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- Consultancy/Advisory Services
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- Participation in Conferences
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- Projects Initiated/Completed

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.



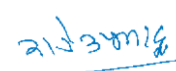
The Institute has developed ProkDBP, a novel machine learning-driven computational model for prediction of Prokaryotic DBPs and Sesame Genomic Web Resource (SesameGWR). The Institute has also developed a mobile app SWINE-SHRIA (Smart Heuristic Response based Intelligent Assistant), a cutting-edge educational platform for effective swine management in collaboration with ICAR0IVRI, New Delhi.

The Institute also celebrated International Yoga Day and 18th National Statistics Day. A total of **58** Research Papers, **03** Book Chapters; **05** Popular Articles; **05** R Packages were published. Initiated **02** new research projects. Through three training programmes, **162** personnel were trained, and 17 participated in Hindi Workshop. The Institute was involved in teaching of practical session on Basic Statistical Methods in Agriculture for the 4th batch of M.Sc. Agronomy students of Afghanistan National Agriculture Science and Technology University (ANASTU).

The Kritagya Hackathon, a National Level **Agtech_Hackathon** platform designed and developed by the Institute has been used to organise Hackathon on Digital Crop Survey by the Department of Agriculture & Farmers Welfare (DA&FW), Ministry of Agriculture and Farmers Welfare, Govt. of India. This nationwide Agtech initiative attracted participation from 173 teams. Scientists from the Institute contributed as members of various committees, providing valuable inputs.

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 ACHIEVEMENTS

- **ProkDBP, a Novel Machine Learning-Driven Computational Model for Prediction of Prokaryotic DBPs**

Prokaryotic DNA binding proteins (DBPs) play pivotal roles in governing gene regulation, DNA replication, and various cellular functions. Accurate computational models for predicting prokaryotic DBPs hold immense promise in accelerating the discovery of novel proteins, and the development of therapeutics targeting for potential disease interventions. Institute developed '**ProkDBP**', a novel machine learning-driven computational model for prediction of prokaryotic DBPs. This model has been trained on 741 diverse prokaryotic species, including 128 agriculturally important microorganisms (AIMs). Understanding DBPs in AIMs enables scientists to manipulate microbial genomes for enhanced agricultural benefits. By modifying DBP-regulated pathways, researchers can develop biofertilizers, biopesticides, and stress-resistant microbial strains to improve crop resilience and sustainability. The model achieved the maximum accuracy of 95%. Additionally, even with an independent data set, the model could achieve an accuracy of 93%. ProkDBP is available at <https://iasri-sg.icar.gov.in/prokdbp/> enabling free access to interested users. This tool stands as a significant contribution, enhancing the repertoire of resources for accurate and efficient prediction of prokaryotic DBPs.

- **Sesame Genomic Web Resource (SesameGWR)**

An-annotated data resource for transcriptomic signatures of abiotic and biotic stress responses in sesame (*Sesamum indicum* L.) has been developed. This platform provides key insights into differentially expressed genes, transcription factors, miRNAs, and molecular markers like simple sequence repeats, single nucleotide polymorphisms, and insertions and deletions associated with both biotic and abiotic stresses. SesameGWR is available at <http://backlin.cabgrid.res.in/sesameGWR/> will serve as a valuable resource for developing climate-resilient sesame varieties, thereby enhancing the productivity of this ancient oilseed crop.

- **Mobile App: SWINE-SHRIA (Smart Heuristic Response based Intelligent Assistant)**

The SWINE-SHRIA chatbot, is a cutting-edge educational platform for effective swine management. It has been designed to provide personalized swine farming guidance, innovative solutions, and expert advice, to unlock new realms of productivity and profitability. The chatbot has been developed using advanced Natural Language Processing (NLP) algorithms to carry out a real-time conversation with its users. It can understand and communicate in 10 different Indian languages, ensuring accessibility and inclusivity for a diverse range of stakeholders. A web-based dashboard to monitor the usage statistics of this bot has been developed and is freely available at <https://swineshria.icar.gov.in>. The chatbot is available as a mobile application at Google play store: - https://play.google.com/store/apps/details?id=com.ivriapp.ivri_chatbot.ivrichatbotswine&pli=1

