

PUBLICATION REPORT

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Research Article:	
1.	Patra, S. K., Sengupta, S. , Das, S. S., & Mazumdar, D. (2025). Assessment of the interaction of copper and zinc with cadmium to reduce its toxicity in heavy metal-contaminated river basin soils. <i>Discover Soil</i> , 2(1), 2.
2.	Patra, S. K., Sengupta, S. , Banik, M., & Poddar, R. (2024). Improving the root yield, quality, water productivity and economics of sarpagandha (<i>Rauwolfia serpentina</i> L. Benth.) through irrigation and nitrogen management. <i>Irrigation and Drainage</i> , 1-15.
3.	Patra, S. K., Poddar, R., Sarkar, A., Sen, A., Sengupta, S. , Kundu, R., & Saha, S. (2024). Irrigation Scheduling and Nutrient Management in Green Gram Cultivation: An Evaluation of Yield and Water Productivity, Soil Water-Nutrient Dynamics, Energy Budgeting and Profitability. <i>International Journal of Plant Production</i> , 1-19.
4.	Laha, A., Sarkar, S., Sengupta, S. , Das, A., Paul, S., & Bhattacharyya, S. (2024). Unraveling the potential of <i>Acinetobacter calcoaceticus</i> for arsenic resistance and plant growth promotion in contaminated lentil field. <i>South African Journal of Botany</i> , 168, 61-70.
5.	Das, S., Sengupta, S. , Patra, P. K., & Dey, P. (2024). Limestone and yellow gypsum can reduce cadmium accumulation in groundnut (<i>Arachis hypogaea</i>): A study from a three-decade old landfill site. <i>Chemosphere</i> , 353, 141645.
6.	Bhattacharya, P., Sengupta, S. , Bhattacharyya, K (2024) Cationic micronutrient fractions in some tropical <i>Alfisols</i> and <i>Inceptisols</i> as affected by organic amendments and simulated moisture regimes: an incubation study, <i>Journal of Plant Nutrition</i> , 47(10), 1527-1545.
7.	Laha, A., Sengupta, S. , Bhattacharyya, S., Bhattacharyya, K., & GuhaRoy, S. (2024). Isolation and characterization of rhizobacteria from lentil for arsenic resistance and plant growth promotion. <i>3 Biotech</i> , 14(1), 1-13.
8.	Sengupta, S. , Bhattacharya, P., Bhattacharyya, K., Pandian, B. J., & Chinchmalatpure, A. R. (2023). Assessment of the Suitability of Extractants for Predicting Plant Available Arsenic in Some Tropical Rice Growing Inceptisols of Eastern India. <i>Communications in Soil Science and Plant Analysis</i> , 1-18.
9.	Sengupta, S. , Patra, S. K., Laha, A., Poddar, R., Bhattacharyya, K., Dey, P., & Mandal, J. (2023). Replacing conventional surface irrigation with micro-irrigation in vegetables can alleviate arsenic toxicity and improve water productivity. <i>Groundwater for Sustainable Development</i> , 23, 101012.
10	Baishya, A., Mishra, A., & Sengupta, S. (2023). Modelling and Assessment of Climate Change Impact on Rainfed Rice Cultivation in a Sub-humid Subtropical Region. <i>Agricultural Research</i> , 1-11.
11	Sarkar, S., Sengupta, S. , Bhattacharyya, K., Parveen, S., & Bhattacharya, P. (2023). Influence Of Varietal Duration And Nitrogen Fertilization In Augmenting Micronutrient Uptake And Yield Of Rice. <i>Journal of Survey in Fisheries Sciences</i> , 10(1S), 6973-6978.
12	Bhattacharya, P., Sengupta, S. , & Bhattacharyya, K. (2023). Relating Soil Available Zinc With

	Physicochemical Properties In New Alluvial Zone Of West Bengal, India. <i>Journal of Survey in Fisheries Sciences</i> , 10(1S), 7037-740.
