Shop holders and strengthen the and explore ways to strengthen the marketing of their products.
Review meeting of the Corporate Social Responsibility (CSR) Project	May 14, 2026	To review the research progress, future strategies, outreach, stakeholder engagement, implementation and dissemination.
Institute Joint Staff Council (IJSC)	June 03, 2026	To review the issues faced by technical, administrative and supporting staff.



Meeting at Pusa Krishi Haat



Review meeting of CSR Project



Meeting of Senior Officers Council



114th Meeting of the IJSC

AWARDS AND HONOURS

Dr. Ch. Srinivasa Rao honoured with Prof. M.S. Swaminathan Award

Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, New Delhi, was conferred with the Prof. M.S. Swaminathan Award for the year 2024-25 on April 18, 2026, at a distinguished ceremony held in Hyderabad. The award was presented by Shri M. Venkaiah Naidu, Hon'ble Former Vice President of India, in recognition of Dr. Rao's exceptional and sustained contributions to climate-resilient farming and natural resource management areas.



Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, receiving the Prof. M.S. Swaminathan Award for the Year 2024-25

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VISITS OF NATIONAL & INTERNATIONAL DIGNITARIES / DELEGATIONS TO IARI



Visit of Mauritian Civil Servants to ICAR-IARI, New Delhi, on April 06, 2026



Visit of Shri Ajeet Kumar Sahu, IAS, Joint Secretary (Seeds), Ministry of Agriculture & Farmers Welfare to the ICAR-IARI, Regional Station, Indore on April 12, 2026



Visit of newly recruited Bank POs of CANARA Bank at *Krishi Vigyan Kendra*, Gurugram, on May 27, June 04 and 09, 2026



Visit of New Zealand Delegation to ICAR-IARI, New Delhi on June 09, 2026



Visit of Secretary, ICAR & Additional Secretary, DARE to ICAR-IARI Regional Station, Indore on June 12, 2026



Visit of Dr. Ch. Srinivasa Rao, Director, ICAR-IARI, to ICAR-IARI Regional Station, Shimla on June 11–12, 2026



Visit of direct recruit assistants through Reserve Panel/Reallocation/Inter-Institute Transfer of CAGE-2022 in ICAR-IARI, New Delhi on June 22-29, 2026



Visit of Dr. S.K. Sharma, ex-Director, ICAR-NBPGR and Dr. T.K. Behera, Director, ICAR-IIHR, to ICAR-IARI Regional Station, Pune on June 02, 2026



Visit of the Directorate General of Resettlement batch of 30 participants from NIESBUD on June 01 and June 29, 2026, to the Division of Microbiology

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