- **Lightweight DenseNet Model for Plant Disease Diagnosis**

Plant disease diagnosis holds significant economic importance worldwide. To tackle this issue, advanced agricultural technologies are being developed to help farmers implement preventive measures and enhance crop production. With the advancement of deep learning, convolutional neural networks (CNNs) have proven highly effective in detecting plant leaf

diseases. However, traditional CNN models demand substantial computational power and processing costs. To address this, a lightweight deep convolutional neural network, Lightweight DenseNet (LWDN), has been designed for plant leaf disease detection. Based on DenseNet121, LWDN features a pruned and concatenated architecture. It was trained on the Plant Village dataset using partial layer freezing, transfer learning, and feature fusion techniques. The model achieved 99.37% accuracy, with a compact 13.8 MB size and 1.5M parameters, significantly reducing computational requirements compared to InceptionV3, Xception, VGG16, and MobileNetV2. Due to its efficiency and accuracy, LWDN is ideal for real-time plant disease diagnosis on mobile and portable devices.

- **R-Packages Developed: 05**

- **HTSeed:** Version 1.0 for fitting of Hydrotime Model for Seed Germination Time Course available at <https://cran.r-project.org/web/packages/HTSeed/index.html>
- **pRepDesigns:** Version 1.2.0 for generation of Partially Replicated (p-Rep) Designs available at <https://CRAN.R-project.org/package=pRepDesigns>
- **CoreMicrobiomeR:** Designed to facilitate the identification, statistical testing, and visualization of microorganisms available at <https://CRAN.R-project.org/package=CoreMicrobiomeR>
- **GB5mCPred:** An in-silico pipeline for predicting DNA sequences containing the 5-methylcytosine (5mC) sites in crop plants using machine learning approach available at <https://cran.r-project.org/web/packages/GB5mCPred/index.html>
- **TDSTNN:** R package for fitting of Time Delay Spatio-Temporal Neural Networks, to capture the complex nonlinear dynamics efficiently available at <https://cran.r-project.org/package=TDSTNN>

- **Hackathon on Digital Crop Survey Conducted using Kritagya Hackathon Portal**

The Kritagya Hackathon, a National Level Agtech Hackathon platform designed and developed by the Institute to organize Hackathon on Digital Crop Survey by the Department of Agriculture & Farmers Welfare (DA&FW), Ministry of Agriculture and Farmers Welfare, Govt. of India. This national Agtech platform attracted participation from 173 teams. Scientists from the Institute contributed as members of various committees, providing valuable inputs. The winners were honoured at an award ceremony held on May 15, 2024, at Krishi Bhawan, New Delhi, where the Secretary of Agriculture & Farmers Welfare presented the awards.

