



IARI NEWS



GRAIN^{EX} - An automated grain physical purity analyser for e-NAM

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From Director's Desk

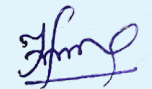
In this quarter, the Institute developed the Grain^{EX} machine, in active collaboration with C-DAC, Kolkata, for the physical purity analysis of seed lots. This innovation has the potential to transform e-NAM markets by facilitating quality-based seed pricing. In horticultural crops, a new cabbage variant with enhanced anthocyanin content and extended field-staying capacity; and two profusely flowering marigold varieties were identified for release. Other significant research highlights include design of a polymer composite for coating chickpea seeds to protect them against bruchid infestation during storage, the demonstration of altered C: N: P stoichiometry in rice under phosphorus-limited and elevated CO₂ conditions and development of models for non-destructive assessment of tomato fruit quality. Research in disaster and risk assessment led to the development of a machine learning and remote sensing-based method for assessing crop damage due to flooding.

The Institute celebrated its 119th Foundation Day with a special lecture and a variety of commemorative activities. The inaugural IARI Alumni Meet was a successful congregation of distinguished alumni from various sectors, both from India and abroad. Numerous capacity-building programs and advanced workshops aimed at enhancing the skills of farmers and students were organized. Two enthusiastic plantation drives under the banners of “Ek Ped Maa ke Naam” and “Adopt a Plant Initiative” were conducted.



The scientists of the Institute secured notable externally funded research grants and published a number of peer-reviewed articles in high-impact journals. We also organized Kisan Goshthis, exhibitions and demonstrations for farmers and farm women.

I am sure that the information in the IARI NEWS will be useful to farmers and stakeholders. I wish to congratulate all the scientists and staff of the Publication Unit for bringing out the newsletter on time.



T.R. Sharma
Director, ICAR-IARI



GRAIN^{EX} – An automated grain physical purity analyser for e-NAM

In the agricultural industry, assessing seed physical quality is crucial for ensuring that the produce meets market standards and consumer expectations. Traditionally, this assessment has been labor-intensive, relying on manual inspection and basic testing methods. To address these challenges and align with government initiatives like the Digital Agriculture Mission and the National Agriculture Market (e-NAM) Scheme, the Grain^{EX} Machine was the result of a collaboration between the Division of Seed Science and Technology at ICAR-Indian Agricultural Research Institute (IARI), New Delhi and Centre for Development of Advanced Computing (C-DAC), Kolkata. This machine uses a fully automated approach for physical purity analysis, offering a quicker and more reliable alternative to the traditional methods. Launched by the Ministry of

Electronics and Information Technology (MEITY), three prototypes of Grain^{EX} have been installed at the Division of Seed Science and Technology, ICAR-IARI, New Delhi, Birsa Agricultural University (BAU), Ranchi, and at the e-NAM grain market in Merta, Rajasthan. The Grain^{EX} aims to bring transformative changes to e-NAM markets through quality-based pricing and is expected to benefit over 1,200 e-NAM-connected markets.

(Joshi M, Ghosh A, Akuli A and Mishra GP, Division of Seed Science & Technology and C-DAC, Kolkata)
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Red Cabbage-The Vibrant Variant of Cabbage

KTCBR-5: An open-pollinated variety of red cabbage with an average yield of about 35 t/ha was developed by ICAR-IARI, Regional Station, Katrain and identified for release for Zone-I (Himachal Pradesh, Jammu & Kashmir and Uttarakhand) in the 41st Group Meeting of the AICRP (VC) held at SKUAST, Jammu & Kashmir. It has 10-12 non-wrapping, waxy leaves with a purplish, compact

round head. It matures in 80-85 days after transplanting and possesses a field staying capacity of 25-30 days after head formation. It has a higher anthocyanin content (11.59mg/100g) than white cabbage (1.32mg/100g).

(Parkash C and Kumar S, ICAR-IARI, Regional Station Katrain)
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Head view of KTCBR-5

Herb of the Sun- New Marigold Varieties Identified

Two varieties were identified for loose flower and bedding/landscape purposes.

Pusa Prabha

It belongs to the French marigold group and flowers 110-120 days after sowing. It has profuse



Flower view of Pusa Prabha

flowering, with an average of 90-100 compact, medium-sized, dark orange-colored flowers per plant.

