National Academy of Agricultural Sciences

Citations

ACADEMY AWARDS 2023-2024

17th Agricultural Science Congress

February 20-22, 2025

GB Pant University of Agriculture and Technology

Pantnagar, Uttarakhand

National Academy of Agricultural Sciences

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Recipients of Academy Awards for the Biennium 2023-2024

Name of The Award	Awardee
MEMORIAL / LECTURE AWARD	
Dr. B.P. Pal Award	Dr. S.K. Vasal, Former Distinguished Scientist, CIMMYT svasal12@yahoo.com; skvasal@gmail.com
Dr. A.B. Joshi Memorial Lecture Award	Dr. P.L. Gautam, Former Deputy Director General (Crop Science), ICAR, New Delhi
Dr. K. Ramiah Award	Dr. Pritam Kalia, Former ICAR Emeritus Scientist pritam.kalia@gmail.com; pkalia@iari.res.in
Dr. K.C. Mehta Award	Dr. Rasappa Viswanathan, Director, ICAR-Indian Institute of Sugarcane Research, Lucknow rasaviswanathan@yahoo.co.in; r.viswanathan@icar.gov.in
Dr. M.S. Randhawa Award	Dr. H.P. Singh, The Founder and Chairman, Confederation of Horticulture Associations of India (CHAI), New Delhi hpsingh50@gmail.com; confedhorti@gmail.com; confedhortiamit@gmail.com
Dr. N.S. Randhawa Award	Dr. Ch. Srinivasa Rao, Director, ICAR-Indian Agricultural Research Institute, New Delhi cherukumalli2011@gmail.com
Dr. P. Bhattacharya Award	Dr. Raghavendra Bhatta, Deputy Director General (Animal Science), ICAR, New Delhi ragha0209@yahoo.com; ddgas.icar@nic.in
ENDOWMENT AWARD	
Shri L.C. Sikka Endowment Award	Dr. Jai Chand Rana, Country Director, Alliance of Bioversity International and CIAT, New Delhi j.rana@cgiar.org; ranajc2003@yahoo.com Dr. Tusar Kanti Behera, Director, ICAR-Indian Institute of Horticultural Research, Bengaluru tusariari@gmail.com; tusar@rediffmail.com
Dr. (Ms.) Prem Dureja Endowment Award	Dr. (Ms.) Madhoolika Agrawal, Head, Department of Botany, Banaras Hindu University, Varanasi madhoo.agrawal@gmail.com
Dr. N.G.P. Rao Endowment Award	Dr. S.K. Pradhan, ADG (Food & Fodder Crops), Indian Council of Agricultural Research, New Delhi adgffc.icar@gov.in; pradhancrri@gmail.com

Recipients of Academy Awards for the Biennium 2023-2024

Name of The Award	Awardee
RECOGNITION AWARD	
Plant Improvement	Dr. Viswanathan Chinnusamy, Joint-Director (Research), ICAR-IARI, New Delhi viswanathan@iari.res.in; v.chinnusamy@icar.gov.in; jd_research@iari.res.in
	Dr. Gyan Prakash Mishra, Head, Division of Seed Science and Technology, ICAR-IARI, New Delhi gyan.gene@gmail.com; gyan.mishra@icar.gov.in
Plant Protection	Dr. Supradip Saha, Principal Scientist, Division of Agricultural Chemicals, ICAR-IARI, New Delhi s_supradip@yahoo.com
Soil, Water & Environmental Sciences	Dr. Rajbir Singh, Deputy Director General (Agricultural Extension), ICAR, New Delhi rajbirsingh.zpd@gmail.com; rajbir.singh3@icar.gov.in; adgagroandaf@gmail.com
Animal Sciences	Prof. Yashpal Singh Malik, Joint Director, ICAR-Indian Veterinary Research Institute, Mukteshwar, Nainital malikyps@gmail.com; malikyps@gadvasu.in
Agricultural Engineering & Technology	Dr. Narayan Lal Panwar, Associate Professor, College of Technology and Engineering, MPUA&T, Udaipur nlpanwar@gmail.com
Social Sciences	Dr. Ranjit Kumar Paul, Senior Scientist (Agricultural Statistics), ICAR-IASRI, New Delhi ranjitstat@gmail.com; ranjit.paul@icar.gov.in

Dr. B.P. Pal Memorial Award

Dr. Surinder Kumar Vasal

Dr. Surinder Kumar Vasal is an accomplished Maize Breeder, Geneticist and Millennium World Food Prize Laureate. He was born on April 12, 1938 and grew up in Amritsar. He completed his university education and academic degrees from various Institutes in India including Ph.D. from Indian Agricultural Research Institute, New Delhi. His professional career started from Himachal Agricultural Department where he served as Assistant Botanist Maize-cum-Assistant Professor. In 1967, Dr. Vasal took up his first foreign assignment with Rockefeller Foundation Agricultural Program in Thailand as Research Associate and conducted research on maize. He was one of the key players to develop Suwan-1, a most popular variety even today in the world and identified resistance to *Curvularia lunata* and its inheritance.

In 1970, Dr. Vasal moved to Mexico as a post-doctoral fellow at the International Centre for Maize and Wheat Improvement (CIMMYT) and later he was promoted as Senior Maize Scientist. He made significant contributions to the development of agronomically acceptable Quality Protein Maize (QPM) cultivars for varied maize production environments. In 1984, Dr. Vasal was assigned a hybrid maize development program at CIMMYT and also served as maize program germplasm coordinator. In 1991, as coordinator of lowland tropical maize program of CIMMYT his team released the first set of 58 tropical and 42 subtropical lines as CMLs. In 1994, an additional 62 tropical white and yellow lines and 55 QPM lines were announced as CMLs. In 1997, Dr. Vasal was the first scientist to be promoted to the rank of Distinguished Scientist and was given a new role as Team Leader of the Asian Regional Maize Program of CIMMYT in Thailand. He developed sources of resistance to downy mildew, strengthened hybrid research activities and coordinated the Tropical Asian Maize Network (TAMNET). Dr. Vasal has registered 12 hybrid-oriented source populations, 24 white lines and 21 yellow lines and published 14 book chapters and 150 research papers. He has trained many post-doctoral fellows, visiting scientists and conducted in-country training courses on hybrid.