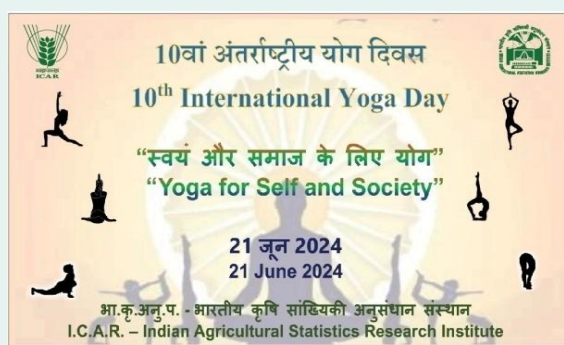




PANORAMA OF ACTIVITIES

International Yoga Day

- Institute celebrated International Day of Yoga 2024 on June 21, 2024 with the theme “Yoga for Self and Society” to achieve the objective of “Yoga for humanity and Peace”. The session focused on promoting a "Balanced Nutritional Diet" for a healthy lifestyle, emphasizing both dietary choices and behavioral habits. In this context, Dr. Sugeeta Mutreja, a nutrition expert (BAMS, DNHE, MBA(HA)) and founder of Aarogya Clinic: Diet and Nutrition, delivered a lecture and addressed participants' queries. The session highlighted the benefits of Yoga, Pranayam, and healthy eating habits, focusing on food choices and meal schedules for overall well-being. The session was chaired by Dr. Rajender Parsad, Director, ICAR-IASRI, New Delhi, emphasized the importance of Yoga and its genesis of the celebration and practice of yoga with special mention of maintaining mental and physical health with positive attitude in life and power of subconscious mind.
- Program started with invocation Mantra “ॐ संगच्छध्वं संवदध्वं सं वो मनासि जानताम, देवा भागं यथा पूर्वं सज्जनाना उपासते” with aims and objectives of Yoga including common yoga protocol. Further, the usefulness of the Yoga and importance of diets for the well being of people and the society and achieve the objective of slogan “तन स्वस्थ तो मन स्वस्थ”. More than 110+ participants including Scientists, Technical Personnel, Administrative personnel and contractual employees participated in the programme. In addition to this, the staff of the Institute also participated in the programme organized on June 21, 2024 from 7:30 AM at Multipurpose Hall, Bharat Ratna C. Subramanian Auditorium NASC Complex New Delhi under the chairmanship of Hon’ble Union Agriculture Minister. The session was concluded with Sankalp and Path “सर्वे भवन्तु सुखिनः सर्वे सन्तु निरामया। सर्वे भद्राणि पश्यन्तु मा कश्चित् दुःखभाग् भवेत्” with a message “योग करें, रोज करें, स्वस्थ रहें और सुरक्षित रहें”.





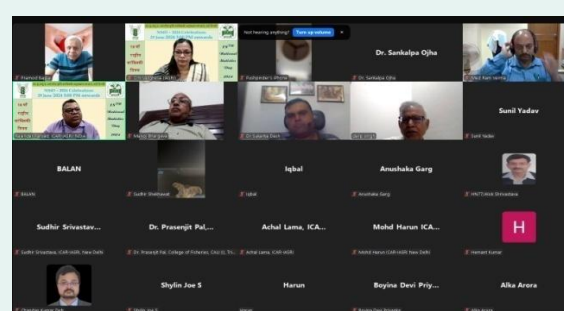
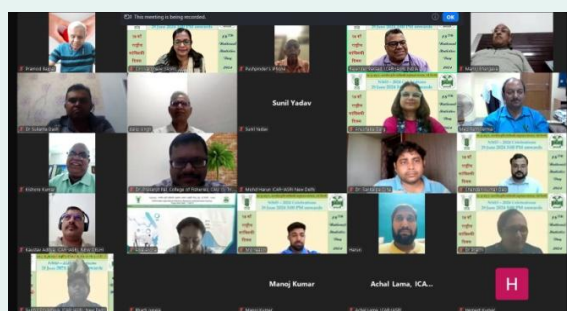
18th National Statistics Day

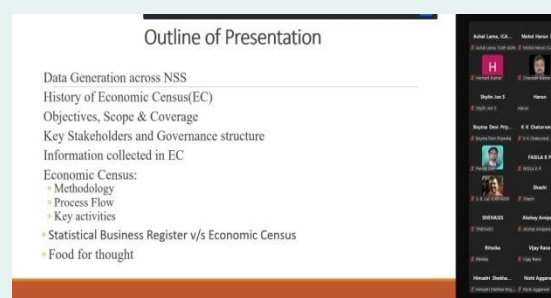
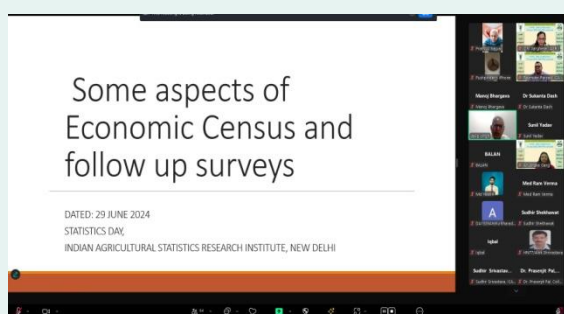
- The Institute celebrated National Statistics Day on June 29, 2024, with a series of pre-events leading up to the occasion. The celebrations commenced with "THE FLASHMOB-MOB MOMENTUM", a vibrant performance by ICAR-IASRI students, followed by "CAMERA QUEST" on June 12, 2024. The event was graced by the Honourable DDG (Education), Dr. R.C. Agrawal, and Director, ICAR-IASRI, Dr. Rajender Parsad, whose presence, along with the enthusiastic participation of students, faculty, and staff, contributed to its grand success.