Pusa Shwetaabh

It belongs to the African marigold group and flowers 90-100 days after sowing. This variety



Field view of Pusa Shwetaabh

flowers profusely and produces 60-70 creamish white flowers per plant.

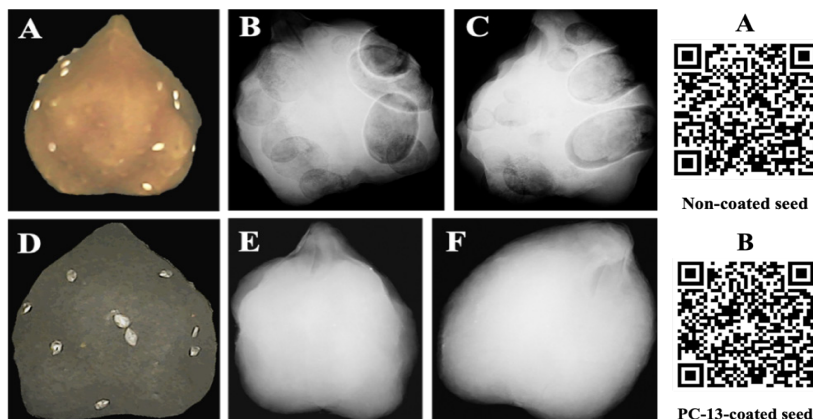
(Singh KP, Panwar S, Namita, Kumar P, Singh M, Division of Floriculture and Landscaping)
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Polymer Composite (PC) Seed Coating of Chickpea- Bruchid Management during Storage

Bruchid beetles are devastating storage pests in chickpea that

can completely compromise seed viability within three months of storage. Polymer composites (23 nos.) were designed using natural products for coating chickpea seeds to protect them against infestation without affecting seed quality. PC1-PC 6, PC11,

PC14, PC16, and PC 20 provided complete protection, as evidenced by zero adult emergence and no damage compared to non-coated seeds. X-ray radiography and videography confirmed that PCs provided an effective barrier to entering first-instar bruchid larvae into the seeds. This technology offers a potential solution for protecting pulse seeds from bruchid infestations during storage.

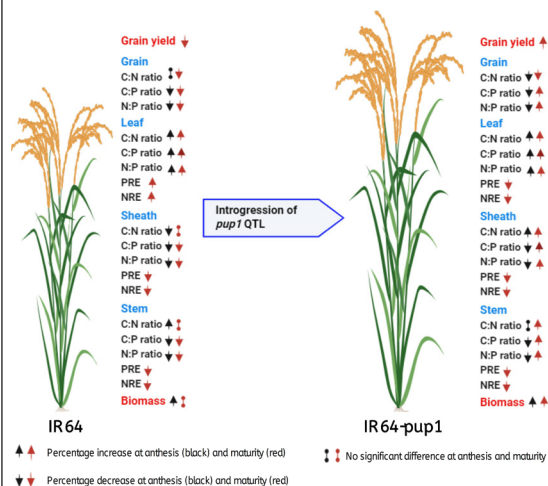


X-ray radiography of **A**: Non-coated seed with oviposition on the surface **B-C**: Non-coated seed with visible larvae in different stages of development **D**: PC 11 coated seed with oviposition on the surface **E-F**: PC-coated seed without any larvae inside. QRcode to view the videography of larval fate in non-coated and coated seeds. *Scan the QRcode in mobile to view the respective video

(Febina AS, Kumar A, Bharadwaj C, Nebapure SM, and Kumar A MB, Division of Seed Science and Technology) arunk_sst@iari.res.in

Nutrient Remobilization and C: N: P Stoichiometry – Influence of Elevated CO₂ (eCO₂) and Low Phosphorus Availability in Rice

The impact of eCO₂ on growth, yield, nutrient remobilization and C: N: P stoichiometry under low P stress was investigated in *Pup1* QTL introgressed IR64 (IR64-Pup1), Kasalath (*aus* type) and IR64. All the plants significantly reduced C: N and C: P ratios. Compared to the control, the N and P remobilization efficiencies were reduced considerably in treated plants. The treatment effect was more evident in IR64-Pup1, which produced higher biomass and grain yield than IR64 under the same conditions. However, IR64-Pup1 exhibited low N but high P concentration, indicating that the *Pup1* QTL exhibited improved P compared to N uptake. This study suggests that P limitation with increasing atmospheric CO₂ would alter the C: N: P stoichiometry ratios due to their differential partitioning in various tissues, thereby affecting growth and yield.