13	Choudhury, R. K., Bhattacharya, P., Parveen, S., Bhattacharyya, K., & Sengupta, S. (2023). Modeling The Uptake Of Cationic Micronutrients And Rice Grain Yield At Different Graded Dose Of Nitrogen Fertilization. <i>Journal of Survey in Fisheries Sciences</i> , 10(1S), 7017-7021.
14	Sarkar, T., Sengupta, S. , Kundu, S., & Das, K. (2023). Vegetative Multiplication Of Psidium Guajava L. Through Stem Cutting. <i>Journal of Survey in Fisheries Sciences</i> , 10(1S), 754-7056.
15	Sengupta, S. , Bhattacharyya, K., Mandal, J., Bhattacharya, P., & Chattopadhyay, A. P. (2023). Zinc and iron enrichment of vermicompost can reduce the arsenic load in rice grain: An investigation through pot and field experiments. <i>Journal of Cleaner Production</i> , 419, 138267.
16	Phonglosa, A., Bhattacharyya, K., Pari, A., Ray, K., Banerjee, H., Halder, S., Sengupta, S. , Bhattacharya, P. & Mandal, J. (2023). Assessment of the suitability of selected extractants for boron in some inceptisols of Eastern India under sunflower (<i>Helianthus annuus</i> L.). <i>Journal of Plant Nutrition</i> , 46(17), 4340-4355.
17	Baishya, A., Chowdhury, A., Chakrabarty, R., Sengupta, S. , Das, A., Panda, A., Bhadoriya, U.P.S. & Mandal, D. (2023). Spatiotemporal Analysis and Trend Detection of Groundwater Levels Using Gis Techniques in Nadia District of West Bengal, India. <i>Journal of the Geological Society of India</i> , 99(6), 868-874.
18	Patra, S. K., Sengupta, S. , Das, S. S., & Mazumdar, D. (2023). Remediation of Lead Toxicity Using Phosphorus in Lead-Contaminated Agricultural Soils. <i>CLEAN–Soil, Air, Water</i> , 2200309.
19	Mandal, J., Jain, V., Sengupta, S. , Rahman, M. A., Bhattacharyya, K., Rahman, M. M., Golui, D., Wood, M.D. & Mondal, D. (2023). Determination of bioavailable arsenic threshold and validation of modeled permissible total arsenic in paddy soil using machine learning. <i>Journal of Environmental Quality</i> , 52(2), 315-327.
20	Patra, S. K., Sengupta, S. , Bhattacharya, P., & Bhattacharyya, K. (2023). Enhancing yield of lettuce through irrigation and nitrogen management in a subtropical Inceptisol. <i>Israel Journal of Plant Sciences</i> , 1(aop), 1-15.
21	Patra, S. K., Sengupta, S. , Poddar, R., & Bhattacharyya, K. (2022). Improving the growth, yield, and quality of ginger (<i>Zingiber officinale</i> Rosc.) through irrigation and nutrient management: a study from an Inceptisol of India. <i>Water SA</i> , 48(4), 487-498.
22	Das, S., Sengupta, S. , Patra, P.K., Acharjee, P.U., & Pal, S.K. (2022). Appraisal of environmental, ecological and carcinogenic risk due to heavy metals in a sewage and solid waste contaminated area, <i>Soil and Sediment Contamination: An International Journal</i> , 1-25.
23	Sengupta, S. , Bhattacharyya, K., Mandal, J., & Chattopadhyay, A.P. (2022). Complexation, retention and release pattern of arsenic from humic/fulvic acid extracted from zinc and iron enriched vermicompost. <i>Journal of Environmental Management</i> , 318, 115531.
