



April-June, 2025

A ICAR-IASRI NEWS Volume 30 No. 2; April-June, 2025

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From the Director's desk..



This Newsletter brings to you the key research achievements, awards and recognitions received, training programmes conducted, workshops and conferences organized/attended, advisory services provided and significant publications of ICAR-IASRI during the period under report.

The scientists, staff and students of the Institute congratulates the Dr Mangi Lal Jat for being appointed as Secretary, DARE and Director General, ICAR.

The Institute has developed (i) Deep Learning Framework for Transparent Crop Yield Modeling using Simulated Virtual Experimental Runs; (ii) Intelligent Decision Support for Drought Stress (IDS DS); (iii) Calibration Estimator of Population Total by Double Use of Auxiliary Information in Two-Stage Sampling Design and (iv) Identified Phytochemical Inhibitors Against Rice Blast Pathogen. Venture for Interaction of Kisan and Agri-students 9VIKAS APP) developed by DAFW, Agricultural Education Division, ICAR-IASRI and Digital Green Trust was launched by Honorable Agriculture Minister Sh. Shivraj Singh Chauhan ji. The Institute also developed Dashboard Portal for Viksit Krishi Sankalp Abhiyan and made available at <https://vikalp.kisansarathi.in/index.php>.

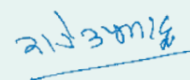
During this period, the Institute was transferred from Agricultural Education Division to Agricultural Engineering Division, ICAR. Deputy Director General (Agricultural Engineering) addressed the employees of the Institute on May 24, 2025. Steering Committee meeting of Network Project on Computational Biology and Agricultural Bioinformatics was also organized during this period.

The Institute also celebrated World Environment Day; International Yoga Day and 19th National Statistics Day 2025. The Copyright Office and Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry honored the Institute for registering significant number of Copyrights during recent years during the celebrations of the 68th years of Enactment of Copyright Act, 1957, themed "Reform in Copyright Act in the Digital Era". The scientists of the Institute also actively participated in Viksit Krishi Sankalp Abhiyaan. The Institute also made a presentation before the Hon'ble Parliamentary Committee on Official Language along with the Chairpersons and member offices of the Northern Regional Official Language Implementation Committee (NARAKAS) at New Delhi. Several programmes were also organized under SC Sub plan.

ICAR-IASRI family takes pride in congratulating Dr DVV Ramana, a distinguished alumnus of the Institute for conferred with SUNY Distinguished Professorship award.

A total of 51 Research Papers and 09 Book Chapters were published. Initiated 04 new research projects and completed 04 research projects. Through four training programmes including two Hindi Workshops, 142 personnel were trained.

The scientists of the Institute brought recognitions by way of serving as Expert Members in various high-level committees, presenting research work in prestigious conferences/ workshops. I earnestly hope that the contents of this Newsletter would be useful and informative to you all. Any constructive comments for better presentation of this newsletter are most welcome



(Rajender Parsad)

RESEARCH ACHIEVEMENT

Virtual Experimental Runs

Deep Learning (DL) has made substantial advancements in global crop yield modeling, primarily due to its high precision. However, a major challenge with DL is its black-box nature, meaning the internal workings of the developed models are not transparent. This critical gap of the opacity of DL models has been bridged with advanced statistical techniques. It provides unprecedented insights into the complex relationships between climatological and physiological factors and crop yield optimization on a global scale. DL-RSMv2 framework introduces the concept of Simulated Virtual Experimental Runs (SVER), which leverage advanced DL models to estimate variable relationships and crop-specific optimal weather conditions using gradient-based optimization. Furthermore, a comprehensive case study using NASA's POWER data and decade-long countrywide field experiments on mungbean demonstrates the proposed approach's practical effectiveness. Among the evaluated DL models, the GRU-CNN hybrid achieved the best performance with the lowest RMSE (200.968 kg/ha), lowest MAE (152.191 kg/ha), and highest R^2 (~0.7) for mungbean yield prediction. The study helps enhance food security by providing an AI-based methodology to comprehensively understand climatic and physiological impacts on crop production, offering valuable insights for researchers in the agriculture and pattern recognition domain.