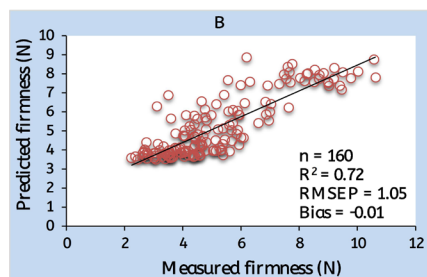
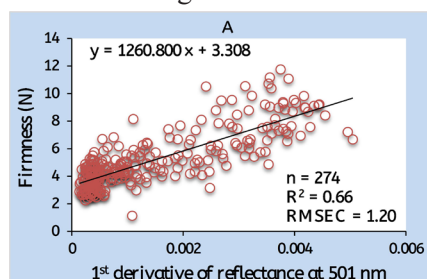


Influence of elevated CO₂ and low P stress on C:N:P stoichiometry ratios in Pup1 QTL introgressed IR64 compared to parent IR64

(Pandey R, Division of Plant Physiology)
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Non-destructive Assessment of Quality and Nutritional Parameters of Tomato Fruits

Models (based on the reflectance of visible light from the surface of tomato fruit) have been developed for non-destructive assessment of ripeness/maturity [y (ripeness/maturity score ranging from 0.0 to 8.5) = $-2.456 \ln(x) - 1.093$ where x is the reflectance at 521 nm], firmness [y (firmness, ranging from 11.74 to 1.13 N) = $1260.800x + 3.309$ where, x is 1st derivative of the reflectance at 501 nm], lycopene [y (lycopene content, ranging from 0.003 to 66.04 $\mu\text{g g}^{-1}$ FW) = $0.1713x^{-1.789}$ where, x is the reflectance at 546 nm] and total carotenoids [y (total carotenoids, ranging from 2.15 to 112.2 $\mu\text{g g}^{-1}$ FW) = $1.6638x^{-1.353}$ where, x is a reflectance at 582 nm] of tomato fruits. Indices were validated and can be utilized to develop automated cost-effective tools for sorting the fruits.

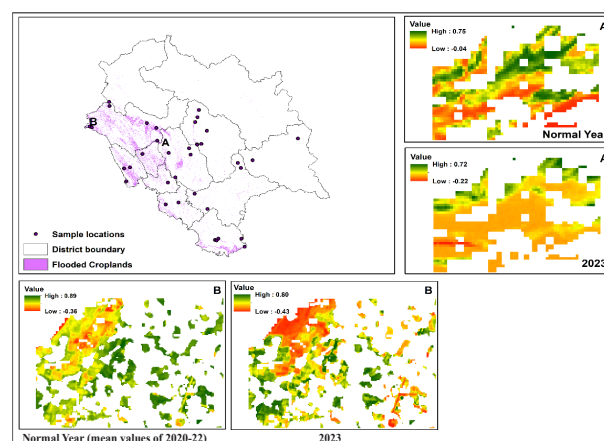


Calibration (A) and validation (B) graphs for developing the model for prediction of tomato fruit ripeness

(Paul V, Pandey R and Sahoo R N,
Division of Plant Physiology)
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Development of Machine Learning (ML)-Remote Sensing (RS)-data-based method for Flood-related Crop Loss Estimation

Remote sensing data and ML algorithms were used to develop models for determining yield loss due to extreme flood events in Himachal Pradesh. Further, four ML algorithms (random forest, support vector regression, k-nearest neighbour and extreme gradient boosting) were evaluated to forecast maize and rice crop production and potential loss during the *Kharif* season in 2023. Random forest showed outstanding performance compared to others.



Variation NDVI values at different locations over two years

The maximum production loss of maize was estimated for Solan (54.13%), followed by Una (11.06%) and rice in Kangra (19.1%), Una (18.8%) and Kinnaur (18.5%) districts. This indicated the utility of the methodology for a quick in-season forecast of crop production loss due to climatic hazards.