24	Panda R., Patra, S.K. & Sengupta, S. (2022) Assessment of the Potassium Supplying Capacity of Coastal Entisols and Inceptisols under Intensive Cropping and Fertilization, <i>Communications in Soil Science and Plant Analysis</i> , 1-14. DOI: 10.1080/00103624.2022.2094943
25	Patra, S. K., & Sengupta, S. (2022). Effect of gravity-fed drip irrigation and nitrogen management on flowering quality, yield, water and nutrient dynamics of gladiolus in an Indian inceptisol. <i>Journal of Plant Nutrition</i> , 1-19. DOI: 10.1080/01904167.2022.2057327
26	Saha, C., Bhattacharya, P., Sengupta, S. , Dasgupta, S., Patra, S. K., Bhattacharyya, K., & Dey, P. (2022). Response of cabbage to soil test-based fertilization coupled with different levels of drip irrigation in an inceptisol. <i>Irrigation Science</i> , 40(2), 239-253.

27	Sengupta, S. , Pari, A., Biswas, L., Shit, P., Bhattacharyya, K., & Chattopadhyay, A. P. (2022). Adsorption of arsenic on graphene oxide, reduced graphene oxide, and their Fe ₃ O ₄ doped nanocomposites. <i>Biointerface Res. Appl. Chem</i> , 12(5), 6196-6210.
28	Sengupta, S. , Bhattacharyya, K., Mandal, J., Bhattacharya, P., Halder, S., & Pari, A. (2021). Deficit irrigation and organic amendments can reduce dietary arsenic risk from rice: Introducing machine learning-based prediction models from field data. <i>Agriculture, Ecosystems & Environment</i> , 319, 107516
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30	Das, T., Hazra, S., Sengupta, S. , Hazra, P., & Chattopadhyay, D. (2021). Genotoxic effect of saccharin on <i>Allium cepa</i> root tips. <i>Biologia</i> , 76(11), 3191-3199.
31	Mukherjee, S., Saha, N., Sarkar, B., Sengupta, S. , Ghosh, S., & Dey, P. (2021). Assessing Methods for Estimating Potentially Mineralisable Nitrogen Under Organic Production System in New Alluvial Soils of Lower Gangetic Plain. <i>Journal of Soil Science and Plant Nutrition</i> , 21 , 1030–1040
32	Laha, A., Bhattacharyya, S., Sengupta, S. , Bhattacharyya, K., and GuhaRoy, S. (2021). Investigation of arsenic-resistant, arsenite-oxidizing bacteria for plant growth promoting traits isolated from arsenic contaminated soils. <i>Archives of Microbiology</i> . 203, 4677–4692.
33	Dasgupta, S., Sengupta, S. , Saha, S., Saha, N., Bhattacharyya, K., & Dey, P. (2021). Predicting the response of soil potassium to broccoli (<i>Brassica oleracea</i> var. <i>italica</i>) in a Gangetic Inceptisol of West Bengal, India through suitable chemical extractants. <i>Journal of Plant Nutrition</i> . 44(7) : 931-945. (DOI: 10.1080/01904167.2020.1867580)
34	Bhattacharyya, K., Sengupta, S. , Pari, A., Halder, S., Bhattacharya, P., Pandian, B. J., & Chinchmalatpure, A. R. (2021). Assessing the human risk to arsenic through dietary exposure-a case study from West Bengal, India. <i>Journal of Environmental Biology</i> , 42, 353-365
35	Laha, A., Bhattacharyya, S., Sengupta, S. , Bhattacharyya, K., and GuhaRoy, S. (2021). Rhizobium Leguminosarum: A Model Arsenic Resistant, Arsenite Oxidizing Bacterium Possessing Plant Growth Promoting Attributes. <i>Current World Environment</i> , 16(1).
36	Sengupta, S. , Mukherjee, S., Halder, S. and Bhattacharya, P. (2020). Enrichment of vermicompost for improving soil quality and ensuring Zn and Fe bioavailability through rice grain. <i>Journal of Pharmacognosy and Phytochemistry</i> ; 9(1) : 246-254
37	Bhattacharya, P., Sengupta, S. and Halder, S. (2020). Characterization and delineation of micronutrient pools in some selected Inceptisols and Alfisols of West Bengal. <i>International Journal of Chemical Studies</i> . 8(2) : 732-746
38.	Laha, A., Bhattacharyya, S., Sengupta, S. , Bhattacharyya, K., and GuhaRoy, S. (2021). Study on <i>Burkholderia</i> sp: Arsenic Resistant Bacteria Isolated from Contaminated Soil. <i>Applied Ecology and Environmental Sciences</i> , 9 (2): 144-148.