Intelligent Decision Support for Drought Stress (IDSDS)

Drought is a major abiotic stress that adversely affects plant growth, physiology, and crop yield. Conventional methods for assessing drought stress tend to be fragmented, targeting either leaves, canopies, or roots, and are often expensive, low-throughput, and lack the ability to provide real-time, whole-plant insights. Addressing these limitations, this study presents a novel, integrated pipeline titled *Intelligent Decision Support for Drought Stress (IDSDS)* that leverages remote sensing and artificial intelligence (AI) for accurate, real-time monitoring of drought stress across entire plants. The IDSDS pipeline employs low-cost RGB images collected at various growth stages and uses a deep learning-based model to reconstruct hyperspectral data, which is typically costly and complex to obtain. This reconstructed data enables the extraction of key physiological traits, including greenness, saturation, and pigment content. A novel phenotyping metric—*Greenness Coefficient (GC)*, was also proposed, offering precise spatial analysis of drought impact within the plant. The hyperspectral reconstruction model was validated using standard performance metrics such as the correlation coefficient, mean squared error, standard deviation of squared error, and spectral angle mapper (SAM). IDSDS further calculates a comprehensive set of spectral indices (e.g., greenness, leaf pigment, water content) that are closely linked to drought-induced changes. Finally, by integrating these indices with machine learning-based classification models, IDSDS accurately stratifies plant drought stress into seven distinct categories. The results showed that the proposed hyperspectral reconstruction model effectively converts RGB plant images into accurate hyperspectral data, achieving a SAM value between 0.14 and 0.30. This indicates strong spectral similarity, meaning the reconstructed pixel spectra closely align with the reference spectra. The GC, along with other reconstructed spectral indices, supports visual interpretation and enhances the traceability of the system's outputs, thereby increasing transparency. Additionally, the findings demonstrate statistically significant results ($p < 0.001$) for these indices in detecting plant drought stress, with a high classification accuracy of 99 % and an average

area under the curve (AUC) of 1.00, reflecting precise differentiation of stress across the entire plant. Overall, the study introduces a breakthrough in drought stress monitoring, combining high-throughput and cost-effective RGB imaging with AI to support both scientific research and practical crop management. The IDSDS pipeline lays the groundwork for informed, drought-adaptive decision-making of agricultural crops.

Calibration Estimator of Population Total by Double Use of Auxiliary Information in Two-Stage Sampling Design

Sample survey involves selecting a representative subset of individuals from a larger population to gather information and make inference about the entire target population. The use of auxiliary information while estimating the population parameters are widely adapted due to its capability of obtaining efficient estimators. The calibration approach is one of the most employed method for integrating auxiliary information into the estimation process of survey sampling. Rank-based calibration leverages a single auxiliary variable in two different ways. Several researchers have successfully applied rank-based calibration to improve the estimators for uni-stage sampling designs which were merely used in real life surveys as in real life surveys commonly employed designs are multistage in nature. In this context, a new calibration estimator was developed for two-stage sampling design by utilizing an auxiliary variable in two different ways i.e. the auxiliary information itself and its rank. It was also assumed that auxiliary information is available for all the elements in the population. The approximate mean square error and estimator of the approximate mean square error were also derived using Taylor Series linearization technique. The proposed estimator was evaluated against existing estimators using both simulated and real survey data, employing newly developed R code for the analysis. The results demonstrated that the proposed estimator outperformed the existing ones based on the relative and theoretical efficiency measures.

Identification of Phytochemical Inhibitors against Rice Blast Pathogen

Using a machine learning-based bioactivity prediction model combined with molecular docking analysis, three phytochemicals (Azadirachtin, Calotropin, and Lupeol) were identified as potential inhibitors of *Magnaporthe oryzae*, the causal agent of blast disease in rice. The virtual screening was carried out against AVR-Pik, a pathogen effector protein that suppresses rice immunity. Among these, the efficacy of Lupeol was validated through in vitro assays, where it showed 54% inhibition at 100 ppm, confirming its significant antifungal activity against *M. oryzae*.

PANORAMA OF ACTIVITIES

International Yoga Day

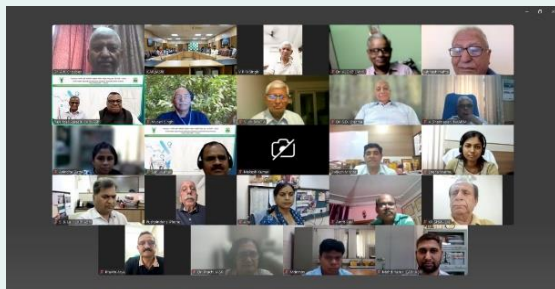
- Institute celebrated 11th International Yoga Day 2025 on June 21, 2025 on the theme “Yoga for one Earth, One Health” in the institute Lawn.