The 18th National Statistics Day was celebrated with the theme "Use of Data for Decision Making" on June 29, 2024. The Keynote Address was delivered by Dr. Dalip Singh, Additional Director General, Economic Statistics Division, MoSPI, Government of India, on "Some aspects of Economic Census and Follow-up Surveys." The event was presided over by Dr. Rajender Parsad, Director, ICAR-IASRI, and saw active participation from alumni, faculty from NARES/ICAR-IASRI, and students.





Seminars Delivered

A total of 45 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

Category	Type of Seminar	Number
Scientist	Project Completion	1
	New Project Proposal	0
	Foreign Visit	0
	General	0
Student	Course	17
	ORW	21
	Thesis	5
	Guest Seminar	1
Total		45

PUBLICATIONS

Research Papers

- Adak S, Bandyopadhyay K, Sahoo RN, Krishnan P, Sehgal VK, Kumar SN, Datta SP, Sarangi A, Bana RS, Mandal N, Bhattacharya P and Yeasin M (2023). Long-term impact of tillage, residue, nitrogen and irrigation management on growth, yield and nitrogen Productivity of maize under maize-wheat rotation in North-Western India. *Journal of Agricultural Physics*, **23(2)**, 180-195.
- Adupa S, Kumbhare NV, Muralikrishnan L and Sinha K (2024). Cow-based traditional farming practices as a basis for regenerative agriculture: Andhra Pradesh community managed natural farming an Indian perspective. *Biological Forum-An International*

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 11. Banerjee R, Das P, Bharti, Bansal S, Ankita Devi S, Pal S and Ahmad T (2024). Prediction approach in repeated measurement surveys: a methodological exploration. *International Journal of Statistics and Applied Mathematics*, **9(2)**, 200-203. <https://doi.org/10.22271/math.2024.v9.i2c.1715>
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Book Chapters

- Choudhury Nalini K, Kumar P, Budhlakoti N, Md. Samir Farooqi, Mishra DC and Ajit (2023). Bioinformatics Tools and Resources for Crop Breeding Research. In *Modern Plant Breeding*. Brillion Publishing. Eds. Gita R. Chaudhari, Krishna Prakash, Sheetal R. Patel., **12**, pp 229-25. ISBN: 978-1-394-20993-4
- Banerjee R, Bharti, Das P and Khan S (2024). Crop Yield Prediction using Artificial Intelligence and Remote Sensing Methods. In *Artificial Intelligence and Smart Agriculture*. Eds. Pandey, K, Kushwaha NL, Pande, CB, Singh, KG. Advances in Geographical and Environmental Sciences. Springer, Singapore. https://doi.org/10.1007/978-981-97-0341-8_6
- Majumdar SG, Rakshit D, Balakrishnan M, Dhandapani A, Supriya P and Das R. (2024). Tools and Techniques in Metagenomics for Agriculture. In *Research and Technology Advancements in Agriculture*, ICAR-NAARM, Hyderabad, Editors Ch. Srinivasa Rao, A. Dhandapani, Sanjiv Kumar, pp.721-748, ISBN No: 978-93-340-3808-8.

Popular Articles

- Gautam US, Burman RR, Jha SK, Arora A, Marwaha S, Pal S and Choudhary N (2024). Empowering farmers: a comprehensive guide to KVK Portal of ICAR. *Indian Farming*, 74(3), 09-12.
- Singh AK, Paul RK, Yeasin Md, Sarkar A, Paul AK, Kumar P and Roy HS (2024). Big data analysis and its impact on agriculture. *Vigyan Varta*, 5(5), 259-262.
- Devi M, Shukla A, Sharma A, Kumar P and Bharti. (2024) Natural farming for sustainable agriculture. *The Agriculture Magazine*, 3(9), 77-80.
- Das M, Deb CK, Kumar S, Bansal R and Meena S (2024). Advancing plant breeding: integrating High Throughput Phenotyping (HTP) and artificial intelligence (AI) for next-gen phenomics. *Krishak Jagat*, 1(10), 53.
- नसीब चौधरी, राजर्षि रॉय बर्मन, ऊधम सिंह गौतम, सुजीत कुमार झा, अलका अरोड़ा, सुदीप मारवाहा और सौमेन पाल (2024). कृषि विज्ञान केंद्र पोर्टल से कृषक सशक्तिकरण, *खेती*, 76(11), 28-31.