Dr. Vasal is a fellow of many scientific societies in India and abroad, recipient of International Service in Crop Science Award, International Service in Agronomy Award, Crop Science Society Presidential Award, Chinese Friendship Award and Dr. M.S. Swaminathan Award for Leadership in Agriculture from TAAS. Dr. Vasal in conjunction with Dr. Evangelina Villegas were awarded 2000 World Food Prize by the World Food Prize Foundation. Dr. Vasal has received honorary doctor of science degrees from IARI, PAU and JNKVV.

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Dr. B.P. Pal Memorial Award to Dr. Surinder Kumar Vasal for his outstanding contributions in Agricultural Sciences for the Biennium 2023-2024.

Dr. A.B. Joshi Memorial Lecture Award

Dr. Prem Lal Gautam

Dr. Prem Lal Gautam, a well-known geneticist and plant breeder, hails from a Village Berthin of District Bilaspur (Himachal Pradesh). After having his early education from the village school, he received B.Sc. Agriculture degree in 1968 from Himachal Agricultural College, Solan affiliated to Panjab University, Chandigarh. He accomplished his M.Sc. (1968) and Ph.D. (1974) degrees in Genetics from IARI, New Delhi.

He started his professional inning from G.B. Pant University of Agriculture and Technology (GBPUAT), Pantnagar as Assistant Professor (1974), and since then he has served in various important positions in SAUs, ICAR and Govt. of India. He served as Chairperson, Protection of Plant Varieties and Farmers' Right Authority (PPV&FRA), New Delhi (Ministry of Agriculture & Farmers' Welfare) and Chairman, National Biodiversity Authority (NBA), Chennai (*Ministry of Forests, Environment & Climate Change*) in the rank of Secretary to the Govt. of India. He also served as Vice-Chancellor, GBPUAT for two terms and, concurrently, he was Managing Director, Uttrakhand Seeds & Terai Seeds Corporation. He served ICAR system as Deputy Director General (Crop Science); National Director, National Agricultural Technology Project and Director, National Bureau of Plant Genetic Resources. Presently, he is Chancellor, Dr. Rajendra Prasad Central Agricultural University, Pusa, Samastipur (Bihar).

Dr. Gautam is associated with the development of 13 crop varieties and registration of two germplasm accessions. He has contributed significantly in the management of agrobiodiversity, including, *inter alia,* operationalization of the National Gene Bank, drafting and implementation of Biological Diversity and PPV&FR Acts, commencement of registration of plant germplasm, preparation of peoples' biodiversity registers, registration of farmers' varieties, and recognition of Farmers Rights in the FAO International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA). He represented India in negotiations of FAO Seed Treaty and United Nations Convention on Biological Diversity (CBD). He was also a member of the Executive Board of Global Crop Diversity Trust, Bon, Germany.

During his career spanning over four decades, he has been honoured with awards, medals, *honoris causa* degrees and plaque of Honour etc. for his notable contributions as a teacher, guide, researcher, Institution builder and research manager. He has been Vice-President of NAAS (2013-2015) and President of prestigious Indian Societies of Genetics &Plant Breeding and Plant Genetic Resources.

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Dr. A.B. Joshi Memorial Lecture Award for the Biennium 2023-2024 to Dr. P.L. Gautam for his outstanding contributions in the field of agricultural science, education and development and also feel honored to invite Dr. Gautam to deliver the prestigious lecture at the occasion of XVII Agricultural Science Congress.

Dr. K. Ramiah Memorial Award

Dr. Pritam Kalia

Dr. Pritam Kalia, a distinguished horticulturist, hails from a Village Dhabera, Tehsil Bangana, District Una (Himachal Pradesh). He had his early education from native village school and pursued B.Sc. Agriculture (1976), M.Sc. Agriculture (1978), and Ph.D. in Vegetable Breeding (1983) from Himachal Pradesh Krishi Vishvavidyalaya (HPKV), Palampur. In 1986, he visited UK under Commonwealth-sponsored postdoctoral program. Dr. Kalia started his professional inning in 1983 as Assistant Vegetable Breeder at HPKV, Palampur. Subsequently, he served as Associate Professor/Vegetable Breeder and Professor from 1989 to 2002. Then, he served ICAR system at Indian Agricultural Research Institute (IARI), New Delhi in various capacities including Principal Scientist (Division of Vegetable Science) (2002-17); Head, Division of Vegetable Science (2010–16); Professor (Horticulture, 2008-2010); Co-ordinator, School of Horticultural Sciences (2012–16); and Emeritus Scientist (2017-20).

With a career spanning over 37 years, Dr. Kalia has made significant contribution to vegetable crop improvement through resistance breeding, biofortification, molecular breeding, and transgenesis. He developed 33 varieties of vegetable crops, including garden pea, cauliflower, carrot, broccoli, leek, and radish, and registered genetic stocks such as CMS cauliflower, CMS tropical carrot, and disease-resistant germplasm. His notable achievements include the introgression of β-carotene enhancing Or gene into Indian cauliflower, facilitating hybrid breeding, and resistance breeding for black rot and downy mildew in cauliflower. He has published over 120 research papers in esteemed national and international journals, along with 14 books and 34 book chapters. He has guided M.Sc. (5) and Ph.D. (6) students, with three of his Ph.D. scholars receiving the Jawaharlal Nehru National Award for Best Thesis.

His professional contributions have been recognized with several prestigious awards and recognitions, including the VASVIK Award, Rafi Ahmed Kidwai Award (ICAR), Dr. Kirti Singh IAHS Gold Medal, and Himachal Gaurav Award. He also received the HPU Gold Medal and the N.N. Mohan Memorial Gold Medal during his academic career. He is Fellow of the National Academy of Agricultural Sciences (NAAS), the Indian Society of Vegetable Science (ISVS), the Indian Academy of Horticultural Sciences (IAHS), and the International Society of Noni Science (ISNS). Dr. Kalia represented India in various international forums, including an APO-sponsored meet in Taiwan (2007) and as an IAEA-sponsored training expert in Mauritius (2016). He served as Vice-Chairperson of the International Society for Horticulture Science (ISHS) for the Division of Horticulture for Development (2018 onward). He has been the Consulting Editor, International Journal of Vegetable Science since 1999 and Editor, Agricultural Research Springer since 2024.

The National Academy of Agricultural Sciences (NAAS) is honoured to present the Dr. K. Ramiah Memorial Award for the Biennium 2023–2024 to Dr. Pritam Kalia for his outstanding contributions to the genetic improvement of vegetable crops.