National Statistics Day

- Institute celebrated 19th National Statistics Day 2025: ICAR-IASRI celebrated National Statistics Day during June 21-29, 2025. It has been lively with a series of celebratory events commencing with the launch of an announcement video prepared and presented by the students of the Institute by Director, ICAR-IASRI on June 21, 2025. On June 25, 2025, a visually striking banner drop took place, where two large vertical banners were unfurled from the top of the TAC building, marking the celebration in a grand manner. The day also featured engaging fun activities including cup pyramid challenges, and a creative meme-making competition centered around Statistics. A vibrant rangoli competition and various sports events added further enthusiasm and colour to the celebration. Continuing the festivities, an online session was held on June 27, 2025, through interaction with the esteemed alumni of the Institute. The event was enriched with a presentation by the Director on the genesis, growth and achievements of the Institute. A wonderful poem and student presentations were highlight of the session. A special highlight of the session was the participation of eleven distinguished alumni aged over 70 years, who shared their thoughts and extended their blessings to the students and younger staff of the Institute. The enthusiastic participation of students, faculty, staff, and alumni made the celebrations a truly memorable one.



Launch: VIKAS APP (Venture for Interaction of Kisan and Agri-students)

Venture for Interaction of Kisan and Agri-students developed by DAFW, Agricultural Education Division, ICAR-IASRI and Digital Green Trust launched by Honorable Agriculture Minister Sh Shivraj Singh Chauhan ji on May 20, 2025 during the Annual Conference of Vice Chancellors of Agricultural Universities and Directors of ICAR Institutes. Convergence for Action: Shaping Agricultural Research, Education and Extension for Viksit Bharat@2047 held at Bharat Ratna Dr. C Subramaniam Auditorium, NASC Complex, New Delhi

Programme under SCSP Scheme:

- Seed distribution of Paddy (PB 1847: 4250 kg); Bajra (PC 701: 130 kg); Moong (250kg); Bhindi (50 kg) and Lauki (kg) was organized under the Scheduled Caste Sub Plan (SCSP) scheme in four villages (Mumrejpur, Budhpur, Darapur and Kutubpur) in the Bulandsaahar district of Uttar Pradesh on April 25, 2025. The number of SC farmer beneficiary in 4 villages were 120, 30, 39 and 46 respectively. Discussion was made along with the farmers about the package of practices for the paddy variety PB 1847. Additionally, the impact of the wheat seed distribution program which was conducted in the previous year was assessed. The farmers were satisfied with the wheat yield and the quality. Overall, the farmers expressed their satisfaction with the quality and timely availability of the seeds of different crops which are being provided to them through the SCSP scheme in the kharif and rabi seasons. (Conveners: Dr. Soumen Pal and Dr. Md Yeasin)



- Training and seed distribution programme under SC Sub Plan was organized by the Institute at (i) Asaudha village (Jhajjar), Haryana on May 08, 2025. Seeds of Pusa Basmati 1692 and Pusa Basmati 1718 were distributed to around 100 farmers (Convenor: Dr. Deepak Singh) and (ii) Khatawali village (Rewari), Haryana on May 28, 2025. The seeds of bajra, moong and lauki were distributed among the 34 SC beneficiaries. Discussion was made along with the farmers about the quality and the yield obtained for the wheat and vegetables seeds provided to them in the previous rabi season and during the Pusa Krishi Vigyan Mela (February 2025). The farmers were satisfied

with the yield and the quality of the wheat and tomato. Overall, the farmers expressed their satisfaction with the quality and timely availability of the seeds of different crops which are being provided to them through the SCSP scheme in the kharif and rabi seasons (Conveners: Dr. Ritwika Das, Dr. Mohd Yean)



Others

- The Copyright Office and Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry Celebrated the 68th years of Enactment of Copyright Act,

1957, themed “Reform in Copyright Act in the Digital Era” on 4th June 2025 at India International Centre, New Delhi. ICAR-IASRI was honored during this function for registering significant number of Copyrights during recent years.