PAPERS PRESENTED/LECTURES DELIVERED

Paper presented /Invited talk delivered in Conferences

- Inception Workshop on Impact of Nutritional Interventions on Production and Consumption Diversity: A Step Towards Achieving SDGs held at NASC, New Delhi on April 09, 2024
 - Rajender Parsad. Impact of Nutritional Interventions on Production and Consumption Diversity: A Statistical Perspective. (Invited Talk)
- International Conference on Globalisation and Sustainable Development: Interdisciplinary Perspective held at DPG Degree College, Gurgaon (Affiliated to MDU Rohtak) on April 25, 2024
 - Dinesh Kumar. Interdisciplinary Research.
- International Conference on Recent Advances in Mathematics and Data Science, ICRAMDS 2024 held at MANIT, Bhopal from June 27-28, 2024
 - Samarth Godara*, Rajender Parsad, Sudeep Marwaha. Utilizing Data Analytics for Understanding Farmer's Information Demand: An Analysis of Haryana's Kisan Call Center Data.
 - Shabana Begam*, Samarth Godara, Hukam C Rawal and Tapan Kumar Mondal. Intelligent Advancements in Pioneering Chloroplast Genome Research through Computational Extraction and Assembly from Whole Genome Data.
 - Monika Singh*, Anu Sharma, KK Chaturvedi, Sanjeev Kumar, Dwijesh Chandra Mishra, Alka Arora, Rakesh Bharadwaj, Mrinmoy Roy, Mamatha YS and Samarth Godara. Seed Germination Viability Detection with ANN-Assisted NIR Spectroscopy.
- International Conference on Intelligent Computing and Communication Techniques held at Jawaharlal Nebru University, New Delhi during June 28-29, 2024
 - Rajnish Chaturvedi, Hardeo Kumar, Dinesh Sahu and Akshay Dheeraj*. A book recommender system based on visual cues of book cover "Judge a book by its cover".
(*denotes the author who presented the paper)

Lecture Delivered (Outside institute)

- 'Strategy and issues on submission of genomic data at global databases' on April 04, 2024 in a brainstorming session entitled Policy for submission of sequences of genomic data to

the Gene Bank organized by Rajendra Prasad Central Agriculture University, Bihar. (D.C. Mishra). (Invited Lecture)

