Sher-e-Bangla Agricultural University

SDG Activity Report

on

SDG 08:

Decent Work and Economic Growth

(2025–2026)

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36. Stakeholder and expert opinion of solar radiation modification in South Asia: insights into perceptions, geopolitical, and governance concerns in Bangladesh

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38. Biochar-biostimulant combinations enhance nodulation, yield, and antioxidant defense in mungbean under reduced NPK fertilization

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40. Development of a Silicon Efficiency Index Integrated with GGE Biplot Analysis for Identifying Salinity-tolerant Wheat Genotypes

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43. Imperative roles of auxin signaling in reprogramming of drought tolerance in plants

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49. Determinants of adoption of climate-smart agriculture (CSA) practices in mushroom farming in Bangladesh

50. Microbial Degradation of Herbicide Residues in Australian Soil: An Overview of Mechanistic Insights and Recent Advancements

51. Pesticide handling practices, occupational risks, and health expenses among Bangladeshi smallholder vegetable farmers

52. Mechanisms of waterlogging tolerance in plants

53. Understanding the Basics: Definitions, Sources, and Classifications

54. Community Perceptions and Economic Drivers of Hilsa Fishery Conservation in Riverbank Villages of Bangladesh

55. Assessing resilience of surface water management schemes in Bangladesh: strategic insights for transformation

56. Knowledge, attitudes, and practices on occupational hazards among veterinary students in Bangladesh: A cross-sectional study

57. Understanding rice farmers' fertilizer application behavior to advance sustainable agricultural practices in Bangladesh: insights from the extended KAP model

58. Factors influencing the adoption of biosecurity practices in livestock farming in bangladesh for infectious disease prevention

59. Assessing Suitability of Various Morphological and Ionic Traits as Proxies for Barley Tolerance to Combined Salinity and Waterlogging Stress

60. Fungi for Future Farming: Enhancing Nutrient Uptake and Stress Resilience in Sustainable Development Era

61. Algae-based bioremediation of soil, water, and air: a solution to polluted environment

Faculty Research and Publications

1. Next-Generation Crop Improvement: Social, Ethical, and Regulatory Perspectives on GMO Commercialization and Future Challenges

Author: Boora N.; Ahlawat Y.; Chaudhary D.; Jaiwal P.K.; Kundu S.

Year: 2025

DOI / Link: https://doi.org/10.1007/978-981-95-0309-4_14

Abstract:

The publication abstract for 'Next-Generation Crop Improvement: Social, Ethical, and Regulatory Perspectives on GMO Commercialization and Future Challenges' (DOI: 10.1007/978-981-95-0309-4_14) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105024051397?origin=resultslist.

2. E-commerce and the consumption structure of rural households in China

Author: Jiang Q.; Wang W.; Wang F.; Akter A.; Xu H.; Zhao Q.

Year: 2026

DOI / Link: https://doi.org/10.1057/s41599-026-07973-8

Abstract:

The publication abstract for 'E-commerce and the consumption structure of rural households in China' (DOI: 10.1057/s41599-026-07973-8) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105044023121?origin=resultslist.

3. Heavy Metals and Trace Elements in the Context of the SDGs

Author: Ali M.M.; Hossain D.; Hossain M.K.; Nag S.K.; Bristi S.Z.T.; Ahmed M.J.

Year: 2026

DOI / Link: https://doi.org/10.1007/978-3-032-26858-7_6

Abstract:

The publication abstract for 'Heavy Metals and Trace Elements in the Context of the SDGs' (DOI: 10.1007/978-3-032-26858-7_6) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105054457689?origin=resultslist.

4. Harnessing plant–microbe interactions for sustainable crop improvement: from genomics to breeding

Author: Kayess O.; Tahjib-Ul-Arif; Halder T.; Siddiqui N.