Review Article:	
1.	Adak, E. & Sengupta, S. (2024). Role of polyhalite in soil-plant nutrition studies. <i>Int. J. Agric. Nutr.</i> ; 6(2): 32-34. DOI: https://doi.org/10.33545/26646064.2024.v6.i2a.179
2.	Samanta, S. & Sengupta, S. (2024). Integrated nutrient management (INM) in sustainable plant nutrition. <i>Int. J. Agric. Food Sci.</i> 6(2):128-130.

3.	Das, D. & Sengupta, S. (2024). The role of microorganisms in agriculture: Enhancing soil health, crop productivity, and sustainable farming practices. <i>Int. J. Agric. Food Sci.</i> 6(2):163-165. DOI: https://doi.org/10.33545/2664844X.2024.v6.i2c.219
4.	Adak, E., Halder, S., Koley, B., Biswas, S., Sengupta, S. , Kundu, S., & Sarkar, T. (2024). An Overview of the Importance of Biochar in Sustainable Agriculture. <i>Journal of Advances in Biology & Biotechnology</i> , 27(6), 924-937.
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6.	Mandal, S., Sasmal, D., Modak, S., Ghosh, P., Kundu, S., Sengupta, S. , Kanthal, S., & Sarkar, T. (2024). Agroforestry: socio-economic impact and future aspect. <i>Int J Res Agron.</i> 7(4S):131-137. DOI: 10.33545/2618060X.2024.v7.i4Sb.565
7.	Koley, B., Halder, S., Biswas, S., Adak, E., Sengupta, S. , Kundu, S., & Sarkar, T. (2024). Site specific nutrient management: An overview. <i>Int J Res Agron</i> 7(4S):117-126. DOI: 10.33545/2618060X.2024.v7.i4Sb.563
8.	Acharya, R., Samanta, K., Haque, K.N., Box, S., Sengupta, S. , Bhattacharyya, P., & Kanthal, S. (2024). Climate change impact on soil health and crop production. <i>Int J Res Agron</i> 7(4):150-156. DOI: 10.33545/2618060X.2024.v7.i4c.540
9.	Mondal, T., Sarkar, T., Sengupta, S. , Kundu, S. (2024). Nutritional and pharmacological aspects of <i>Trapa natans</i> : An underutilized boon crop of West Bengal. <i>Int J Res Agron</i> 7(4):69-72. DOI: 10.33545/2618060X.2024.v7.i4b.522
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12.	Bakshi, A., Dutta, R., Kundu, S., Sengupta, S. , Kanthal, S., & Sarkar, T. (2024). Prospect of nano-fertilizers in agriculture: An overview. <i>Int J Agric Extension Social Dev</i> 7(4S):08-12. DOI: 10.33545/26180723.2024.v7.i4Sa.516
13.	Dutta, R., Bakshi, A., Kundu, S., Sengupta, S. , Kanthal, S., & Sarkar, T. (2024). Exploring the progress and techniques of cultivating oyster mushrooms: A comprehensive review. <i>Int J Agric Extension Social Dev</i> 7(4):138-143.
14.	Raj, V., Sengupta, S. , Kundu, S., & Sarkar, T. (2024). Advance agriculture system using artificial intelligence: Way towards future farming. <i>Int J Agric Extension Social Dev</i> ;7(4):31-34. DOI: 10.33545/26180723.2024.v7.i4a.498
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17.	Laha, A., Sengupta, S. , Bhattacharyya, P., Mandal, J., Bhattacharyya, S., Bhattacharyya, K. (2022) Recent advances in the bioremediation of arsenic-contaminated soils: a mini review. <i>World Journal of Microbiology and Biotechnology</i> 38 , 189.