- ‘ncRNAOme: Few applications in pulses and horticultural crops’ on April 18, 2024 in the workshop on Non-coding RNAs: An emerging frontier in the modulation of plant biological processes organized at ICAR-CPCRI. (Sarika Sahu). (Invited Lecture)
- Training programme on Advent of Omics Technologies in Precision Diagnostics and Targeted Therapeutics organized by ICMR-National Institute of Cancer Prevention and Research, Noida, U.P. during April 15 to May 7, 2024.
 - Sarika. Data Formats and QC analysis of read data followed by a hands-on session on April 24, 2024. (Invited Lecture)
 - Neeraj Budhlakoti. Variant analysis and GWAS on April 24, 2024. (Invited Lecture)
- ‘Indian Knowledge System and NEP 2020: role of HEI’ on April 29, 2024 in NEP Orientation and Sensitization Program organized at UGC -MMMTC Centre, Silchar University Assam (Central University) during April 18-30, 2024. (Dinesh Kumar). (Invited Talk)
- Workshop on Research Grant Writing at National Forensic Science University (NFSU), Delhi Campus on April 29, 2024
 - Sapna Nigam. What is a research proposal? How to write a research proposal? on 29 April 2024
 - Madhu. What is research paper? How to write a research paper? on 29 April 2024
- Training program on Enhancing Pedagogical Competencies for Agricultural Education for presentation on Hands-on Exercise on Virtual Classroom Tools and Softwares organized at NASC complex, New Delhi from April 01-05, 2024
 - Sanchita Naha. DairySHRIA: Virtual Conversational Agent on Health & Production aspects of Cattle and Buffalo on April 03, 2024.
 - Anshu Bhardwaj. Hands-on Exercise on Virtual Classroom Tools and Softwares on April 03, 2024.
- ‘To discuss and deliberate on issues and ideas related to the newly introduced thematic priority of sustainable Agriculture’ on April 03, 2024 in breakout session on Enhancing Crop Productivity with AI with Global Partnership on Artificial Intelligence (GPAO) for 2024. (Sudeep Marwaha)
- ‘ASHOKA’ and demonstrated the HPC facility to the Trainees from ICAMR – NICPR, Noida on April 30, 2024. (KK Chaturvedi)
- ‘ARMS 2.0’ on May 08, 2024 in the Training programme on E-Governance organised by IIHR, Bengaluru during May 06-08, 2024 (Hybrid Mode). (S.B. Lal)
- ‘eLISS Web portal and eLISS data collection App’, developed under the project "Integrated sample survey solutions for major livestock product during the workshop on Integrated Sample Surveys for State and District Nodal Officers of Himachal Pradesh, Jammu & Kashmir, and Ladakh organized by AHS Division, Govt. of India on June 06, 2024, in Leh, Ladakh. (Rahul Banerjee)
- ‘Research Funding in HEI: Private, Public, CSR & Crowd Funding’ on June 11, 2024; and ‘Research Funding in Higher Educational Institutions in NEP 2020’ on June 18, 2024 in the 9th NEP Orientation and Sensitisation Program organized at UGC-MMMTC Centre, Central University of Haryana during June 03-12, 2024. (Dinesh Kumar)
- ‘Indian Knowledge System: Role of HEI’ on June 19, 2024 in NEP Orientation & Sensitization Programme at Malaviya Mission Teacher Training Centre, Indian Institute of Science Education and Research Bhopal organized during June 18-21, 2024. (Dinesh Kumar)

- ‘Data Science in Agriculture: A critical view on Plant Protection’ on June 27, 2024 in a training program on Artificial Intelligence solution for Plant Diseases and Pest Diagnosis and Management organised by Sher-e-Kashmir University of Agricultural Sciences and Technology, Faculty of Basic Science, Division of Microbiology, Main campus, Chatha, Jammu during June 25- July 05, 2024. (U.B. Angadi)

PARTICIPATION

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

- Annual Group meeting of All Indian Coordinated Research Project on Rice (AICRP on Rice) organized by ICAR-Indian Institute of Rice Research, Hyderabad in Hybrid mode during April 24-25, 2024. (Rajender Parsad)
- Impact of Nutritional Interventions on Production and Consumption Diversity: A Step towards Achieving SDGs organized by the Division of Agriculture Extension, ICAR, New Delhi, in collaboration with ATARI, Jabalpur, Madhya Pradesh, on April 09, 2024. (Rajender Parsad and Raju Kumar)
- Next Generation Sequence Data Analysis and its Applications in Livestock Research organized at National Institute of Animal Biotechnology, Hyderabad during May 20-24, 2024. (Sarika Sahu)
- Webinar 1.0 on Round 2 - Evaluation of Innovation Excellence Indicators of Public Funded R&D Organizations organized by confederation of Indian Industry on April 26, 2024. (Upendra Kumar Pradhan)
- Workshop of Millets Advanced Education, Innovation and Training Tools Development organized by ICAR-IASRI in collaboration with ICAR-IIMR, Hyderabad on May 03, 2024. (Sudeep Marwaha, Shashi Dahiya, Chandan Kumar Deb and Akshay Dheeraj)
- M.S. Swaminathan Foundation Day Lecture delivered by Sh. M. Venkaiah Naidu, Honourble Former Vice President of Indian on June 05, 2024. (Rajender Parsad)
- Leadership and Change Management organized at Indian Institute of Management Ahmadabad (IIMA) from May 27-31, 2024. (Alka Arora, Anshu Bharadwaj and Shashi Dahiya)
- National Conference on Expanding the Horizons of Microbial Research in Agriculture at ICAR-NBAIM, Mau on June 10-11, 2024. (Sunil Kumar)
- Data User Conference on the Results and Methodologies of Household Consumption Expenditure Survey (HCES) and based on the recently released reports of HCES 2022-23 on June 19, 2024 organized by Ministry of Statistics and Programme Implementation, Govt. of India. (Rajender Parsad)
- Launch of Microplastics Project organized under CSIR-IITR’s GAIN (Government Academia Industry Network) and CAIRES (Consultative Arrangement for Innovation in Research by Engaging Stakeholders) on June 21, 2024 at CSIR-IITR, Lucknow organized by NeTsFCO. (Rahul Banerjee)
- Workshop to Strategize and Empower the State/UT for 21st Livestock Censuses at Vigyan Bhawan on June 25, 2024. (Rajender Parsad and Prachi Misra Sahoo)