- **World Environment Day:** Institute celebrated World Environment Day on June 05, 2025
- **Viksit Krishi Sankalp Abhiyan:** विकसित कृषि संकल्प अभियान (Viksit Krishi Sankalp Abhiyaan): मई 29, 2025 से जून 12, 2025 के दौरान संस्थान के सभी वैज्ञानिकों ने सतत एवं सक्रिय भागीदारी की (The scientists of the institute also took active participation in Viksit Krishi Sankalp Abhiyaan during May 29 to June 12, 2025). Also participated in orientation programme of Viksit Krishi Sankalp Abhiyan on May 24, 2025 which was addressed by honorable Agriculture Minister Shri Shiv Raj Singh Chauhan ji. Director, ICAR-IASRI proposed Vote of Thanks during this programme. ICAR-IASRI also develop Dashboard Portal for Viksit Krishi Sankalp Abhiyan available at <https://vikalp.kisansarathi.in/index.php>







उत्तरी नराकास, माननीय संसदीय राजभाषा समिति की आलेख एवं साक्ष्य उप- समिति द्वारा नराकास अध्यक्षों व सदस्य कार्यालयों के साथ विचार विमर्श । बैठक जून 10, 2025 को होटल शंगरीला, नई दिल्ली में आयोजित की गई।





WORKSHOPS/WEBINARS/ MEETINGS ETC. ORGANIZED

Meeting

Dr. S.N. Jha, Deputy Director General (Agricultural Engineering), visited ICAR-IASRI on May 24, 2025 and interacted with the institute’s scientists, technical, and administrative staff. He shared inspiring insights on enhancing efficiency through soft skills such as happiness and strong interpersonal relationships. Dr. Jha also provided valuable guidance on key focus areas including patent filing and copyright licensing, resource generation, customized training, and demand-driven research. (Convener: Dr. Rajender Parsad)



STEERING COMMITTEE Meeting

Steering Committee meeting of Network Project on Computational Biology and Agricultural Bioinformatics was organized on June 13, 2025. The meeting was chaired by Dr SN Jha, Deputy Director General (Agricultural Engineering), ICAR

Seminars Delivered

A total of 17 seminars on different areas of Agricultural Statistics, Computer Application and Bioinformatics which include presentations on new project proposals, salient findings of the completed research projects and Training undertaken at international level by the Scientists, Course/ Thesis/ ORW Seminars of students of M.Sc. and Ph.D. disciplines of Agricultural Statistics, Computer Application and Bioinformatics. The category-wise break-up is given below.

13	Type of Seminar	Number
Scientist	Project Completion	0
	New Project Proposal	0
	Foreign Visit	0
	General	0
Student	Course	02
	ORW	12
	Thesis	03
	Guest Seminar	0
Total		17

- Students: Heartiest congratulations to Dr Moumita Baishya, Agricultural Statistics; Dr. Kamolika Das, Computer Application; Dr. Parinita Das, Bioinformatics; Dr Nitesh Sharma, Bioinformatics for being selected as Assistant Professor at Dr RP Central Agricultural University, Samastipur.

PUBLICATIONS

Research Papers

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10. Chandra T, Jaiswal S, Iquebal MA and Kumar D (2025). Breaking the palatability trade-off: idealizing resistant starch in rice. *Functional and Integrative Genomics*, **25(1)**, 135. <https://doi.org/10.1007/s10142-025-01643-9>
11. Channappa M, Thiruvengadam V, Shivakumar N, Thammayya SK, Nayyar N, Muthugounder M, Ramasamy GG, Syamala RR, Kukreti A, Karthik CM, Selvamani S, Pathak J, Jha GK and Sushil SN (2025). Recombinase polymerase amplification assay for sensitive and rapid detection of invasive fall armyworm, Spodoptera frugiperda. *Scientific Reports*, **15(1)**, 18026. <https://doi.org/10.1038/s41598-025-02399-9>.
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Book Chapters

1. Kumar P, Paul RK, Roy HS, Md. Yeasin and Paul AK (2025). Statistical methods used to unveil the impact of microbial pesticides on sustainable insect pest management in agricultural systems. In *Insect Pathology: Current Principles and Methods*, pp. 1325-1336. Eds. KL Srivastava. Today & Tomorrow's Printers and Publishers India. ISBN 9788197951626.
2. Chaturvedi RK, Thakur HK, Sahu DP and Dheeraj A (2025). Question answering model: Precise information extraction from the raw data. In *Intelligent Computing and Communication Techniques*, pp. 468-473. Eds. Arvind Dagur, Karan Singh, Pawan Singh Mehra and Dharendra Kumar Shukla. CRC Press London. eBook ISBN 9781003635680; <https://doi.org/10.1201/9781003635680>
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4. Adhikary T, Sinha A and Das P (2025). Physiology of flowering. In *Advances in Growth Regulation of Fruit Crops*. Eds. Vishal Singh Rana, Neerja Rana and Sunny Sharma. CRC press, Boca Raton. eBook ISBN 9781032406367; <https://doi.org/10.1201/9781003354055>
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9. Parsad R, Deb CK and Chaudhari SK (2025). Digital agriculture. In *Indian agriculture by 2047: A roadmap for research, education and extension*. Eds. H Pathak, PK Joshi, WS Lakra, AK Singh, VK Baranwal, & RK Jain. National Academy of Agricultural Sciences India. ISBN 9788193152485.