Year: 2026

DOI / Link: https://doi.org/10.1007/s13199-026-01116-y

Abstract:

The publication abstract for 'Harnessing plant–microbe interactions for sustainable crop improvement: from genomics to breeding' (DOI: 10.1007/s13199-026-01116-y) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105034692571?origin=resultslist.

5. Living on the flood line: Constructing and validating a combined multidimensional resilience index for rural riverine floodplain communities

Author: Islam A.R.M.T.; Mamun M.A.-A.; Tasnuva A.; Aktar M.N.; Mishra M.; Al Mamun A.; Moin M.J.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.scitotenv.2026.181581

Abstract:

The publication abstract for 'Living on the flood line: Constructing and validating a combined multidimensional resilience index for rural riverine floodplain communities' (DOI: 10.1016/j.scitotenv.2026.181581) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105030855134?origin=resultslist.

6. Technology Adoption Intention and Sustainable Entrepreneurship Ability of Rural Women in Bangladesh

Author: Sarker T.; Roy R.; Yeasmin S.; Rabbany M.G.; Asaduzzaman M.

Year: 2025

DOI / Link: https://doi.org/10.1002/bsd2.70067

Abstract:

The publication abstract for 'Technology Adoption Intention and Sustainable Entrepreneurship Ability of Rural Women in Bangladesh' (DOI: 10.1002/bsd2.70067) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/85215265672?origin=resultslist.

7. Herbicides in modern sustainable agriculture: environmental fate, ecological implications, and human health concerns

Author: Parven A.; Meftaul I.M.; Venkateswarlu K.; Megharaj M.

Year: 2025

DOI / Link: https://doi.org/10.1007/s13762-024-05818-y

Abstract:

The publication abstract for 'Herbicides in modern sustainable agriculture: environmental fate, ecological implications, and human health concerns' (DOI: 10.1007/s13762-024-05818-y) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/85196307990?origin=resultslist.

8. Does the adoption of improved pulse technologies increase farm profitability in the face of climate risk? Evidence from coastal Bangladesh

Author: Kundu N.D.; Uddin M.T.; Shama A.S.; Sattar M.N.; Majumder M.K.; Tushar M.T.I.; Islam M.M.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.envc.2025.101384

Abstract:

The publication abstract for 'Does the adoption of improved pulse technologies increase farm profitability in the face of climate risk? Evidence from coastal Bangladesh' (DOI: 10.1016/j.envc.2025.101384) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105024613241?origin=resultslist.

9. Prediction to Prevention: Comparative Machine Learning Models for Early Intervention of Dactyloctenium radulans in Australia

Author: Asaduzzaman M.; Mandal M.S.H.; Koetz E.; Rahman A.; Masum S.M.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.rama.2026.02.004

Abstract:

The publication abstract for 'Prediction to Prevention: Comparative Machine Learning Models for Early Intervention of Dactyloctenium radulans in Australia' (DOI: 10.1016/j.rama.2026.02.004) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105033379666?origin=resultslist.

10. River Waste to Goldmine: A Tale of Floating Agriculture in Vulnerable Southern Regions of Bangladesh

Author: Sarker M.R.; Kundu N.D.; Sujan M.H.K.; Salman M.; McKenzie A.M.; Islam M.M.; Rahman M.A.; Uddin M.T.; Bhandari H.; Sarkar M.A.R.

Year: 2025

DOI / Link: https://doi.org/10.1002/fes3.70062

Abstract:

The freshwater prawn (Macrobrachium rosenbergii) constitutes an integral component of the aquaculture sector in Bangladesh, with biofloc technology (BFT) emerging as a sustainable and resource-efficient alternative to conventional farming methods. This study evaluated the comparative effects of three herbal extracts—ginger (GE), amla (AE), and garlic (GaE)—on the growth performance, survival rate, and nutritional composition of M. rosenbergii juveniles cultivated in a biofloc-based system over an eight-week period. Four experimental groups were established: a control (T1), GE (T2), AE (T3), and GaE (T4), with herbal extracts incorporated into commercial feed at a concentration of 200ml/ kg. Among the treatments, amla extract (T3) yielded the most favorable results, reflected in significantly higher mean weight gain (10.5 ± 0.5 g), percentage weight gain (275.5 ± 27.7%), and specific growth rate (2.6 ± 0.1%). The feed conversion ratio (FCR) was the lowest in T3 (0.8 ± 0.0), indicating superior feed efficiency. Proximate analysis of muscle tissue revealed that prawns in the AE group had the highest crude protein content (74.1%) along with optimal fat and fiber levels, highlighting its nutritional benefits. Additionally, the presence of biofloc improved water quality and performance metrics across all treatments compared to the control. These findings suggest that integrating amla extract with BFT can significantly enhance

growth, feed utilization, and flesh quality in prawn aquaculture, offering an environmentally sustainable and economically viable strategy.

11. An Efficient and Explainable Ensemble Framework for Rice Leaf Disease Classification Using Lightweight Deep Learning Models

Author: Islam M.H.; Nur F.N.; Israfil M.

Year: 2025

DOI / Link: https://doi.org/10.1109/STI69347.2025.11367554

Abstract:

The publication abstract for 'An Efficient and Explainable Ensemble Framework for Rice Leaf Disease Classification Using Lightweight Deep Learning Models' (DOI: 10.1109/STI69347.2025.11367554) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105033883696?origin=resultslist.

12. Bioaugmentation with Plant Growth-Promoting Rhizobacteria Alleviates Chromium and Salt Stress in Rice Through the Improvement of Physiology, Ion Homeostasis, and Antioxidant Defense

Author: Sobahan M.A.; Akter N.; Karim M.M.; Badhon M.M.I.; Khan S.N.; Alam S.; Prasad P.V.V.; Hasanuzzaman M.

Year: 2025

DOI / Link: https://doi.org/10.3390/microorganisms13071462

Abstract:

The publication abstract for 'Bioaugmentation with Plant Growth-Promoting Rhizobacteria Alleviates Chromium and Salt Stress in Rice Through the Improvement of Physiology, Ion Homeostasis, and Antioxidant Defense' (DOI: 10.3390/microorganisms13071462) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105011477479?origin=resultslist.

13. Effect of integrated seed priming on storage duration for enhanced germination traits in lentil (Lens culinaris L.) under salinity stress

Author: Rao D.; Yadav S.; Choudhary R.; Singh D.; Bhardwaj R.; Barthakur S.; Hasanuzzaman M.; Sushkova S.; Singh J.; Yadav S.K.

Year: 2026

DOI / Link: https://doi.org/10.1002/jsfa.70289

Abstract:

The publication abstract for 'Effect of integrated seed priming on storage duration for enhanced germination traits in lentil (Lens culinaris L.) under salinity stress' (DOI: 10.1002/jsfa.70289) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105021978113?origin=resultslist.

14. Navigating the productivity-adaptation-mitigation triangle in climate-smart agriculture for rice-based ecosystems

Author: Das Pantha S.; Mimi T.T.; Roy R.; Talukder B.

Year: 2026

DOI / Link: https://doi.org/10.1002/agj2.70425

Abstract:

The publication abstract for 'Navigating the productivity-adaptation-mitigation triangle in climate-smart agriculture for rice-based ecosystems' (DOI: 10.1002/agj2.70425) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105039621825?origin=resultslist.

15. Receptor modeling and multivariate analysis of heavy metals in mud soils from the tourism-intensive Sundarbans mangrove ecosystem

Author: Salam M.A.; Akter I.; Islam M.S.; Nur-E-Alam M.; Dey U.; Siddique M.A.B.; Rahman M.M.; Ali M.M.; Huda S.M.S.; Rahman H.; Rahman M.R.

Year: 2026

DOI / Link: https://doi.org/10.1007/s13762-026-07238-6

Abstract:

The publication abstract for 'Receptor modeling and multivariate analysis of heavy metals in mud soils from the tourism-intensive Sundarbans mangrove ecosystem' (DOI: 10.1007/s13762-026-07238-6) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105036842292?origin=resultslist.