HUMAN RESOURCE DEVELOPMENT

S.No.	Title	Venue	Period	No. of Participants
1.	Usage of AI & AR/VR Technologies in Agriculture & Daily Life of Human Being under Education Division, ICAR (Coordinators: Sudeep Marwaha and Alka Arora)	ICAR-IASRI, New Delhi	May 13-15, 2024	46
2.	Omics Analysis in the era of AI (Coordinators: Monendra Grover, Ritwika Das and Sneha Murmu)	ICAR-IASRI, New Delhi	June 06-12, 2024	58
3.	Bioinformatics Advances in Genomic Data Analysis (Coordinators: Neeraj Budhlakoti, Ritwika Das and Soumya Sharma)	ICAR-IASRI, New Delhi	June 24-28, 2024	58
हिन्दी कार्यशाला				
4.	कृषि में ओमिक्स डेटा विश्लेषण का परिचय (संयोजक: सुधीर श्रीवास्तव, मोहम्मद समीर फारुकी एव स्नेहा मुरमु)	भा.कृ.अनु.प-भा.कृ.सां.अ.सं, नई दिल्ली (ऑनलाइन)	जून 27, 2024	17

- Coordinated one-week classes of the course AS 504 (3L+1P): Basic Statistical Methods in Agriculture to the fourth batch of M.Sc. Agronomy students of Afghanistan National Agriculture Science and Technology University (ANASTU): Total 10 Students. Practical classes were conducted during May 21-31, 2024 and examinations (both theory and practical) were conducted on May 31, 2024 through virtual mode. **Course Instructors:** Cini Varghese, Rajender Parsad, Sukanta Dash.

CONSULTANCY/ADVISORY SERVICES PROVIDED

- MA Iquebal advised (i) Dr. Deebea Kamil, Senior Scientist, ICAR-IARI, New Delhi on whole genome analysis of *Trichoderma* sp.; (ii) Dr. M. Mangal, Principal Scientist, ICAR IARI, New Delhi regarding GWAS analysis in tomato and (iii) Dr. Syed Mudassir Andrabi, Professor & Head, Animal Biotechnology, Shuhama, SKUAST-Kashmir on protein modelling docking.
- Sarika advised (i) Dr. Manish Srivastava, Principal Scientist, ICAR-IARI, New Delhi on QTL-Mapping analysis in mango; (ii) Dr. N. Singh, Senior Scientist, ICAR-IARI, New Delhi regarding transcriptome data analysis in pearl millet and (iii) Dr. Swarnalaxmi, Principal Scientist, ICAR-IARI, New Delhi regarding metagenome data analysis.
- Pankaj Das advised (i) Dr. Trina Adhikary, Assistant Professor (Statistics), College of Horticulture, Punjab Agricultural University, Ludhiana, Punjab in data development and analysis; (ii) Dr. Anju Sharma, Assistant Professor (Statistics), Department of Basic

Sciences, Dr. YS Parmar University of Horticulture and Forestry Nauni, Solan, HP on data analysis related to ML models.

- Mohd. Harun advised (i) Ms. Arpitha SR, Ph.D. Scholar, Biochemistry Division, ICAR-IARI, New Delhi on the analysis of data obtained from experiment conducted for optimizing soymilk with novel Weissella probiotics to improve nutritional and sensory characteristics and (ii) Ms. Sharmila Murugesan, Ph.D. Scholar, ICAR-NBPGR, New Delhi on analysis of wheat data collected for more than 500 genotypes and 20 characters.
- Rahul Banerjee advised (i) Dr. Supriya, Assistant Professor at the Department of Agricultural Economics, Acharya Narendra Dev University of Agriculture and Technology, Kumarganj, Ayodhya on writing R codes for analyzing data using Propensity Score Matching and (ii) Dr. Khasru Alam, Scientist-C at the Central Sericultural Research and Training Institute, Berhampore on transfer learning analysis for gender determination in mulberry silk cocoons.
- Rajeev Ranjan Kumar advised Dr. Sundeep Kumar, Principal Scientist, ICAR-NBPGR, New Delhi on assessing the heat effects in the different genotypes of wheat crops.
- Bharti advised Ms. Taniya Shit, M.Sc. (Vegetable Science) student on Generation Mean Analysis.