PAPERS PRESENTED/LECTURES DELIVERED

Paper presented /Invited talk delivered in Conferences

- Capacity Building Program on Evaluation of Nutri-sensitive Agriculture Research Innovation (NARI) held at Conference Hall of NAAS, NASC Complex, Pusa, New Delhi on April 22, 2025.
 - Girish Kumar Jha. Discussion on sampling methodology and design.
- National Conference on Statistical Methods and Applications in Interdisciplinary Areas (SMAIA-2025), held at the Department of Statistics, University of Delhi during April 11–12, 2025.
 - Kaustav Aditya. Calibration Estimator of Population Total by Double Use of Auxiliary Information in Two-Stage Sampling Designs.
 - Rahul Banerjee. Robust Integration of Probability Samples for Enhanced Efficiency in Estimation.
 - Bharti. Calibration estimators under dual frame surveys.
 - Deepak Singh. Survey-weighted composite indices.
 - Med Ram Verma. Sample Allocation Proportional to Coefficient of Variation under Cost Constraints.
 - Cini Varghese. Designing of experiments for Breeding Trials.
 - Anindita Datta. Efficient Two-Way Designs for Eliminating Heterogeneity with Multiple Units per Cell.
 - Mohd Harun. Designing of experiments for Breeding Trial.
 - Boyina Devi Priyanka*, Cini Varghese, Mohd Harun, Anindita Datta. Partially balanced designs for multi-session sensory trials.
 - UK Pradhan*, R Das, S Naha, Ajit, R Parsad and PK Meher. AScirRNA: A novel computational approach to discover abiotic stress-responsive circular RNAs in plant genome.
 - Neethu R.S.*, Cini Varghese, Mohd Harun, Anindita Datta and Ashutosh Dalal. Optimal covariate designs balanced for indirect effects.
 - Anushaka Garg*, Rajender Parsad, Cini Varghese and Anindita Datta. Designing factorial experiments involving order-of-addition effects with some components.
- Two-day workshop on Utilization of Molecular Tools and Ploidy Analysis in Taxonomy organized by Anusandhan National Research Foundation (ANRF) at ICAR-Central Rice Research Institute, Cuttack on May 08, 2025.
 - M.A. Iquebal. Introduction to Next Gen Sequence (NGS) data analysis.
 - Sarika. Bioinformatics tools for phylogenetic analysis.
- National Workshop on Advances and Application of Bioinformatics in Biological Science organized by Department of Botany at Cooch Behar Panchanan Barma University and Bioinformatics Faculty, NBU during May 28-29, 2025.

- Sunil Kumar. Advances and Applications of Bioinformatics in Biological Sciences.
- National Symposium on Exploring marketing potential of Makhana: Trends and opportunities organized by BASA, AERA, IFPRI and Dr. Rajender Parsad CAU, Patna on May 20, 2025.
 - Girish Kumar Jha. Makhana: Unlocking India's aquatic superfood for rural prosperity.
- National Conference on Statistical Methods and Applications in Interdisciplinary Areas (SMAIA-2025) during April 11-12, 2025 at Delhi University, New Delhi
 - Sanchita Naha. Sample Survey-IV (invited talk).

(*denotes the author who made the presentation)

Lecture Delivered (Outside institute)