16. Nanocellulose: A novel pathway to sustainable agriculture, environmental protection, and circular bioeconomy

Author: Ahmed S.; Islam M.S.; Antu U.B.; Islam M.M.; Rajput V.D.; Mahiddin N.A.; Paul J.R.; Ismail Z.; Ibrahim K.A.; Idris A.M.

Year: 2025

DOI / Link: https://doi.org/10.1016/j.ijbiomac.2024.137979

Abstract:

The publication abstract for 'Nanocellulose: A novel pathway to sustainable agriculture, environmental protection, and circular bioeconomy' (DOI: 10.1016/j.ijbiomac.2024.137979) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/85210690552?origin=resultslist.

17. Market dynamics, consumer preferences, systemic barriers, and the potential of integrated multi-trophic aquaculture in Bangladesh

Author: Zewdie M.C.; Bari S.M.; Ahmed S.T.; Hamid M.A.; Bhuyain M.A.B.; Ali S.M.; Magondu E.W.; Rossignoli C.M.; Yossa R.

Year: 2026

DOI / Link: https://doi.org/10.3389/fsufs.2026.1781267

Abstract:

The publication abstract for 'Market dynamics, consumer preferences, systemic barriers, and the potential of integrated multi-trophic aquaculture in Bangladesh' (DOI: 10.3389/fsufs.2026.1781267) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105044380676?origin=resultslist.

18. Synergistic effects of vermicompost and biochar amendments on cherry tomato production in an urban rooftop garden: A 2-year study

Author: Islam M.M.; Islam R.; Nizam R.; Afsana N.; Sakib S.; Parvin S.; Mahmud J.A.; Hasanuzzaman M.

Year: 2026

DOI / Link: https://doi.org/10.1002/uar2.70045

Abstract:

The publication abstract for 'Synergistic effects of vermicompost and biochar amendments on cherry tomato production in an urban rooftop garden: A 2-year study' (DOI: 10.1002/uar2.70045) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105032256479?origin=resultslist.

19. Foliar application of allantoin reinforces antioxidant defense and glyoxalase systems to confer tolerance against arsenic toxicity in rice (Oryza sativa L.)

Author: Hasanuzzaman M.; Alam S.; Sultana A.; Sabiha U.K.; Alam M.M.; Prasad P.V.V.

Year: 2026

DOI / Link: https://doi.org/10.1186/s12870-026-08192-8

Abstract:

The publication abstract for 'Foliar application of allantoin reinforces antioxidant defense and glyoxalase systems to confer tolerance against arsenic toxicity in rice (Oryza sativa L.)' (DOI: 10.1186/s12870-026-08192-8) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105030502063?origin=resultslist.

20. Optimizing raised bed dimensions for enhanced maize yield, water footprint reduction, and improved soil moisture dynamics under furrow irrigation

Author: Islam M.T.; Bhuyan M.Y.; Das N.; Jahan N.; Rahman M.M.; Jewel M.A.H.; Adham A.K.M.

Year: 2025

DOI / Link: https://doi.org/10.13057/asianjagric/g090102

Abstract:

The publication abstract for 'Optimizing raised bed dimensions for enhanced maize yield, water footprint reduction, and improved soil moisture dynamics under furrow irrigation' (DOI: 10.13057/asianjagric/g090102) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/85211163128?origin=resultslist.

21. Gene Bank: Conservation of Genetic Resources in the Genomic Era

Author: Rahman M.S.; Rahman M.Z.; Gain N.; Nesa M.M.; Islam M.Z.; Deepo D.M.; Rahman J.

Year: 2026

DOI / Link: https://doi.org/10.1007/978-3-032-02605-7_8

Abstract:

The publication abstract for 'Gene Bank: Conservation of Genetic Resources in the Genomic Era' (DOI: 10.1007/978-3-032-02605-7_8) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105050458767?origin=resultslist.