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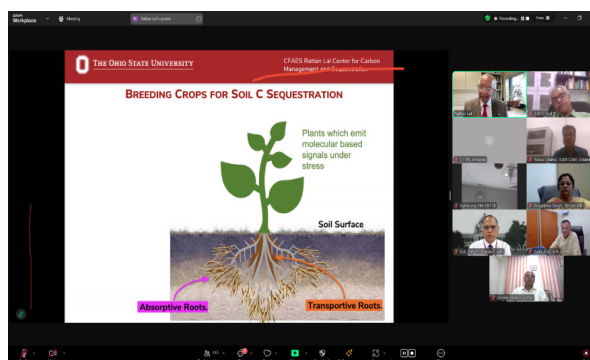


31st Dr. B.P. Pal Memorial Lecture

The 31st Dr. B.P. Pal Memorial Lecture was organized virtually on May 29, 2024, by The Graduate School, ICAR-IARI, New Delhi and the Genetics Club of IARI. On this occasion, Prof. Rattan Lal, World Food Prize laureate, distinguished University Professor of Soil Science and Director, CFAES Rattan Lal Center for Carbon Management and Sequestration, Ohio State University, Columbus, USA, delivered a lecture on “Soil health in relation to agrifood systems sustainability.”

He highlighted the challenges of Indian agriculture in the 21st century and emphasized on the importance of nature-positive agriculture, breeding of climate-resilient crops, carbon farming etc. He underscored in his talk that advancing

the science of soil health and translating it into action can promote and sustain global peace and political stability.



Dr. B.P. Pal memorial lecture by Prof. Rattan Lal in virtual mode



Executive members of the IARI Alumni Association during the IARI Alumni Meet and National Symposium

IARI Alumni Meet and National Symposium Organized by IARI Alumni Association

NAHEP-CAAST project, ICAR-IARI and IARI Alumni Association organized the IARI Alumni Meet and National Symposium on “Transforming IARI

into a Global Leader in Agricultural Research and Education: An Alumni Perspective” on June 22, 2024 at Bharat Ratna Dr. C. Subramaniam Auditorium, NASC Complex, Pusa, New Delhi. During the inaugural function, Shri Shivraj Singh Chouhan, Hon’ble Union Minister of Agriculture & Farmers

Welfare, Govt. of India, urged the scientific community to prioritize the interests of small and marginal farmers towards making India self-reliant in pulses and oilseeds. A panel discussion on mobilizing resources for developing IARI towards a global university was organized during the Symposium.



Training Programs

Training	Salient Features
	<ul style="list-style-type: none"> • CATAT under SCSP organized a two-days training program on “Improved Agricultural Technologies for Higher Productivity and Income” for 100 farmers of East Champaran, Bihar from April 9 to 10, 2024, sponsored by KVK, Pasoni, East Champaran, Bihar. • Participants - 29
<ul style="list-style-type: none"> • The Division of SSAC, ICAR-IARI, New Delhi, and the Academy of Natural Resource Conservation and Management (ANRCM), Lucknow organized a public-private partnership training program on “Instrumentation Techniques for Analysis of Soil, Plant and Water” from May 15 to 22, 2024. • Training on operating and handling different soil, plant and water analysis instruments. • Participants - 20 	

Training	Salient Features
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- Three days of training on “Solanaceous Crop Cultivators under Recognition-Prior Learnings” sponsored by ASCI was organized by KVK, Gurugram, on June 05-07, 2024.
- Participants - 29

- KVK, Gurugram, organized a training program on “INM in Pearl-Millet” on June 27-28, 2024 at the KVK campus.
- During the program, the participants were apprised about green manuring, farm yard manure, bio-fertilizers and the balanced use of fertilizers in pearl millet.
- Participants - 22



- KVK Gurugram conducted a one-day training on “Integrated Pest Management in Pearl Millet” at the KVK campus on June 27, 2024.
- Participants - 15

Mission/Special Programs

119th IARI Foundation Day

The ICAR- IARI celebrated its 119th Foundation Day at Dr B.P. Pal Auditorium on April 01, 2024, with a lecture on “Unlocking Nature’s Vault: Plant Bioresources for a Thriving Bioeconomy” delivered by Dr. Sanjay Kumar, Chairman, Agricultural Scientists Recruitment Board (ASRB), New Delhi. Dr. Sudhir K Sopory, the former Vice-Chancellor of Jawaharlal Nehru University and Emeritus Senior Scientist at the International Centre for Genetic Engineering Biotechnology, New Delhi, presided over the lecture.