- 'Role of AI in Research' at Acharya Narendra Dev College, University of Delhi on April 01, 2025. (Monendra Grover)
- (i) 'Role of Nonparametric Tests and Regression' and (ii) 'Logistic Regression Analysis' on April 23, 2025 in one week online workshop on Advanced Statistical Data Analysis using SPSS on April 24, 2025 organized by Resilient Foundation For Academic Innovation & Scientific Research, New Delhi during April 23-24, 2025. (R.K.Paul)
- 'Overview of various Sampling Designs and its Application in Real Life Survey using R Software' held online for the Faculty Development Program of UBKV, organized by Pundibari, Cooch Behar on April 17, 2025. (Kaustav Aditya)
- (i) 'Regression Analysis' and (ii) 'Time Series analysis' on May 16, 2025 in two week capacity building programme on Statistical Tools for Data Analysis in Agricultural and Social Science Research organized by CCS HAU College of Agriculture, Bawal, Rewari, Haryana during May 06-19, 2025. (R.K. Paul)
- 'Rice Market Outlook in India: Trends and Future Prospects' at PCET's Pune Business School on June 17, 2025. (Jaiprakash Bisen)
- 'Next-Gen genomics: concepts, technologies, and impacts' on June 18, 2025 in Course entitled Basics to Advances in Bioinformatics, Zakir Husain Delhi College organized during June 16-27, 2025. (Sarika)
- Training programme on Advent of Omics Technologies in Precision Diagnostics and Targeted Therapeutics organized by ICMR-NICPR, Noida during June 02-24, 2025.
 - 'Computational genomics: Use of AI in decoding genome' on June 20, 2025. (D.C. Mishra)
 - 'Variant calling' and 'Hands-on genome assembly and annotation' on June 20, 2025. (Neeraj Budhlakoti)
- Two-day online training programme on Data Analytics Techniques for Social Science Research organized in collaboration with West Bengal University of Animal and Fishery Sciences (WBUAFS), Kolkata on June 25-26, 2025.
 - 'Overview of SPSS' and Hands-on session on correlation & regression analysis in SPSS held on June 26, 2025. (Pankaj Das)
 - (i) 'Hands-on Exercise on ANOVA using SPSS' and (ii) 'Overview and Exercise on non-parametric tests using SPSS' on June 26, 2025. (Rahul Banerjee)
 - 'Principal component analysis-overview and exercise using SPSS' on June 26, 2025. (Ankur Biswas)

PARTICIPATION

National Conference/ Workshop/ Seminar/ Symposia/ Training/ Foundation Course/ Annual Day/ Lectures, etc.

- National Conference on Statistical Methods and Applications in Interdisciplinary Areas organized (SMAIA-2025) by Department of Statistics, Delhi University from April 11-12, 2025. (Med Ram Verma, Cini Varghese, Mohd Harun, Anindita Datta, Kaustav Aditya, Rahul Banerjee, Bharti, Deepak Singh)

- Annual conference of Vice Chancellors of Agricultural Universities and Directors of ICAR Institutes on May 20, 2025 on Convergence for Action: Shaping Agricultural Research, Education and Extension for Viksit Bharat @2047. (Rajender Parsad)
- Conference on Optimizing Food Water and Energy for Better Nutrition in South Asia from June 18-19, 2025 at Colombo, Sri Lanka. It was hosted by the Prime Minister's Office of Sri Lanka supported by the South Asian Policy Leadership for Improved Nutrition and Growth (SAPLING), and administered by the World Bank. (Tauqueer Ahmad)

HUMAN RESOURCE DEVELOPMENT

Training Programmes/Workshops Organized: 04 (142 Participants)

S.No.	Title	Venue	Period	No. of Participants
1.	Module II: Direct Recruited Assistants of ICAR <i>(Course Director: Rajender Parsad, Coordinators: SK Gajmoti (ICAR-NBPGR), Uttam Prakash)</i>	ICAR-IASRI, New Delhi	June 23-27, 2025	36
Workshop				
2.	Data Analytics Techniques for Social Science Research <i>(Collaboration: Department of Fishery Economics, Statistics & Marketing, West Bengal University of Animal and Fishery Sciences)</i> <i>Course Coordinator: Soumyadip Purkait (WBUAFS)</i> <i>Course Co-Coordinators: Pankaj Das (IASRI) & Dr. Soumen Sahu (WBUAFS)</i>	ICAR-IASRI, New Delhi (Online)	June 25-26, 2025	40
हिन्दी कार्यशाला				
3.	राजभाषा नियमों का अनुपालन (समन्वयक: कुमारी सुनीता, उप निदेशक (राजभाषा))	भाकृअनुप-भा.कृ.सां.अ.सं., नई दिल्ली	26 मई 2025	47
4.	कृषि में पारिस्थितिकी एवं पर्यावरणीय डेटा विश्लेषण में उन्नत सांख्यिकीय तकनीकें (समन्वयक: मो. यासीन, हिमाद्रि शेखर राय एवं प्रकाश कुमार)	भाकृअनुप-भा.कृ.सां.अ.सं., नई दिल्ली (ऑन-लाइन)	24 से 30 जून, 2025	19