Dr. K.C. Mehta Memorial Award

Dr. Rasappa Viswanathan

Dr. Viswanathan, a distinguished sugarcane pathologist, was born on April 14, 1963 at Vellalapalayam, District Namakkal (Tamil Nadu). He did B.Sc. (Ag) in 1987, M.Sc. (Ag) (Plant Pathology) in 1989 and Ph.D. (Plant Pathology) in 1999 from Tamil Nadu Agricultural University, Coimbatore. He started his professional career with ICAR system from1991. He served at ICAR-Sugarcane Breeding Institute, Coimbatore in various capacities, including Head, Division of Crop Protection for 12 years (2010-22). Presently, he is serving as Director, ICAR-Indian Sugarcane Research Institute, Lucknow since 2022.

Dr. Viswanathan has immensely contributed to basic and applied research areas in sugarcane pathology. He has devised new screening techniques to various diseases in sugarcane. His rapid red rot screening method has resulted in faster identification of red rot resistant varieties. He was involved in developing 16 elite sugarcane varieties with red rot resistance for the tropical and subtropical regions, including the popular variety Co 0238 that resulted in sugar revolution in the country. He has also characterized genome and transcriptome of red rot pathogen. He developed mechanized set treatment device and successfully managed red rot. He has successfully addressed varietal degeneration in sugarcane thus extending field life of the popular cv. Co 86032 in the tropical India. In addition, he developed molecular diagnostics and characterized four sugarcane viruses based on complete genomes. He is credited for establishing Molecular Plant Pathology lab with accreditation from DBT for virus indexing. He is also guiding sugarcane pathology work in the country as PI, AICRP on Sugarcane (Pathology) for the last 14 years. He has guided 10 Ph.D. scholars and published ~313 research papers.

His extensive research contributions has been well recognized with various awards including Hari Om Ashram Trust Award (ICAR), Sir T.S. Venkatraman Award for Outstanding Research Contribution in Sugarcane Agriculture, Dr. M. Puttarudriah Memorial Endowment National Award, M.S. Pavgi Memorial Award, Mundkur Memorial Award, NAAS Fellowship during 2016 etc.

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Dr. K.C. Mehta Memorial Award to Dr. Rasappa Viswanathan for his outstanding contributions in Plant Protection for the Biennium 2023-2024.

Dr. M.S. Randhawa Memorial Award

Dr. Harishchandra Prasad Singh

Dr. Harishchandra Prasad Singh,known as the “Doyen of Horticulture” and architect of India’s “Golden Revolution”, hails from Samastipur (Bihar). Dr. Singh pursued B.Sc. in Agriculture from Banaras Hindu University (BHU), followed by M.Sc. in Horticulture from Rajendra Agricultural University (RAU). He earned Ph.D. in Horticulture from University of Agricultural Sciences, Bangalore, and was later conferred D.Sc. (Honoris Causa) by Odisha University of Agriculture and Technology.

Dr. Singh’s illustrious career spans over five decades, during which he held pivotal positions such as Deputy Director General (Horticulture), ICAR; Vice-Chancellor, RAU; Horticulture Commissioner to the Government of India; Dean, GBPUAT; and Chairman, Coconut Development Board. His transformative initiatives, including National Horticulture-, Coconut-, Micro-irrigation-, and Bamboo-Missions, revolutionized India’s horticulture sector, resulting in significant growth in production, productivity, and exports. Dr. Singh has developed 21 fruit cultivars and over 75 innovative technologies. He also established six national horticulture directorates, precision farming centers, and five academic institutions. Dr. Singh’s contributions have significantly enhanced food and nutritional security, livelihoods, and sustainability. His pioneering work in precision farming, micro-irrigation, fertigation, organic farming, and greenhouse technology has addressed critical issues of nutritional security and sustainable development.

Dr. Singh has represented India in over 45 countries, chaired global Committees, and spearheaded Projects funded by UNEP, FAO, and Bioversity International. As Chairman, Asia Pacific Coconut Community and leader of international horticultural initiatives, he has elevated India’s global standing in horticulture. A prolific writer, he has authored 71 books, more than 350 scientific articles, and numerous technical reports that continue to guide advancements in horticulture. Beyond science, Dr. Singh has made significant contributions to rural development and education. As Founder and Chairman of CHAI, he has fostered collaboration among policymakers, scientists, and farmers. He is also the Chief Advisor to the Lt. Amit Singh Memorial Foundation and the founder of the Amit Memorial Rural Institute for Transformation, which empowers rural communities through education, training, and innovation.

Dr. Singh’s outstanding contributions have earned him international awards (3), national accolades (41), and prestigious fellowships (13), including Fellowship of the National Academy of Agricultural Sciences (NAAS). He is also recognized with title such as “Man of the Decade” and multiple lifetime Achievement Awards.

The National Academy of Agricultural Sciences (NAAS) is delighted to present the Dr. M.S. Randhawa Memorial Award for the Biennium 2023-2024 to Dr. H.P. Singh for his exemplary contributions to agricultural and horticultural research, education, and rural transformation.

Dr. N.S. Randhawa Memorial Award

Dr. Ch. Srinivasa Rao

Dr. Cherukumalli Srinivasa Rao, presently serving as Director, Indian Agricultural Research Institute (IARI), New Delhi, hails from a Village Anigandlapadu of Krishna District (Andhra Pradesh). He pursued his B.Sc. and M.Sc. in Agriculture from Agricultural College, Bapatla (ANGRAU), and Ph.D. from IARI, New Delhi. He also obtained Post-Doctoral Fellowship from Tel-Aviv University, Israel.

He started his professional career from ICAR system and served as Scientist, Indian Institute of Soil Sciences (1992-98); Senior Scientist, Indian Institute of Pulse Research and Central Research Institute for Dryland Agriculture (CRIDA) (1998-2006) and Principal Scientist, CRIDA (2006-13), Subsequently, he served CRIDA, Hyderabad as Project Co-ordinator (2013-14) & Director (2014-17) and; Director, ICAR-National Academy of Agricultural Research Management (NAARM), Hyderabad (2017-2024). He was also on deputation to International Crops Research Institute for the Semi-Arid Tropics, Hyderabad from 2006-08.

