

**Name** : Dr. Bappa Das  
**Date of birth** : 01st February 1989  
**Designation** : Senior Scientist  
**Qualification** : Ph.D. (Agricultural Physics)  
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### **Educational qualification**

- Ph.D. (Agricultural Physics) from ICAR-IARI, New Delhi
- M.Sc. (Agricultural Physics) from ICAR-IARI, New Delhi
- B.Sc. (Agriculture) from Bidhan Chandra Krishi Viswavidyalaya

### **Professional Experience**

- Senior Scientist at ICAR-NBSS&LUP from 02-06-2025 to till date
- Scientist (Sr. Scale) at ICAR-CCARI from 01-07-2015 to 30-05-2025
- Scientist at ICAR-CCARI from 09-10-2015 to 30-06-2019
- Scientist at ICAR-NAARM from 01-07-2015 to 30-09-2015

### **Research area**

Hyperspectral Remote Sensing for Biotic and Abiotic Stress Detection  
Application of Remote Sensing and GIS in Agriculture  
Crop Yield Forecasting using AI/ML Models  
Digital Soil Mapping  
Climate Analysis

### **Awards**

- **P.R. Pisharoty Memorial Award**, Indian Society of Remote Sensing, Dehradun
- **National Academy of Agricultural Sciences-Young Scientist Award 2022** - Soil, Water and Environmental Sciences
- **Young Scientist Award, 2020**, Indian Society for Plant Physiology, New Delhi
- **Agriculture Research Organization-Israel Postdoctoral Fellowships 2020-21**
- Awarded with **ICAR-Postdoctoral Fellowship (PDF)** at IARI, New Delhi for 2020-21
- **ICAR-Jawaharlal Nehru Award for Outstanding Doctoral Thesis Research** in Agricultural and Allied Sciences 2017, New Delhi
- **Merit Medal** for outstanding academic performance in Ph.D. Degree Programme from ICAR-Indian Agricultural Research Institute (IARI), New Delhi
- **Early Career Research Award** by Science and Engineering Research Board (SERB), Department of Science and Technology (DST), New Delhi
- **Young Scientist award** by Indian Science Congress Association-Agriculture and Forestry Sciences, 2017.
- **Best Student of the Year 2012** for outstanding academic performance during M.Sc. degree programme from ICAR-Indian Agricultural Research Institute (IARI), New Delhi
- **DST INSPIRE Fellowship** for pursuing Ph.D. in Division of Agricultural Physics
- **CSIR-Junior Research Fellowship** for pursuing Ph.D. degree from 2012-2016
- **ICAR-Junior Research Fellowship** for pursuing Master's degree from 2010-2012

### **Honours/ Recognitions**

- Selected as an Associate of National Academy of Agricultural Sciences 2025 – Natural Resource Management
- Elected as an Associate of the West Bengal Academy of Science & Technology (WAST) 2023
- Editorial board member of Journal of the Indian Society of Remote Sensing, Plos One, Soil Use and Management, Frontiers in Remote Sensing and Journal of Agricultural Physics

## Ten best research papers along with NAAS rating-2025

| Sl. No. | Publication                                                                                                                                                                                                                                                                                                                                                                                 | NAAS rating |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|
| 1.      | <b>Das, B.</b> , Chakraborty, D.*, Singh, V. K., Aggarwal, P., Singh, R., Dwivedi, B. S., & Mishra, R. P. (2014). Effect of integrated nutrient management practice on soil aggregate properties, its stability and aggregate-associated carbon content in an intensive rice-wheat system. <i>Soil and Tillage Research</i> , 136, 9–18.                                                    | 12.10       |
| 2.      | <b>Das, B.</b> , Rathore, P., Roy, D., Chakraborty, D.*, Bhattacharya, B. K., Mandal, D., Jatav, R., Sethi, D., Mukherjee, J., Sehgal, V. K., Singh, A. K., & Kumar, P. (2023). Ensemble surface soil moisture estimates at farm-scale combining satellite-based optical-thermal-microwave remote sensing observations. <i>Agricultural and Forest Meteorology</i> , 339(February), 109567. | 11.60       |
| 3.      | <b>Das, B.</b> , Rathore, P., Roy, D., Chakraborty, D.*, Jatav, R. S., Sethi, D., & Kumar, P. (2022). Comparison of bagging, boosting and stacking algorithms for surface soil moisture mapping using optical-thermal-microwave remote sensing synergies. <i>Catena</i> , 217(March), 106485.                                                                                               | 11.40       |
| 4.      | <b>Das, B.*</b> , Chakraborty, D., Singh, V. K., Ahmed, M., Singh, A. K., & Barman, A. (2016). Evaluating Fertilization Effects on Soil Physical Properties Using a Soil Quality Index in an Intensive Rice-Wheat Cropping System. <i>Pedosphere</i> , 26(6), 887–894.                                                                                                                      | 11.20       |
| 5.      | <b>Das, B.*</b> , Sahoo, R. N., Pargal, S., Krishna, G., Verma, R., Chinnusamy, V., Sehgal, V. K., & Gupta, V. K. (2017). Comparison of different uni- and multi-variate techniques for monitoring leaf water status as an indicator of water-deficit stress in wheat through spectroscopy. <i>Biosystems Engineering</i> , 160, 69–83.                                                     | 10.40       |
| 6.      | <b>Das, B.*</b> , Manohara, K. K., Mahajan, G. R., & Sahoo, R. N. (2020). Spectroscopy based novel spectral indices, PCA- and PLSR-coupled machine learning models for salinity stress phenotyping of rice. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 229, 117983.                                                                                     | 10.30       |
| 7.      | Uthappa, A. R., <b>Das, B.*</b> , Raizada, A., Kumar, P., Jha, P., & Prasad, P. V. V. (2025). Forest fire susceptibility mapping using multi-criteria decision making and machine learning models in the Western Ghats of India. <i>Journal of Environmental Management</i> , 379(March), 124777.                                                                                           | 14.00       |
| 8.      | Paramesh, V.*, Arunachalam, V., Nikkhah, A., <b>Das, B.</b> , & Ghnimi, S. (2018). Optimization of energy consumption and environmental impacts of arecanut production through coupled data envelopment analysis and life cycle assessment. <i>Journal of Cleaner Production</i> , 203, 674–684.                                                                                            | 15.70       |
| 9.      | Saha, N.D.*, Kumari, P.*, <b>Das, B.</b> , Sahoo, R.N.*, Kumar, R., Golui, D., Singh, B.*, Jain, N., Bhatia, A., Chaudhary, A. & Chakraborty, B. (2024). Vis-NIR spectroscopy based rapid and non-destructive method to quantitate microplastics: An emerging contaminant in farm soil. <i>Science of The Total Environment</i> , 927, 172088.                                              | 14.20       |
| 10.     | Ghosh, A.*, Singh, A. K., <b>Das, B.</b> , Modak, K., Kumar, R. V., Kumar, S., Gautam, K., Biswas, D. R., & Roy, A. K. (2023). Resiliencies of soil phosphorus fractions after natural summer fire are governed by microbial activity and cation availability in a semi-arid Inceptisol. <i>Environmental Research</i> , 216(P2), 114583.                                                   | 13.70       |

**Total publications (peer-reviewed journals only): 122**

**Citation: 2861 (till 12th August 2025)**

**Google scholar link:** <https://scholar.google.co.in/citations?user=dACFEYwAAAAJ&hl=en>

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