AWARDS AND RECOGNITIONS

Recognitions

Rajender Parsad

- Member, Expert Committee to Review the Existing Methodology of Integrated Sample Survey (ISS) Scheme (constituted by Department of Animal Husbandry and Dairying, Ministry of Fisheries, Animal Husbandry and Dairying).

Rajender Parsad, Sudeep Marwaha and Alka Arora

- Received certificate of appreciation for NAAS Fellowship-online Score-card Information System (NFOSIS) from National Academy of Agricultural Sciences.

Visit Abroad

- Tauqueer Ahmad to participate in the Regional Training Workshop for Fish Loss Assessment Methods: A Gender-Responsive Approach organized by Food and Agricultural Organization of the United Nation for (FAO) Regional Office in Asia and the Pacific (RAP) as nominated by the Institute.

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

Initiated

1. 'Artificial Intelligence enabled Biotic & Abiotic Stress Detection and Advisory Mobile Application for Crops' w.e.f. April 01, 2024 (NASF). (ICAR-IASRI: PI Sudeep Marwaha, Alka Arora, Chandan Kumar Deb, Ashraful Haque and Sapna Nigam; ICAR-CITH, Srinagar: Sajad Un Nabi, Om C Sharma, Abas Shah; ICAR- IIWBR, Karnal: Poonam Jasrotia, Prem Lal Kashyap, Anuj Kumar; ICAR- IIPR, Kanpur: Devraj, Bandi Sanjay Maruti, Rishikesh Kumar; ICAR-NRRI, Cuttack: S. Raghu, Basana Gowda, Asit Kumar Pradhan; UAS, Bengaluru: Prasanna Kumar M K, Shivanna B, Shivlingaiah; ICAR-CARI, Jodhpur: Ritu Mawar, Saranya R, Sugan Chand Meena, N.S. Nathawat)
2. 'Machine learning based Prediction of Mineral Nutrition related Genes in Higher Plants' w.e.f. April 23, 2024. (ICAR-IASRI: PI: Soumya Sharma, Sneha Murmu and Ritwika Das)

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MoU

A Memorandum of Understanding (MoU) has been signed between Agricultural Scientists Recruitment Board (ASRB), an attached Office of Department of Agricultural Research and Education, Ministry of Agriculture and Farmers' Welfare, Government of India, New Delhi and ICAR-Indian Agricultural Statistics Research Institute, New Delhi on May 24, 2024 to develop Application Form for the Offline Examinations to be conducted by ASRB, Implementation and Maintenance thereof called ASRB - Online Application System for Offline Examinations (OAS-OFLE), as well as to facilitate in other IT related activities and providing assistance /consultancy to Examination Division.

PERSONNEL

Congratulations on your Promotion/ New Assignment/ New Joining:

Name	Designation	Effective date
Sh. Vishal Goel	F&AO	22.04.2024

Wish you a Happy Retired Life

Name	Designation	Effective date
Sh. Hari Singh	Technical Officer (Electrician)	31.05.2024
Sh. A.R. Joshi	Chief Technical Officer	31.05.2024
Sh. Bhoop Singh	SSS	30.06.2024
Smt. Neelam Chandra	Chief Technical Officer	30.06.2024

Obituary

ICAR-IASRI family deeply mourns sad demise of the following personnel and prays the almighty for granting peace to the departed soul and his family.

Name	Designation	Date
Sh. Manoj Kumar	Senior Technical Officer	06.05.2024

Compiled by:**Rajender Parsad, Ajit and Upendra Kumar Pradhan****Technical and Secretarial Assistance:****Neha Narang, Sunita and VP Singh**