Dr. Rao is recipient of several national and international awards (48), including the prestigious Rafi Ahmed Kidwai Award of ICAR and the Coromandel Plant Nutrition Award by FAI (2024). Under his leadership, CRIDA and NAARM were twice honored with the Sardar Patel Outstanding ICAR Institution Awards. He is Fellow of many esteemed professional organizations, including INSA, NASI, NAAS, the Indian Society of Soil Science, the A.P. Academy of Sciences, and the Telangana Academy of Sciences. A prolific writer, Dr. Rao has authored 361 research papers, 56 books, 109 national and international book chapters, 69 bulletins, 37 policy papers, and 38 popular articles, in addition to obtaining 18 copyrights. Dr. Rao has represented India at numerous global forums, including UNFCCC CoP Meetings in France, Germany, and Spain as a Global Climate Change Negotiator, and at IPCC and APN meetings in Japan and Thailand, respectively. He has also been a Member or Chairman of various international and national committees, such as the International Dryland Development Commission (IDDC), Cairo, and the Asian Long-Term Experimental Network for Agriculture (ALTENA), Japan.

He played key roles in major national missions, including the National Mission for Sustainable Agriculture (NMSA) as its Technical Chairman and ICAR's flagship program NICRA as National Coordinator.

The National Academy of Agricultural Sciences (NAAS) takes immense pride in presenting the Dr. N.S. Randhawa Memorial Award for the Biennium 2023-2024 to Dr. Ch. Srinivasa Rao for his outstanding contributions to agricultural research, education, and sustainable development.

Dr. P. Bhattacharya Memorial Award

Dr. Raghavendra Bhatta

Dr. Raghavendra Bhatta currently serves as Deputy Director General (Animal Science) at the Indian Council of Agricultural Research (ICAR), New Delhi. He completed his Doctorate in Animal Nutrition from the Veterinary College, Bengaluru. He excelled academically, receiving gold medals during both his Master's and Doctoral programs from the University of Agricultural Sciences, Bengaluru. Dr. Bhatta pursued advanced research as a recipient of the prestigious Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowship, which enabled him to complete two years of postdoctoral work at the National Institute of Livestock and Grassland Science (NILGS), Japan. He also underwent postdoctoral training at the USDA in Texas in 2011.

Beginning his career in 1993 as Scientist at ICAR-Central Sheep and Wool Research Institute, Avikanagar (Rajasthan), Dr. Bhatta later moved to ICAR-National Institute of Animal Nutrition and Physiology (NIANP), Bengaluru in 2003 and served as Director, NIANP from 2014 to 2024, during which he established cutting-edge research infrastructure and led several international collaborations, including with Indo-German, Indo-Japan, and Indo-French projects, as well as initiatives with ILRI and IAEA.

Dr. Bhatta, a trailblazer in animal nutrition research, has made significant contributions to enteric methane mitigation and sustainable livestock management. He developed the first All-India inventory on enteric methane emissions from livestock, based on primary data, region-specific feeding practices, and recent data. His innovative and, cost-effective product, 'Harit Dhara,' derived from phyto-sources, reduces daily methane emissions from adult cattle and buffaloes by 17–20%. With a favorable benefit-cost ratio of 3:1, the product has been successfully commercialized in partnership with four companies.

A prolific writer, Dr. Bhatta has authored over 200 research papers in reputed national and international journals, presented more than 150 conference papers, and written 45 book chapters. He has also authored three books and holds four patents. Dr. Bhatta's outstanding contribution to agriculture have earned him numerous accolades, including the Sir C.V. Raman State Award from the Karnataka State Council for Science and Technology, the Dr. DVR Prakash Rao Outstanding Researcher Award, the Eminent Scientist Award of the Society for Science of Climate Change and Sustainable Environment, and the Rafi Ahmed Kidwai Award for Outstanding Research in Agricultural Sciences from ICAR. He is also Fellow of various academies including the National Academy of Agricultural Sciences, the Karnataka Science and Technology Academy, the National Academy of Veterinary Sciences, and the National Academy of Dairy Sciences-India.

The National Academy of Agricultural Sciences (NAAS) takes great pride in presenting the Dr. P. Bhattacharya Memorial Award for the Biennium 2023-2024 to Dr. Raghavendra Bhatta for his pioneering contributions to animal science, sustainable livestock management, and environmental sustainability.

Shri L.C. Sikka Endowment Award

Dr. Jai Chand Rana

Dr. Jai Chand Rana, presently serving as Country Director, The Alliance of Bioversity International and CIAT in India, hails from Village Harsi, District Kangra (Himachal Pradesh). He obtained his Master's and Ph.D. in Genetics and Plant Breeding from Himachal Pradesh Agricultural University, Palampur, and pursued Post-Doctorate in Molecular Plant Breeding from South China Agricultural University, Guangzhou.

Dr. Rana has focused on utilizing native crop diversity for climate resilience, food and nutrition security, and sustainable livelihoods. He has developed 15 crop varieties, secured six patents and registered 32 genetic stocks with NBPGR and 359 farmers' varieties with PPV&FRA. Over his career, he has led more than 40 plant exploration missions, introducing nearly 10,000 accessions, including six new crops. His research includes evaluating over 75,000 germplasm accessions, developing core and trait-specific reference sets, and introgressing beneficial traits from wild relatives of key crops using pre-breeding and genomic tools.

Dr. Rana has coordinated large-scale testing of over 7,000 native crop varieties across 17 Indian states using a crowdsourcing approach. His efforts led to the identification and commercialization of 300 native varieties under brands such as Native Basket, Dhartee Naturals, and Hill Hatt, enhancing their market value by 35–40% and improving farmer incomes. He has strengthened informal seed systems by establishing over 50 community seed banks, conserving 4,000 native varieties, and ensuring quality seed availability. Currently, over 90,000 farmers cultivate native crop diversity on more than 2 lakh hectares for better adaptation, nutrition, and livelihoods. His contributions extend to nutrition profiling of over 5,000 landraces and the development of NIR-based spectroscopy models for large-scale germplasm analysis. He also coordinates agronomy and breeding programs for beans, forages, cassava, and banana, while contributing to ecosystem service valuation and the Global Agrobiodiversity Index, which he is adapting for India.

Dr. Rana has authored over 200 research papers and three books. His work has earned him prestigious awards, including the ICAR-M.S. Swaminathan National Award for Outstanding Research on Hill Agriculture, NAAS Recognition Award, B.R. Barwale Award, Golden Peacock Award of IBRA, and Dr. R.B. Ekbote National Prize. He is Fellow of NAAS, ISGPB, and ISPGR.