Felicitation of Dr. Sanjay Kumar, Chairman, ASRB

Several publications were released and staff members in technical, administrative and MTS categories were felicitated for their outstanding performance during the year. The school children and the undergraduate and postgraduate students heightened the fervour of the week-long Foundation Day celebrations with their enthusiastic



“Microbial Literacy” initiative program on “स्वच्छ पर्यावरण स्वच्छ जीवन के लिए नई डगर” organized for students by the Division of Microbiology



Release of publications on the Foundation Day



Tree plantation drive inaugurated by Dr. A.K. Singh, Director & Vice-Chancellor, ICAR-IARI, New Delhi

participation in various literary activities. Dr. A.K. Singh, Director, ICAR-IARI, expressed his gratitude to the Institute’s founders, scientists, staff and stakeholders for their unwavering support and dedication towards advancing agricultural science and contributing to the nation’s food security.

World Earth Day

One day “Microbial Literacy” initiative program on “स्वच्छ पर्यावरण स्वच्छ जीवन के लिए नई डगर” was organized by the Division of Microbiology under the aegis of Association of Microbiologists of India (AMI) and Academy of Microbiological Sciences on the occasion of World Earth Day at Lalit Mahajan SVM Sr. Sec. School, Vasant Vihar, New Delhi on April 22, 2024. Students from classes 5th to 10th participated in three events *i.e.* theme poem recitation, poster with slogan and pot decoration.

World Environment Day

Pusa Graduate School Students’ Union (PGSSU) at ICAR-IARI organized an extempore and poster-making competition on World Environment Day on June 05, 2024. The event’s theme was “Heal the Planet Against Rising Climate Crisis,” which engaged the students in creative expression regarding solutions to environmental changes.



Extempore and poster-making competition on World Environment Day

Nature Club, an initiative of The Graduate School, ICAR-IARI, New Delhi, organized an “Adopt a Plant Initiative” drive on World Environment Day. Groups were created with the participation of 69 B.Sc./B.Tech. 1st year students who were entrusted with the responsibility of nurturing the saplings of Amaltas (*Cassia fistula*) and Gulmohar (*Delonix regia*) during their study on the campus.

The Division of Environment Science organized painting, speech, and quiz competitions for students from class VI to Ph.D.



Plantation drive on World Environment Day

Farmers-Scientists interaction was organized by the Division of Microbiology to increase the awareness on the application of biofertilizers and reduce the use of chemical fertilizers for improving the quality of soil, water and air.



Farmers-Scientists Interaction on World Environment Day

KVK Gurugram celebrated the day at the KVK campus by planting 50 neem, mango, amla, jamun and guava saplings.



Tree planting at KVK Gurugram

Lectures

Safe Use of Pesticides in Different Crops

The farmers of the Gurugram district received a lecture on “Safe Use of Pesticides in Different Crops” on May 30, 2024 in the program organized by the Institute of Pesticide Formulation Testing, Gurugram, Haryana. The farmers were sensitized about different types of pesticides and their harmful effects during spraying. A total of 124 farmers participated in the event.

Innovative Farmers' Meet

CATAT organized a one-day innovative farmers' meet on June 06, 2024 at Dr. B.P. Pal Auditorium, IARI. Dr. US Gautam DDG (Extension), ICAR bestowed seven farmers with the IARI Fellow award and thirty-three farmers with the Innovative Farmers award.



Awardee Farmers during Innovative Farmers' Meet

Rural Agricultural Work Experience (RAWE)

A one-month RAWE program was organized by KVK, Gurugram for seventh-semester B.Sc. (Agriculture) students from April 1 to May 10, 2024. The students were exposed to practical aspects of different skills such as vegetative propagation, beekeeping, mushroom production technology, soil and water testing, Trichoderma production, protected cultivation, kitchen gardening, natural farming, integrated farming system, goat farming and dairy farming.