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20.	Sengupta, S. , Bhattacharya, P. and Hazra, S. (2019). Ensuring nutritional security through zinc biofortification of rice grain in Indian scenario: A review. <i>International Journal of Chemical Studies</i> . 7(6) : 2129-2144.
Edited Book:	
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2.	Sarkar, T., Sengupta, S. , & Chatterjee, A. (2024). Innovations and Challenges in Modern Agriculture. Published by Integrated Publications, New Delhi, India. ISBN: 978-93-5834-874-3
3	Sarkar, T., & Sengupta, S. (2024). Harvesting Tomorrow Innovations Redefining Agriculture. Published by AkiNik Publications, New Delhi, India. ISBN: 978-93-6135-113-6
4.	Sarkar, T., Kundu, S., Sengupta, S. , & Chatterjee, A. (2023). Modern Facets of Agriculture in India. Published by Swami Vivekananda University, India. ISBN: 978-93-5967-754-5
Book Chapter:	
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2.	Sengupta, S. (2024). Ensuring Clean Water: Advanced Strategies for Quality and Management. In <i>Resource Conservation: A way to foster the crop production</i> . (pp. 12-26). Published by Swami Vivekananda University, India.
3.	Sengupta, S. (2024). Radio Tracer Technique in Soil-Plant Studies: Unraveling the Dynamics of Nutrient Uptake and Transport. In <i>Emerging Trends in Sustainable Agriculture</i> . (pp. 1-8). Published by Swami Vivekananda University, India.
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6.	Ganguly, P., Mandal, J., Sengupta, S. , & Sinha, B. (2024). Basics of Environment, Pollution, and Bioremediation Techniques. In: <i>Environmental Contaminants: Impact, Assessment, and Remediation</i> (pp. 1-18). CRC Press.
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	Delineation. In: <i>Environmental Contaminants: Impact, Assessment, and Remediation</i> (pp. 47-81). CRC Press.
8.	Dey, A., Dasgupta, S., Sengupta, S. , Dutta, S., Mukhopadhyay, S., & Majumder, S. P. (2023). Food Security and Carbon Footprint: Lessons from COVID-19 in the Indian Subcontinent. In <i>Handbook of Energy Management in Agriculture</i> (pp. 1-25). Singapore: Springer Nature Singapore.
9.	Laha, A., Sengupta, S. , Mandal, J., Bhattacharyya, K., & Bhattacharyya, S. (2023). The Role of Plant Growth Promoting Bacteria on Arsenic Removal: A Review of Existing Perspectives. In: Kumar, N., Kumar, S. (eds) <i>Arsenic Toxicity Remediation: Biotechnological Approaches</i> (pp. 241–262). Environmental Science and Engineering. Springer, Cham
10.	Laha, A., Sengupta, S. , Mandal, J., Bhattacharyya, K., & Bhattacharyya, S. (2023). The Journey of Arsenic from Soil to Plant. In: Kumar, N., Kumar, S. (eds) <i>Arsenic Toxicity Remediation: Biotechnological Approaches</i> (pp. 3-14). Cham: Springer Nature Switzerland.
11.	Sengupta, S. , Roychowdhury, T., Phonglosa, A., & Mandal, J. (2022). Arsenic Contamination in Rice and the Possible Mitigation Options. In: <i>Global Arsenic Hazard: Ecotoxicology and Remediation</i> (pp. 35-48). Cham: Springer International Publishing.
12.	Sengupta, S. , Dasgupta, S., Bhattacharyya, K., Chakraborty, S., & Dey, P. (2022). A Pandemic Resilient Framework for Sustainable Soil Health and Food Security: Response beyond COVID-19. In <i>Innovation in Small-Farm Agriculture</i> (pp. 53-62). CRC Press.