The National Academy of Agricultural Sciences (NAAS) is pleased to present the Shri L.C. Sikka Endowment Award for the Biennium 2023-2024 to Dr. J.C. Rana for his outstanding contributions to plant genetic resources management and sustainable agriculture.

Shri L.C. Sikka Endowment Award

Dr. Tusar Kanti Behera

Dr. Tusar Kanti Behera, presently serving as Director, Indian Institute of Horticultural Research, Bengaluru, hails from Balasore, (Odisha). He graduated in Agriculture from College of Agriculture (Chiplima), and completed his Master's in Horticulture from the College of Agriculture (Bhubaneswar), Odisha University of Agriculture and Technology (OUAT). He earned his Ph.D. from Indian Agricultural Research Institute (IARI), New Delhi (1994-1998). Dr. Behera pursued post-doctoral programs at the University of Wisconsin, Madison, USA, under the DBT Associateship and the Nehru-Fulbright Fellowship.

He started his professional career from IARI in 1998 and served the Institute in various capacities, including Professor (Division of vegetable Science) and Nodal Officer (IARI, Jharkhand). Subsequently, he moved to Indian Institute of Vegetable Research, Varanasi and served as Director until 2024. With 26 years of research and teaching experience, Dr. Behera has contributed significantly to vegetable crop improvement, particularly in bitter gourd and cucumber. He is credited with developing 26 varieties and hybrids of vegetable crops, many of which have been released and notified by the Central Variety Release and Notification Committee. Several of these varieties and breeding lines were licensed to private seed companies for commercialization.

Dr. Behera's pioneering research includes isolating gynoecious lines in bitter gourd, introgressing the gy-1 gene into commercial cultivars, and identifying a 1.31 Mb region on chromosome-1 associated with gynoecious sex expression. He developed the first high quality chromosome-level genome assembly of *Momordica balsamina* using advanced sequencing platforms. In tropical cucumber also, Dr. Behera mapped and introgressed the gynoecious trait, developed several inbred backcross lines for hybrid development, and performed linkage and association analyses of carpel number (Cn) variation, identifying CsCLV3 as the candidate gene for the Cn locus. Additionally, he discovered the SHORT HYPOCOTYL1 (SH1) gene in cucumber, which regulates low-dosage UVB-dependent hypocotyl elongation by modulating the UVR8 signaling pathway.

Dr. Behera has guided 11 Ph.D. and 2 M.Sc. students. He has published 150 research papers, edited 5 books, authored 15 book chapters, and developed 7 training manuals. He has been deputed for academic assignments to the USA, Australia, France, Russia, Thailand, and Libya.

The National Academy of Agricultural Sciences (NAAS) is pleased to present the Shri L.C. Sikka Endowment Award for the Biennium 2023-2024 to Dr. T.K. Behera for his exceptional contributions to the genetic improvement of vegetable crops and advancements in horticultural research and education.

Dr. (Ms.) Prem Dureja Endowment Award

Dr. (Ms.) Madhoolika Agrawal

Dr. (Ms.) Madhoolika Agrawal, presently serving as J.C. Bose National Fellow and Chairperson of the NEP Implementation Committee at Banaras Hindu University (BHU), hails from Azamgarh district (Uttar Pradesh). She completed her B.Sc. from DAV Degree College, Azamgarh (1976), followed by M.Sc. (1978) and Ph.D. (1982) from BHU, Varanasi. She also pursued Fulbright Fellowship at USDA, USA.

Dr. Agrawal began her professional career as Scientist B at the Indian Institute of Toxicological Research (IITR), Lucknow, before joining BHU as Lecturer in 1984. She rose through the ranks, serving as Reader (1991), Professor (1999), and Senior Professor (2018). She has held several key academic and administrative positions, including Dean, Faculty of Science; Head, Department of Botany; Co-ordinator, CAS in Botany; and Co-ordinator, Interdisciplinary School of Life Sciences at BHU. With over four decades of research experience, Dr. Agrawal has made pioneering contributions to air and soil pollution research, global climate change, and plant stress interactions. She conducted extensive field studies in central India and Varanasi to assess the impact of air pollution, particularly ozone, on crop yield and plant health. Using an innovative air exclusion approach, she quantified yield losses in major Indian crops due to ambient ozone concentrations and established mechanisms of ozone interaction with crops. Her research employing an ozone flux model identified wheat cultivars' sensitivity under projected ozone levels, providing crucial insights for yield and biomass risk assessments.

Dr. Agrawal was the first in India to study ozone phytotoxicity on grassland species, assessing its impact on carbon sequestration, soil dynamics, and plant communities. Her research on elevated CO_2, ozone, and UV-B interactions has advanced understanding of crop susceptibility, photosynthesis, and nutrient efficiency. She has significantly contributed to studies on greenhouse gas emissions, carbon sequestration, and modeling agricultural yields under different tillage practices. Her work also addresses heavy metal transfer in urban food chains and sustainable waste management in agriculture. Additionally, she has contributed to global programs like the UNEP Atmospheric Brown Clouds report and Sweden's RAPID C Program.

She received various awards, including the UNESCO/ROSTASCA Young Scientist Award; Professor Hira Lal Chakraborty Award from ISCA; UGC National Award in Environmental Science and Ecology; Dr. P. Sheel Memorial Lecture Award from NASI; and the J.C. Bose National Fellowship from DST. She is Fellow of INSA, NASI, and NAAS. Dr. Agrawal has published 330 research papers and authored three books.

The National Academy of Agricultural Sciences (NAAS) is pleased to present the Dr. (Ms.) Prem Dureja Endowment Award for the Biennium 2023-2024 to Dr. (Ms.) Madhoolika Agrawal for her outstanding contributions to environmental science, plant stress research, and sustainable agriculture.

Dr. N.G.P. Rao Endowment Award

Dr. Sharat Kumar Pradhan

Dr. Sharat Kumar Pradhan, presently working as Assistant Director General (Food and Fodder Crops, ICAR), hails from Kendukata village, Sambalpur district, (Odisha). He completed his B.Sc. (Ag.) and M.Sc. (Ag.), in Plant Breeding and Genetics from Odisha University of Agriculture and Technology (OUAT), Bhubaneswar. He obtained his Ph.D. degree from GBPUAT, Pantnagar (Uttarakhand) in 2003.