Rural Agricultural Work Experience for the Undergraduate Students

Seed Treatment Campaign

KVK, Gurugram organized a seed treatment campaign at village Raiseena on May 03, 2024. The seed treatment method for *Zaid* and *Kharif* season crops was demonstrated for the farmers.



Seed treatment campaign organized by experts

Plantation Drive under “Ek Ped Maa Ke Naam”

KVK, Gurugram organized a plantation drive under “*Ek Ped Maa Ke Naam*” on June 28, 2024 at the KVK campus by planting neem, mango, amla, jamun, and guava saplings.



Plantation Drive under “*Ek Ped Maa Ke Naam*”

Scientific Advisory Committee (SAC) Meeting

KVK, Gurugram organized the 38th SAC meeting under the chairmanship of Dr. R.N. Padaria, Joint Director (Extension), ICAR-IARI. The meeting was attended by the Heads of Divisions of IARI, officials of ATARI, Zone II, Jodhpur and the State Department, Haryana, farmers, farm women (SAC members) and KVK staff to discuss the progress during 2023-2024 and the action plan for the year 2024-2025.



Scientific Advisory Committee Meeting

Kisan Goshthis

Kisan Goshthi on Enhancing Nutritional Security and Farmer's Income

The Division of Agricultural Extension, ICAR-IARI organized a “Kisan Goshthi” on May 03, 2024, at Muradnagar village in the Ghaziabad district of Uttar Pradesh. The program emphasized the importance of enhancing nutritional security and farmers' income through the adoption of improved nutrient-rich varieties of various crops and export-oriented basmati rice varieties developed by ICAR-IARI. Approximately 40 progressive farmers actively participated in the event.



Distribution of seed materials and farm literature to the farmers

Kisan Goshthi on Nutrition and Health (AE4NH) Promotion

The Division of Agricultural Extension, ICAR-IARI organized three “Kisan Goshthi” programs on May 21, 2024 on “Agricultural Extension for Nutrition & Health Promotion” in Almora, Nainital, and Bageshwar districts of Uttarakhand. The farm field awareness and Kisan Goshthi program were conducted in the following villages of three districts viz. Almora: Papgarh and Kheti, Nainital: Hartola and Gangarkote and Bageshwar: Bahuli and Garia Gaon. Nutri-kitchen garden kits were distributed to the trainee farmers and farm women. A total of 600 farmers (300 farmers and 300 farm women) were benefitted.



Distribution of seed material and farm literature to the farmers

Kisan Goshthi during *Kisan Samman Nidhi* Program

Nutri-kitchen garden kits distributed to farmers

Kisan Goshthi on Kisan Samman Nidhi Program

KVK, Gurugram organized a *Kisan Goshthi* during the *Kisan Samman Nidhi* program on June 18, 2024.

Various technologies, such as drip irrigation, bio-fortified varieties, drone technology and natural farming were demonstrated during the *goshthi*. The Hon'ble Prime Minister's address was also live telecast to the participants. A total of 102 farmers and farmwomen participated in the event.

CAPACITY BUILDING

Workshop

The e-review workshop of the IARI - Voluntary Organisations partnership outreach program and the National Extension program was organized by CATAT on April 07, 2024. The performance of the crops/technologies under demonstration during *Kharif* 2023 was assessed under the chairmanship of Dr. A.K. Singh, Director, ICAR-IARI. The workshop was attended by 24 officials from ICAR Institutes, SAUs, VO's from 26 partner

organizations, along with 33 nodal officers from IARI. To strengthen the program, the highlights of successful technologies were recorded for upscaling and assessment.

Workshop on "Nutrition Garden for Enhanced Household Nutrition Security"

A Workshop was organized by the Division of Agricultural Extension, ICAR-IARI on May 10, 2024 at Sangel Village in Nuh, Haryana to discuss the importance of the balanced diet for healthy life and the importance of vegetables in

nutritional security. Nutri-kitchen garden kits were distributed to the trainees.

Farmer-Scientist Interface

The Division of Agricultural Extension, ICAR-IARI organized a "Farmer-Scientist Interface" program on May 06, 2024 at Roopwas village in Dadri, Uttar Pradesh. The program discussed advanced weed and water management practices and disseminated knowledge on high-yielding rice varieties such as PB 1718, PB 1847, PB 1692 and PB 1121.