CONSULTANCY/ADVISORY SERVICES PROVIDED

- Prakash Kumar advised Dr. P. Lavanya Kumari (Statistics & Computer Applications), S.V Agricultural College, Acharya N. G. Ranga Agricultural University, Tirupati on Web server development and statistical modeling work to develop “Rice Pest Early Warning System”.
- Kaustav Aditya advised (i) Dr. Shirla Das, Division of Soil Science regarding analysis of data using SEM and CART and (ii) Ms. Jayshree Gehlot, Division of Plant Pathology, regarding analysis of data using Structural Equation Modeling (SEM) and Randomized Block Design (RBD).
- Pankaj Das advised Dr. Anju Sharma, Assistant Professor (Dr. YS Parmar University of Horticulture and Forestry, Nauni, Solan HP) regarding forestry data analysis.
- Bharti advised Dr. Kanica Upadhyay, Assistant Professor, College of Horticulture and Forestry, Jhalawar, regarding regression analysis.
- Rahul Banerjee advised (i) Dr. Komal Chauhan, Professor, Food Science and Nutrition, at the National Institute of Food Technology, Entrepreneurship and Management (NIFTEM), Kundli, Haryana, regarding optimum sample size determination for honey sample collection; (ii) Dr. R. Ambika Rajendran, Senior Scientist, Soybean Unit, Division of Genetics, ICAR-IARI, New Delhi regarding the application of the Kruskal-Wallis test for analysing Genotype and Location effects separately. Additionally, corresponding boxplots have been generated to visually represent the findings.

AWARDS AND RECOGNITIONS

Awards

Institute Alumni

1. **SUNY Distinguished Professorship award (Ramana Davuluri)**

Ramana V. Davluri, an alumnus of ICAR-IASRI, who did his M.Sc. and Ph.D. from IASRI (IASRI), has been decorated with the “State University of New York (SUNY) Distinguished Professor” award. Ramana will join the class of 2025, SUNY Distinguished Academy. Distinguished Professorship is conferred upon individuals who have achieved international prominence and a distinguished reputation within a chosen field. He is recognized for his contributions in the field of Bioinformatics, with special focus on the development of machine learning and artificial intelligence methods for understanding the DNA language, and how genetic and epigenetic changes in the non-coding genome alter DNA linguistics in cancer. Distinguished Faculty Rank is a promotion to a prestigious, tenured rank above that of full professor.” Institute congratulates Prof Ramana for the recognition of his achievements. ICAR-IASRI is proud of Dr. Ramana.

2. **Arpan Bhomwik**

Congratulations to Dr. Arpan Bhomwik on receiving NAAS Associateship.

Recognitions

Rajender Parsad

Guest of Honour for a two-day training workshop on 'Data Analytics Techniques for Social Science Research.' The programme was jointly organized by ICAR-IASRI and the West Bengal University of Animal and Fishery Sciences (Department of Fishery Economics, Statistics, and Marketing) on June 25-26, 2025.

Deepak Singh

- Chaired Technical Session TS05: Survey Sampling 01 in National Conference on Statistical Methods and Applications in Interdisciplinary Areas (SMAIA-2025), organized by the Department of Statistics, University of Delhi, during April 11–12, 2025.

Girish Kumar Jha

- Member of Scientific Advisory Committee (SAC) of National Horticultural Research and Development Foundation (NHRDF) for the period 2024-26.

Sarika

- Member of the Sectorial Expert Committee on "Space Biomanufacturing" for 3 years (2023-2026) by the Secretary, Department of Biotechnology, Govt of India.

PROJECTS/ SCHEMES/ PROGRAMME/ CENSUS/ SAMPLE SURVEYS/ EVALUATION STUDIES/ SOFTWARE DEVELOPED/ INITIATED/ COMPLETED

Initiated

1. 'Designing Sensory Experiments and Analysis of Ranked Data' w.e.f. 16.05.2025. (Mohd Harun, Cini Varghese, Anindita Datta)
2. 'G-Protein Coupled Receptors (GPCRs) Regulating Moulting as Novel Targets for Development of Next Generation Insecticide against Pink Bollworm, *Pectinophora gossypiella* w.e.f. 24.04.2025. (Neeraj Budhlakoti, Soumya Sharma, PAU, Ludhiana: Vikas Jindal, Vijay Kumar)
3. Development of AI-Based Robust Price Forecasting Models for Temperate Vegetables w.e.f. 24.04.2025. (Rajeev Ranjan Kumar, ICAR-CITH: Ronit Jaiswal, Geetika Malik, Mahendra Kumar Verma)
4. Development of Hybrid Fuzzy-Based Time Series Models for Agricultural Data w.e.f. 01.05.2025. (Rajeev Ranjan Kumar, Mrinmoy Roy, Kanchan Sinha, Jaiprakash Bisen, K.N. Singh)