Dr. Pradhan started his professional inning from Central Rice Research Institute, Cuttack (1997) as Scientist (Plant Breeding) and served until 2022. Prior to joining ICAR System, he served OUAT, Bhubaneswar for five years as Research Assistant at Regional Research Station, Chiplima. He has released 66 rice varieties for different states and about 50 are in the seed chain. He has reported 61 novel QTLs/genes for different rice traits through genome wide association mapping. He has published 155 research papers, 30 popular articles, 37 book chapters, 6 books, and developed 2 mobile apps.

Dr. Pradhan has received many prestigious recognitions and Awards, including Shri L.C. Sikka Endowment Award, 2021-22 (NAAS); BP Pal Memorial Award, 2023 (ISGPB); EA Siddiq Award, 2017-18 (IARI); XXVI Hooker Award, 2018-19 (IARI); SK Vasal Award, 2023 (ISPGR); AB Joshi Memorial Award, 2017 (ISGPB); Best Scientist Award, 2006, 2010 & 2015 (CRRI, Cuttack).

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting the Dr. N.G.P. Rao Endowment Award to Dr. S.K. Pradhan for his outstanding contributions in the field of Rice Breeding & Genetics for the Biennium 2023-2024.

Recognition Award (Plant Improvement)

Dr. Viswanathan Chinnusamy

Dr. Viswanathan Chinnusamy, a distinguished Plant Physiologist, hails from Village Morangam, District Namakkal (Tamil Nadu). He obtained his B.Sc. (Agriculture) degree from Agricultural College and Research Institute, Killikulam, Tamil Nadu Agricultural University (1990), and M.Sc. (1993) & Ph.D. (1999) in Plant Physiology from Indian Agricultural Research Institute, New Delhi. He carried out his Post-Doctoral research at University of Arizona (2001-02), and University of California Riverside, USA during 2008-10. He was also Visiting Scholar at Department of Molecular Biology - Massachusetts General Hospital & Department of Genetics, Harvard Medical School, Boston, USA in 2009. He started his professional inning from IARI and served in various capacities, including Scientist (1996-2005); Senior Scientist (2005-10); Principal Scientist (2010-13); Head of the Division, (Plant Physiology, 2013-22); and Joint Director (Research) (since 2022).

Dr. Viswanathan has made pioneering contribution to elucidate the mechanism of action of ABA-Receptors and ABA signalling pathway in plants. He discovered the ICE1-CBF signalling pathway of cold tolerance in plants, and elucidated of the role of two novel proteins namely SICKLE1 and STABILIZED1 in microRNA biosynthesis and abiotic stress tolerance in plants.

He has established state-of the art facilities like “Nanaji Deshmukh Plant Phenomics Centre” and “Discovery Centre”, at IARI, which facilitated international training of 70 students and 15 Faculty, and national training of > 2000 students.

He also initiated genome editing research program, which led to the development of genome edited lines in rice, being tested in the national field trials for the first time in the country. He is coordinating a National Network Project on genome editing with 24 ICAR-Institutes as partners. He has 270 research publications, 2 edited books, three Copy Rights and three Patents to his credit.

He is a recipient of several awards/fellowships, including ICAR Jawaharlal Nehru Award, (2001); DST BOYSCAST Fellowship (2001); J.J. Chinoy Gold Medal of Indian Society for Plant Physiology (ISPP), (2012); and Fellow of the National Academy of Sciences India (2010), Indian Society for Plant Physiology (ISPP) (2016); & National Academy of Agricultural Sciences (NAAS) (2018).

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Recognition Award in Plant Improvement to Dr. Viswanathan Chinnusamy for his outstanding contributions to overall agricultural research and development for 2023-2024.

Recognition Award (Plant Improvement)

Dr. Gyan Prakash Mishra

Dr. Gyan Prakash Mishra, presently working as Head, Division of Seed Science and Technology at Indian Agricultural Research Institute (IARI), New Delhi, hails from Varanasi, (Uttar Pradesh). He earned his B.Sc. (Ag) from Banaras Hindu University, Varanasi, and his M.Sc. & Ph.D. in Genetics from IARI, New Delhi. He pursued Post-Doctoral research at University of California, Riverside, and Purdue University, USA during 2010–2011. Dr. Mishra began his career at DRDO-Defence Institute of High Altitude Research, Leh as Scientist 'C' in 2007 and subsequently served Indian Council of Agricultural Research (ICAR) system from 2012.

Dr. Mishra has made significant contributions to the improvement of various crops through a combination of conventional and molecular breeding approaches. His work includes mapping genes and QTLs for economically important traits like fertility restorer in rice; earliness, multi-flowering and seed size in lentil; YMV resistance in mungbean; resistance to stem rot, rust, and leaf spot diseases in groundnut, facilitating marker-assisted breeding. He has 12 varieties to his credit, (four in lentil, one in mungbean, six in okra (including one hybrid), and one in French bean) and also registered eight unique germplasms in lentil, mungbean, and garden pea. Furthermore, he licensed eight okra genotypes to seed companies and established a National Permafrost-Based Germplasm Storage Facility at Chang-La, Ladakh (17,586 feet AMSL) for the conservation of important germplasms as safety duplicates. Dr. Mishra also developed and commercialized an antioxidant-rich microgreen kit, "*TinyFields*."

Dr. Mishra has published over 150 research papers, authored one book, edited three books, and contributed 44 book chapters, 11 bulletins, & 9 training manuals. He is Fellow of the National Academy of Agricultural Sciences (NAAS), Indian Society of Genetics and Plant Breeding (ISGPB), and Indian Society of Vegetable Sciences (ISVS). He has received numerous prestigious awards and honours, including DST-BOYSCAST Fellowship (2010), NAAS-Associate (2018), ICAR-Rajendra Prasad Award (2020), ISCA-Pran Vohra Award (2012), IARI-Ram Nath Singh Award (2019-21), ISGPB-8th Harbhajan Singh Memorial Award (2022), ISVS-Dr. Harbhajan Singh Memorial Award (2018), 5th Dr. P.N. Bahl Award (2020-21), ICARDA-Certificate of Recognition (2018), DRDO-National Science Day Award (2009), and CSIR Award for S&T Innovations for Rural Development (2010). Dr. Mishra is a member of the International Seed Testing Association, Switzerland (2023), and the Central Seed Certification Board, Government of India (2024).

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Recognition Award to Dr. Gyan Prakash Mishra for his significant contributions in the field of Plant Improvement for the Biennium 2023-2024.