Lecture on land and water management practices for higher rice productivity



Research Grants

Externally Funded Projects Sanctioned and Implemented (> 10 lakhs)

Title	Amount (in lakhs)	Duration	Funding Agency	Principal Investigator
Unraveling the etiology characterization and seed transmission studies of new viruses associated with vein necrosis disease of soybean	55.3	May 17, 2024- May 16, 2027	DBT -Agriculture Biotechnology Scheme	Dr. Nagamani Sandra, SS, Division of Seed Science & Techonology
Development of engineered Azotobacter with super-efficient biofertilizer activity	79.92	May 17, 2024- May 16, 2027	DBT-Ad hoc Funding Scheme	Dr. Sangeeta Paul, PS, Division of Microbiology
Validation of candidate gene(s) governing exceptionally higher prolificacy in Sikkim primitive-a unique maize landrace of north eastern Himalayas and its introgression into elite inbreds through molecular breeding	97.88	June 27, 2024- June 26, 2027	DBT	Dr. Firoz Hossain, PS, Division of Genetics
Identification of novel genomic regions governing resistance against recently evolved devastating stripe rust pathotype 238S119 in unexplored durum wheat landraces from southern India	38.72	June 27, 2024- June 26, 2027	DST-CRG	Dr. H. Prashanth Babu, SS, Division of Genetics
Assessment on climate change related agricultural losses, damage , impacts vulnerability and adaptation for national communications (BTR and FNC) to UNFCCC	44.99	April 03, 2024- April 02, 2027	MoEF & CC	Dr. Naresh Kumar, Head & PS, Division of Environment Science
Inventory of GHG emission from Indian agriculture sector: crop residue burning and urea application to soils-BUR-4,BTR-1 and FNC	38.10	April 15, 2024- April 14, 2027	MoEF & CC	Dr. Niveta Jain, PS, Division of Environment Science
GHG emission inventory from agricultural soils and rice cultivation for BUR-4, BTR-1, and FNC	54.10	May 07, 2024- May 06, 2027	MoEF & CC	Dr. Arti Bhatia, PS, Division of Environment Science
Conversion of doubled haploids of broccoli into CMS lines using MABC and their utilization in hybrid breeding	58.00	May 08, 2024- May 07, 2027	BIRAC	Dr. Chander Prakash, Head & PS, IARI-Regional Station Katrain
Development of DUS testing guidelines in summer squash	13.86	June 14, 2024- June 13, 2026	PPV & FRA	Dr. Shyam Sunder Dey, SS, Division of Vegetable Science
Survey and identification of agriculturally important insect pests and disease in Ladakh region	10.00	June 27, 2024- December 26, 2025	DIHAR, DRDO	Dr. PR Shashank, SS, Division of Entomology

Paradigm shift from traditional to natural and organic farming	250.00	June 25, 2024- June 24, 2026	RKVY- RAFTAAR	Dr. Sandeep Kumar, S, IARI-Regional Station, Karnal
Evaluation of ME5382 2% GR against rice root-knot nematode <i>Meloidogyne graminicola</i>	12.61	April 19, 2024- October 18, 2024	Arysta LifeScience Ltd.	Dr. Pankaj, Head, Division of Nematology
Studies on greenhouse gas emission in rice-wheat and sugarcane-wheat cropping system under different agri-management practices	70.95	June 25, 2024- June 24, 2027	Varaha ClimateAg Pvt. Ltd.	Dr. Arti Bhatia, PS, Division of Environment Science
Evaluation of bio efficacy of Triflumizole 15% EC against powdery mildew and scab disease of Apple	13.64	May 28, 2024- May 27, 2026	Mahindra Summit Agriscience Ltd	Dr. Santosh Watpade, SS, IARI-Regional Station, Amartara Cottage, Shimla
Evaluation of PIF 320 5% SC against apple diseases	21.35	June 25, 2024- June 24, 2027	PI Industries Limited	Dr. Santosh Watpade, SS, IARI-Regional Station, Amartara Cottage, Shimla

Technology Commercialization

Under the Lab to Land Initiative, 24 ICAR-IARI technologies were commercialized to 135 industry partners, generating a total revenue of ₹ 2.56 crore.