13.	Bhattacharyya, K., Sinha, A., Sengupta, S. , Dasgupta, S., Patra, S. K., Dey, P., & Mazumdar, D. (2022). Optimizing Irrigation Requirement of Soil Test-Based Fertilizer Recommendation Models for Targeted Yields of Cabbage and Broccoli in a Typic Fluvaquept Soil. In <i>Advanced Modelling and Innovations in Water Resources Engineering</i> (pp. 729-747). Springer, Singapore.
14.	Dasgupta, S., Sengupta, S. , Saha, S., Sarkar, A., and Anantha, K.C. (2021). Approaches in Advanced Soil Elemental Extractability: Catapulting Future Soil–Plant Nutrition Research. In <i>Soil Science: Fundamentals to Recent Advances</i> (pp. 191-236). Springer, Singapore.
15.	Bhattacharyya, K. and Sengupta, S. (2020). Arsenic management options in soil-plant-food chain. In: <i>Proceedings of the National Webinar On Arsenic Mitigation: A Nexus Approach</i> ; (Prasad Bishun D., Mandal Jajati., Kumar Sunil., Sohane R K, Eds.), pp. 17-23. (ISBN- 978-93-5407-684-8).
16.	Bhattacharya, P., Sengupta, S. and Halder, S. (2019). Customized, Fortified and Nano Enabled Fertilizers-Prioritizing and Profiteering Sustainability in Agriculture. In: <i>Advances in Agriculture Sciences; Vol-19</i> (R.K. Naresh, Eds.), Akinik Publications, New Delhi, pp. 69-97. (ISBN- 978-93-5335-728-3).
Patents published:	
1.	Tanmoy Sarkar, Vibhor Raj, Sudip Sengupta , Abhishek Dhar, Saurabh Adhikari, Subhranil Som. Patent applied on “From Fields to Future: 4-Wheel Drive Robots are Reshaping Agriculture” (Application No. 202431003636, Published on 09/02/2024)
2.	Tanmoy Sarkar, Vibhor Raj, Sudip Sengupta , Suprabuddha Kundu, Abhishek Dhar, Saurabh Adhikari, Subhranil Som. Patent applied on “Grow Sense Plant Support System” (Application No. 202431029282, Published on 26/04/2024)
3	Tanmoy Sarkar, Vibhor Raj, Sudip Sengupta , Abhishek Dhar, Saurabh Adhikari, Subhranil Som. Patent applied on “Thermo Guard Agri Sprayer” (Application No. 202431029002, Published on 19/04/2024)
4	Tanmoy Sarkar, Vibhor Raj, Sudip Sengupta , Abhishek Dhar, Saurabh Adhikari, Subhranil Som. Patent applied on “Revolutionizing Agriculture: Vermicompost Innovations” (Application No.

	202431028475, Published on 19/04/2024)
5.	Tanmoy Sarkar, Vibhor Raj, Sudip Sengupta , Abhishek Dhar, Saurabh Adhikari, Subhranil Som. Patent applied on “Exploring Wireless Charging technologies for smartphones” (Application No. 202431002798, Published on 02/02/2024)
6.	Tanmoy Sarkar, Vibhor Raj, Sudip Sengupta , Abhishek Dhar, Saurabh Adhikari, Subhranil Som. Patent applied on “Turning Tap Water into Electricity: A green solution” (Application No. 202431002783, Published on 02/02/2024)
7.	Tanmoy Sarkar, Sudip Sengupta , Vibhor Raj, Avishek Chatterjee. Patent applied on “Automated Sanitization System for Laboratory Environments” (Application No. 202431090713 A, Published on 13/12/2024)
8.	Tanmoy Sarkar, Sudip Sengupta . Patent applied on “Application of Sewage on the Germination and Early Development of Amaranthus" (Application No. 202431091463 A, Published on 29/11/2024)
9.	Tanmoy Sarkar, Sudip Sengupta . Patent applied on "Development and Optimization of a Solar-Powered Chill Preservation Unit for Perishable Goods" (Application No. 202431091467 A, Published on 29/11/2024)
Popular Article:	
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