Recognition Award (Plant Protection)

Dr. Supradip Saha

Dr. Supradip Saha was born on May 10, 1975 in Bishnupur, West Bengal. He completed his B.Sc. (Agriculture) Hons. from Bidhan Chandra Krishi Viswa Vidyalaya, Mohanpur, followed by M.Sc. and Ph.D. in Agricultural Chemicals from Indian Agricultural Research Institute (IARI), New Delhi. Dr. Saha joined ICAR in 2003 and is currently serving as Principal Scientist in the Division of Agricultural Chemicals at IARI, New Delhi.

Dr. Saha's pioneering research focuses on the chemistry, applications, and formulations of triterpenic saponins, limonoids, and terpenoids, with a special emphasis on their bioefficacy against insect pests and fungal pathogens. Among his notable achievements is the development of an energy-efficient and eco-friendly method for extracting azadirachtin from neem. His innovative contributions include technologies for the mass production of *Bacillus thuringiensis* using agro-waste, the use of lac wax-based policosanol as a plant growth regulator, and a pH-responsive bio-formulation. Additionally, he has developed nano-formulations using bioactive extracts and essential oils to improve bioefficacy against fungal pathogens.

Dr. Saha's outstanding work has been recognized internationally, and he was elected as a Fellow of the Royal Society of Chemistry (RSC), London. He has published 164 research papers, five Reviews, 12 book chapters and holds three patents. Dr. Saha has received numerous prestigious awards, including the IARI Merit Medal (2004), the ICAR Award for Outstanding Interdisciplinary Team Research (2007–08), the Pran Vohra Award (2011) by the Indian Science Congress Association, the Lal Bahadur Shastri Young Scientist Award (2013), and the P.B. Sarkar Memorial Endowment Lecture Award (2013-14). He was elected NAAS Associate in 2013. In addition Dr. Saha has guided two Ph.D. and five M.Sc. students and served as General Secretary of the Society of Pesticide Science India from 2018 to 2021.

The National Academy of Agricultural Sciences (NAAS) is pleased to present the Recognition Award in Plant Protection for the Biennium 2023-2024 to Dr. Supradip Saha for his exceptional contributions to agricultural chemicals, plant protection, and environmentally sustainable pest and pathogen management.

Recognition Award (Soil, Water & Environmental Sciences)

Dr. Rajbir Singh

Dr. Rajbir Singh, presently working as Deputy Director General (Agricultural Extension) at ICAR, New Delhi, hails from village Jakhod Khera of district Hisar. He had B.Sc. Hons (Ag) in 1990, M.Sc. (Agronomy) in 1992; and Ph.D. in 1996 from CCS Haryana Agricultural University, Hisar. He started his innings from ICAR System and served as Scientist (1995-2004) and Senior Scientist (2004-2008) at Central Institute of Post-Harvest Engineering and Technology, Abohar, Punjab. Subsequently he served as Principal Scientist (Agronomy) at the Indian Institute of Water Management, Bhubaneswar (2008-2012) and Natural Resource Management (NRM) Division, ICAR, New Delhi (2012-15) and as Director, ICAR-Agricultural Technology Application Research Institute, Ludhiana (2015-2023).

Dr. Singh has wider experience of research, research management and coordination; and technology application. He has made outstanding contributions in the field of conservation agriculture, climate smart agriculture, farming systems and natural farming, which led to the development of agro-techniques of low-cost polyhouse and plastic tunnel for cultivation of off-season vegetables; standardization of package of practices for strawberry cultivation; the concept of service reservoir and developed alternate cropping models through micro-irrigation in tail end of canal; agronomic management package for Happy Seeder sown wheat and direct seeded rice (DSR); and 10 Climate Smart Model Villages across the states of Punjab, H.P. and J&K.

Dr. Singh has more than 100 research papers to his credit. He has been bestowed with many prestigious awards, and fellowships, including the Rafi Ahmed Kidwai Award (2021), Nanaji Deshmukh ICAR Award (2019), and Fellow of National Academy of Agricultural Sciences (NAAS) (2022). Besides, Dr. Singh has been the Chairperson of Working Group on 'Promotion of straw management in Haryana' constituted by the Govt. of Haryana in 2018; and awarded appreciation Plaque by Chief Minister of Punjab (2019) for popularizing the resource conservation technologies.

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Recognition Award to Dr. Rajbir Singh for his significant research contributions in the field of Soil, Water and Environmental Science for the Biennium 2023-2024.

Recognition Award (Animal Sciences)

Prof. Yashpal Singh Malik

Prof. Yashpal Singh Malik was born on October 14, 1973 in Hisar (Haryana). He obtained his Bachelor's degree in Veterinary Sciences and Animal Husbandry during 1995, Master's in 1997 and Ph.D. in 2000 in Veterinary Microbiology. He started his professional career in 2001 as Assistant Professor (Veterinary Microbiology) at JNKVV, Jabalpur. Subsequently, he served at Indian Veterinary Research Institute (IVRI) in various capacities, including Senior/Principal Scientist (2008-14) and National Fellow (2014-2020). Prof. Malik also served as Dean, College of Animal Biotechnology, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana, Punjab (2020-2024). Currently, he is serving as Joint Director since April 2024 at IVRI, Mukteswar. He acquired advanced training in Molecular Virology from the University of Minnesota, Saint Paul, USA, Ontario Research Institute, University of Ottawa, Canada, and Wuhan Institute of Virology, China.

Prof. Malik has contributed significantly in developing state-of-the-art technologies for detecting animal viruses having public health significance. His pioneering work on authentic automatic milk record keeping based on artificial intelligence and the internet-of-things (AI & IoT) has been granted Indian patent. He has guided 18 MVSc. and 08 Ph.D. students and published 257 research papers and authored eight books. He made valuable contributions in developing WHO document on pathogens prioritization: a scientific framework for epidemic and pandemic research preparedness. He played a pivotal role in developing course guidelines adopted in VI Dean committee for BTech in Animal Biotechnology.

Prof. Malik is recipient of several prestigious awards, including Fellowships of the National Academy of Agricultural Sciences, National Academy of Veterinary Sciences, National Academy of Dairy Sciences, National Academy of Biological Sciences, and Academy of Microbiological Sciences. Prof. Malik also received ICAR-Jawaharlal Nehru Award. He served as Chairman World Health Organization's Picobirnaviridae Family Group and a member of International Committee on Taxonomy of Viruses (ICTV). He is a member of Committee for the Control and Supervision of Experiments on Animals, GoI. He served as co-ordinator ICMR-accredited COVID-19 testing laboratory at GADVASU with screening of 6.5 lakh human samples.

