Name : Dr. Abir Dey

Date of birth : 21st July 1987

Designation : Senior Scientist

Qualification : Ph.D. (Soil Science and Agricultural Chemistry)

Email id : abir.dey@icar.org.in; abirdey21@gmail.com

Educational qualification

- Ph.D. (Soil Science and Agricultural Chemistry) from ICAR-IARI, New Delhi
- M.Sc. (Soil Science and Agricultural Chemistry) from ICAR-IARI, New Delhi
- B.Sc. (Agriculture) from Bidhan Chandra Krishi Viswavidyalaya, WB

Professional Experience

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

Research area

- Soil aggregation, carbon sequestration, and biochemical characterization of humic substances
- Nutrient cycling and system-specific nutrient management protocols under conservation agriculture, including digital tools for real-time nitrogen advisory
- Soil and crop health responses to seaweed-based biostimulants and other regenerative inputs

Awards

- Young Scientist Award, 2022, GKV Society, Agra
- Fertiliser Association of India (FAI) Golden Jubilee Award for doctoral research in fertilizer usage, 2017
- The Mosaic Company Foundation Award for Ph.D. research in the area of plant nutrition, 2017
- Dhiru Morarji Memorial Award for article published in Indian Journal of Fertilisers, 2016, FAI
- Indian Society of Soil Science (ISSS) Zonal Award (North Zone) for Masters dissertation, 2012
- Y.P. Kalra Travel Award for Paper presentation at Annual Convention of ISSS, 2012
- UGC-Junior Research Fellowship for pursuing Ph.D. degree, 2012
- ICAR-Senior Research Fellowship for pursuing Ph.D. degree, 2012
- ICAR-Junior Research Fellowship for pursuing Master's degree, 2009

Honours/ Recognitions

- Reviewers for Soil use and management, Soil and Tillage Research, Journal of Soil Science and Plant Nutrition, Journal of the Indian Society of Soil Science, Scientific Reports etc.
- Secretary, Delhi Chapter, The Indian Society of Soil Science
- Councilor (North Zone), The Clay Mineral Society of India

International experience

- Oral presentation and active participation in the 9th World Congress on Conservation Agriculture (2024), held at CTICC, Cape Town, SA availing the DST International Travel Scheme
- Collaboration with Borlaug Institute for South Asia (BISA), CIMMYT for Doctoral research work
- Teaching students of Afghanistan National Agriculture Science and Technology University (ANASTU)
- Poster presentation in the 9th International Greenhouse Gas & Animal Agriculture Conference (2025) held at ILRI, Nairobi, Kenya
- Poster presentation in the AgMIP10 (2025) held at CIMMYT, El Batan, Mexico.

Ten best research papers along with NAAS rating-2026

S. No.	Publication	NAAS rating
1	Upadhyay PK*, Sarkar S, **Dey A**, Ekka U, Rathore SS, Kumar R, Shekhawat K, Singh RK, Rajanna GA, Peramaiyan P, Gakhar S, Sahoo RN, Mrunalini K, Upadhyay V, Sharma NK, Choudhary SK, Hasnain M, Paliwal A, Tyagi V, Nagargade M and Singh VK (2026) Development and validation of a precision nitrogen management app for enhancing sustainability in maize production. Results in Engineering 29, 109306. https://doi.org/10.1016/j.rineng.2026.109306.	**13.90**
2	Bamel D, **Dey A***, Mondal BK, Bhattacharyya R, Das D, Das S, Das TK, Dash AK (2025) Non-abundance of cellulose and lignin in crop residue biomass increases decomposability and lowers temperature sensitivity of the process and helps in labile soil organic carbon build-up. Journal of Soil Science and Plant Nutrition. https://doi.org/10.1007/s42729-025-02625-3.	**9.10**
3	Mondal BK, **Dey A***, Meena MC, Das D, Singh A, Nagar S, Ray P, Upadhyay PK, Bamel D, Dash AK, Mourya KK, Yadava N and Singh T (2025) Seaweed extract-based biostimulants alleviate nutrient stress and enhance productivity and grain quality of wheat through efficient use of fertilizers nutrients under sub-optimal NPK application. Journal of Applied Phycology. https://doi.org/10.1007/s10811-025-03612-y	**9.00**
4	Dash AK, Meena MC*, Das S, **Dey A***, Raza MB, Tripathy S, Kumar A, Panda D, Divyadarshan A (2025) Temporal effects of conservation agriculture-based rice–wheat cropping system on soil aggregation and organic carbon dynamics in northwestern Indo-Gangetic plains. Journal of Soil Science and Plant Nutrition 25, 4073-4089. https://doi.org/10.1007/s42729-025-02384-1	**9.10**
5	Saha P, Das TK*, Sen S, Govindasamy P, Singh R, Raj R, Mahanta D, Meena MC, Bhatia A, Shukla L, **Dey A**, Paramanik B, Roy A, Gunturi A, Sharma T (2024) The interplay between external residue addition, and soil organic carbon dynamics and mineralization kinetics: Experiences from a 12-year-old conservation agriculture. Journal of Environmental Management 371, 122998. https://doi.org/10.1016/j.jenvman.2024.122998	**14.40**
6	Dash AK, Dwivedi BS, **Dey Abir***, Meena MC and Chakraborty D (2023) Temperature sensitivity of soil organic carbon as affected by crop residue and nutrient management options under conservation agriculture. Journal of Soil Science and Plant Nutrition 23, 4183-4197. https://doi.org/10.1007/s42729-023-01335-y	**9.40**
7	**Dey Abir**, Dwivedi BS*, Bhattacharyya R, Datta SP, Meena MC, Jat RK, Jat ML, Sarkar DJ and Kumar R (2023) Functional groups and mineralization kinetics of soil organic matter under contrasting hydro-thermal regimes under conservation agriculture-based rice-wheat system in eastern Indo-Gangetic Plains. Soil Use and Management 40, e12962. https://doi.org/10.1111/sum.12962	**9.70**
8	**Dey Abir**, Dwivedi BS*, Bhattacharyya R, Datta SP, Meena MC, Jat RK, Gupta RK, Jat ML, Singh VK, Das Debarup and Singh RG (2020) Effect of conservation agriculture on soil organic and inorganic carbon sequestration, and their lability: A study from a rice-wheat cropping system on a calcareous soil of eastern Indo-Gangetic Plains. Soil Use and Management, 36, 429-438. https://doi.org/10.1111/sum.12577	**9.70**
9	Parihar CM, Singh AK, Jat SL, **Dey Abir***, Nayak HS*, Mandal BN, Saharawat YS, Jat ML and Yadav OP (2020) Soil quality and carbon sequestration under conservation agriculture with balanced nutrition in intensive cereal-based system. Soil and Tillage Research, 202, 104653. https://doi.org/10.1016/j.still.2020.104653	**12.80**
10	Jat SL, Parihar CM*, **Dey Abir**, Nayak HS, Ghosh A, Parihar N, Goswami AK and Singh AK (2019) Dynamics and temperature sensitivity of soil organic carbon mineralization under medium-term conservation agriculture as affected by residue and nitrogen management options. Soil and Tillage Research, 190, 175-185. https://doi.org/10.1016/j.still.2019.02.005	**12.80**

Total publications (peer-reviewed journals only): 77
International: 47
National: 30
Citation: 1570 (till 12th May 2026)

Google scholar link: https://scholar.google.co.in/citations?user=noDOM3AAAAAJ&hl=en
Research Gate link: https://www.researchgate.net/profile/Abir-Dey-3?ev=hdr_xprf