Completed

1. Mining Agricultural Microbiome Datasets for Antibiotic Resistance Genes (ARG) Diversity and Prediction of Microbial Resistome on 02.04.2025. (ICAR-NBAIM: Kumar M., Harsh Vardhan Singh, Abhijeet Shankar Kashyap, Jyoti Prakash Singh; ICAR-IASRI: Ratna Prabha (till 09.03.2023), Sunil Kumar (since 10.03.2023), Sneha Murmu (since 27.11.2023), Ritwika (since 27.11.2023): 03.10.2022-02.04.2025)
2. Development of An Integrated Framework for the Analysis of Biogeochemical Cycles from Metagenomics Data on 28.05.2025. (Ritwika Das, Sneha Murmu, Anu Sharma. (28.11.2022-28.05.2025)
3. Development of Prediction Server for Internal Ribosomes Entry Sites in Agricultural Important Species on 13.06.2025. (Sarika Sahu, Soumya Sharma, Dwijesh Chandra Mishra (till 04.09.2023). (14.06.2023-13.06.2025)
4. Mainstreaming Rice Landraces Diversity in Varietal Development through Genome wide Association Studies: A Model for Large-Scale Utilization of Gene Bank Collections of Rice on 30.04.2025. Funded by DBT. (ICAR-IARI, Director: Ashok Kumar; ICAR-IASRI: Sarika, Dinesh Kumar (deputation on 02.12.2021 and again from 01.03.2023 onwards), M.A. Iquebal. (01.05.2020-30.04.2025)

PERSONNEL

Congratulations on your Promotion/ New Assignment/ New Joining:

Name	Designation	Effective date
Dr. Kamal Batra	Senior Scientist	16.04.2025, New Joining
Dr. A.R. Rao	Principal Scientist	24.04.2025, New Joining
Dr. Patil Santosh Ganapati	Senior Scientist	24.04.2025, New Joining
Dr. Anshuman Singh	Senior Scientist	25.04.2025, New Joining
Sh. Dilip Roy	CAO (Sr. Grade)	29.05.2025, Joined from CRRI Cuttack
Sh. Uttam Prakash	AO	09.05.2025, Joined from NRCP, Guwahati
Dr. Yogesh Ashok Garde	Senior Scientist	27.06.2025, New Joining
Promotions:		
Smt. Daisy Kumari	UDC	22.05.2025, Promotion
Smt. Mamta Verma	UDC	22.05.2025, Promotion
Smt. Manisha Kumari	UDC	22.05.2025, Promotion
Dr. Sudhir Srivastava, Dr. Kanchan Sinha	Senior Scientist	02.06.2025, Promotion
Sh. Subash Chand	CTO	10.06.2025
Dr. Sukanta Das, Dr. Sangeeta Ahuja, Dr. Raju Kumar, Dr. Prakash Kumar,	Senior Scientist	19.06.2025, Promotion
Dr. Sarika Sahu, Dr. Samarth Godara, Dr. Chandan Kumar Deb, Dr. Ashraful Haque, Dr. Sanchita Naha, Dr. Sapna Nigam, Dr. Madhu, Dr. Bharti, Dr. Pankaj Das, Dr. Rahul Banerjee and Dr. Deepak Singh	Scientist Level-11	19.06.2025, Promotion

Wish you a Happy Retired Life

Name	Designation	Effective date
Sh. Ratan Singh Rana	Technical Officer (Carpenter)	01.04.2025, VRS
Dr. Ajit	Principal Scientist	30.06.2025
Sh. B.R. Modak	CTO	30.06.2025
Sh. Raj Kumar	SSS	30.06.2025

Transfer/ Resignation/Deputation

Name	Designation	Effective date
Dr. Mrinmoy Ray	Scientist	16.04.2025, Relieved to Join as Senior Scientist at ICAR-IARI

Compiled by:

Rajender Parsad, Ajit, Upendra Kumar Pradhan
and Medram Verma

Technical and Secretarial Assistance:

Neha Narang, Sunita, Nikita and VP Singh