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting Recognition Award to Prof. Yashpal Singh Malik for his outstanding contributions in Animal Sciences for the Biennium 2023-2024.

Recognition Award (Agricultural Engineering & Technology)

Dr. Narayan Lal Panwar

Dr. Narayan Lal Panwar, an accomplished researcher in Agricultural Engineering and Technology, hails from a Village Dhinawas, of District Pali Marwar (Rajasthan). He obtained his B.E. (Mechanical Engineering) (1999) from JNVU, Jodhpur; M.E. (Renewable Energy Engineering) (2001) from Maharana Pratap University of Agriculture & Technology (MPUAT), Udaipur and Ph.D. (Energy Studies) from Indian Institute of Technology, Delhi (2013). Dr. Panwar started his academic career in 2005 as Assistant Professor (Renewable Energy Engineering) at MPUAT, Udaipur. His dedication and expertise led to his promotion to Professor in 2021.

Dr. Panwar's research interests includes waste-to-energy conversion, biomass transformation, and biorefinery technologies. He is actively involved in the design and development of advanced cookstoves, biomass gasifiers, pyrolysers, torrefaction systems, and solar thermal devices, with applications tailored to both industrial and rural needs. His research findings could find place in over 180 publications. He has authored 20 books on renewable energy, and holds 15 patents for innovative technologies.

Dr. Panwar's contribution to renewable energy has earned him numerous accolades, including "Prakritik Urja Puraskar" from the Ministry of New and Renewable Energy (Government of India) for his outstanding book on "Alternative Energy Resources" and Fellowship of the Institution of Engineers (India). He was also honored with the "Shrimati Vijay-Usha Sodha Research Award" (2014) by the Indian Institute of Technology, Delhi, and Rajasthan Energy Conservation Award (2018) from the Government of Rajasthan.

The National Academy of Agricultural Sciences (NAAS) has great pleasure in presenting the Recognition Award to Dr. Narayan Lal Panwar for his significant contributions in the field of Agricultural Engineering and Technology for the Biennium 2023-2024.

Recognition Award (Social Sciences)

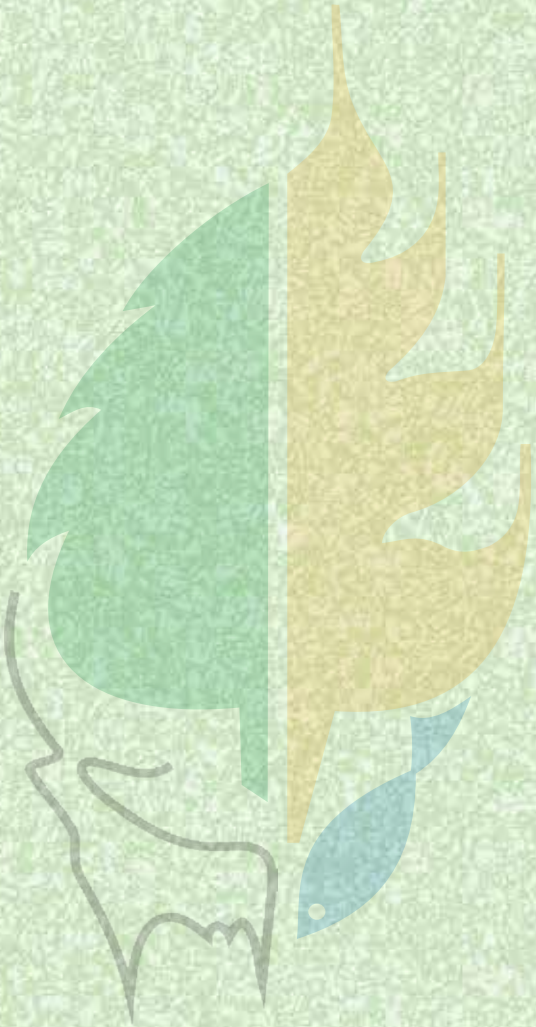
Dr. Ranjit Kumar Paul

Dr. Ranjit Kumar Paul, presently serving as Senior Scientist, ICAR-Indian Agricultural Statistics Research Institute (IASRI), New Delhi, hails from West Bengal. He obtained his B.Sc. degree from Uttar Banga Krishi Vishwavidyalaya; and M.Sc. & Ph.D. degrees from Indian Agricultural Research Institute (IARI), New Delhi.

Dr. Paul has made outstanding research contributions in the field of Agricultural Statistics, which could find place in more than 200 research papers in international and national journals of repute. He has developed crop yield forecast models considering important weather variables. Besides, he developed hybrid forecasting models combining machine learning, stochastic models and wavelets for forecasting volatile agricultural commodity prices and showed that forecast accuracy of hybrid models are better than the traditional forecasting models. Dr. Paul has proposed the algorithm based on Maximal overlap discrete wavelet transform (MODWT) combined with Generalized Auto Regressive Conditional Heteroskedastic (GARCH) and artificial neural network (ANN) class of models and proved that it can outperform the individual forecasting models. Dr. Paul has developed several R packages for implementation of complex algorithms. Dr. Paul is actively involved in teaching and guiding (M.Sc. and Ph.D. students) in the discipline of Agricultural Statistics. He has worked as Visiting Scientist at Department of Economics, South Dakota State University, USA in the area of Multivariate GARCH model and its applications and developed the methodology for finding spill-over effect of volatility.

Dr. Paul is a recipient of several awards and recognitions. He has received Young Scientist awards and Fellowships from the National Academy of Agricultural Sciences (NAAS), Indian Society of Agricultural Statistics (ISAS) and Society for Application of Statistics in Agriculture and Allied Sciences (SASAA). He has also received ICAR-Lal Bahadur Shastri Outstanding Young Scientist Award in Social Sciences.

The National Academy of Agricultural Sciences (NAAS) has a great pleasure in presenting Recognition Award to Dr. Ranjit Kumar Paul for his significant research contribution in the field of Social Science for the Biennium 2023-2024.



NATIONAL ACADEMY OF AGRICULTURAL SCIENCES

NASC, Dev Prakash Shastry Marg, New Delhi 110 012, India
Ph: +91-11-25846051-52; Fax: +91-11-25846054;
Email: naas-mail@naas.org.in, Web site: www.naas.org.in