IP Management

During this quarter, the ZTM & BPD Unit filed six copyrights and four patents.

INCUBATION ACTIVITIES

Upja & Arise 2024

Pusa Krishi, IARI, launched its startup incubation program UPJA & ARISE on April 01, 2024, to empower aspiring entrepreneurs with essential resources, mentorship, funding and guidance.

Masterclass Series for RABI Startups

PUSA Krishi’s ‘Masterclass Series for RABI Startups’ under RKVY-RAFTAAR was organized in online mode by the ZTM & BPD unit from April 01-12, 2024,

to empower budding startups with technical support.

Webinar on Intellectual Property Rights-Promoting Innovation and Creativity for a Sustainable Future

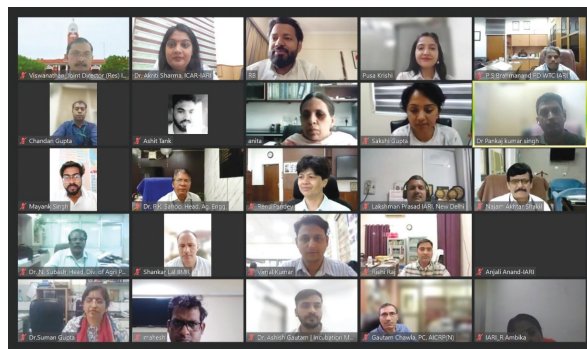
A Webinar on “Intellectual Property Rights (IPR)-Promoting Innovation and Creativity for a Sustainable Future” was organized by the ZTM & BPD



Signing of MoA between IARI and seed companies for licensing of HD 3386

TechXchange 2024: Empowering Industry with Innovation

The ZTM & BPD unit hosted “TechXchange 2024 - Empowering Industry with Innovation” on April 30, 2024 at the BP Pal Auditorium, Pusa Campus, New Delhi. The program aimed to create an industry-academia interface to bridge the gap between technological advancements and their practical applications in agriculture. A Memorandum of Agreement (MoA) was signed



Webinar on “Intellectual Property Rights

unit on April 26, 2024, with over 70 participants from all over India. The webinar covered various aspects of IPR, emphasizing sustainability in innovation.

between the ZTM & BPD unit, IARI and approximately 100 seed companies to license HD 3386 wheat variety.

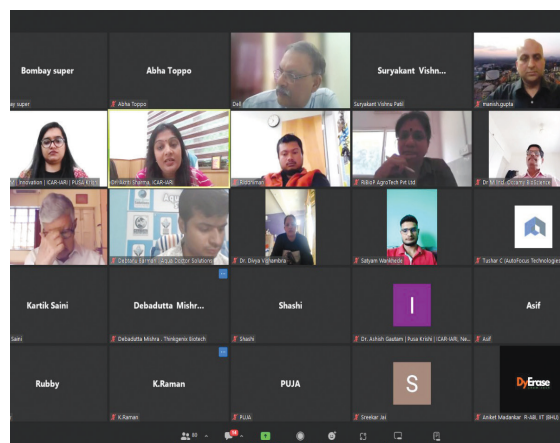
Agri India Meet 4.0

The fourth edition of the Agri India Meet took place on May 10, 2024, focusing on the theme “Disrupting Agriculture Value Chains: Power of Supply Networks & Logistics.” The program provided a platform for stakeholders to engage

in meaningful discussions, exchange ideas and explore avenues for collaboration within agricultural value chains.

Corporate Membership

The ZTM & BPD Unit enrolled 9 new industry partners for membership and renewed the membership of 17 industry partners, generating a revenue of ₹ 1,45, 000.



Stakeholders at the virtual Agri India Meet

Publications with NAAS rating >10.0

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National & International Visits at IARI



Visit of attendees of 71st Professional Course of Foreign Diplomats program from Sushma Swaraj Institute of Foreign Service, Ministry of External Affairs on April 30, 2024



Visit of Dr. Lee Junwon, Chairman, Korea FAO Association & Honorary Regional representative for Far East Regional Office (FERO) of AARDO, Republic of Korea on May 01, 2024



Visit of Dr. Brent Wells, USAID, Ms. Kelly Robbins and Ms. Lina Stankute-Alexander, PEER program, USA on May 14, 2024

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