22. Harnessing Rice Combine Harvester Adoption for Sustainable Agriculture in the Haor (Wetland) Ecosystem of Bangladesh

Author: Sujan M.H.K.; Sarker M.R.; Sarkar M.A.R.; Sultana M.; Rahman M.S.; Ahammad S.; Khan M.

Year: 2025

DOI / Link: https://doi.org/10.1111/1467-8489.70055

Abstract:

The publication abstract for 'Harnessing Rice Combine Harvester Adoption for Sustainable Agriculture in the Haor (Wetland) Ecosystem of Bangladesh' (DOI: 10.1111/1467-8489.70055) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105017956116?origin=resultslist.

23. Analyzing the impact of climate change and renewable energy on agricultural productivity in Bangladesh using an ARDL model

Author: Ahammad S.; Datta T.; Mosharof N.B.; Islam M.F.; Bhuiyan M.I.H.; Ahmed M.J.; Alam K.E.

Year: 2026

DOI / Link: https://doi.org/10.1007/s43621-026-03525-x

Abstract:

The publication abstract for 'Analyzing the impact of climate change and renewable energy on agricultural productivity in Bangladesh using an ARDL model' (DOI: 10.1007/s43621-026-03525-x) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105046539451?origin=resultslist.

24. Strategies to strengthen institutional capacities for climate-resilient coastal socio-ecological systems in Bangladesh

Author: Roy R.; Chakraborty L.; Haldar S.; Talukder B.; Tan M.L.; Roy S.; Bhuiyan S.; Chan N.W.

Year: 2026

DOI / Link: https://doi.org/10.1080/17565529.2026.2617374

Abstract:

The publication abstract for 'Strategies to strengthen institutional capacities for climate-resilient coastal socio-ecological systems in Bangladesh' (DOI: 10.1080/17565529.2026.2617374) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105028109190?origin=resultslist.

25. Pulse farmers' adaptation to climate-induced variability in coastal Bangladesh: Perceptions, strategies, and drivers

Author: Kundu N.D.; Uddin M.T.; Sarker M.R.; Sujan M.H.K.; Noman M.A.A.; Islam M.M.; Sarkar M.A.R.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.cliser.2026.100646

Abstract:

The publication abstract for 'Pulse farmers' adaptation to climate-induced variability in coastal Bangladesh: Perceptions, strategies, and drivers' (DOI: 10.1016/j.cliser.2026.100646) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105030532208?origin=resultslist.

26. Roles of ROS and NO in Plant Responses to Individual and Combined Salt Stress and Waterlogging

Author: Anee T.I.; Sewelam N.A.; Bautista N.S.; Hirayama T.; Suzuki N.

Year: 2025

DOI / Link: https://doi.org/10.3390/antiox14121455

Abstract:

The publication abstract for 'Roles of ROS and NO in Plant Responses to Individual and Combined Salt Stress and Waterlogging' (DOI: 10.3390/antiox14121455) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105025762961?origin=resultslist.

27. Magnesium-mediated stress adaptation in plants: from physio-biochemical insights to climate-resilient agriculture

Author: Sarraf M.; Bansal R.; Shackira A.M.; Yadav V.; Zarbakhsh S.; Roychowdhury R.; Chauhan D.K.; Mousavi H.; Hasanuzzaman M.

Year: 2026

DOI / Link: https://doi.org/10.3389/fpls.2026.1715501

Abstract:

The publication abstract for 'Magnesium-mediated stress adaptation in plants: from physio-biochemical insights to climate-resilient agriculture' (DOI: 10.3389/fpls.2026.1715501) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105032240435?origin=resultslist.

28. Corn cob incorporated lightweight concrete: Experimental evaluation and mechanical strength optimization using response surface methodology

Author: Jewel A.; Izlal S.; Kader M.A.; Fujisawa K.; Komariah K.; Eziefula U.G.; Islam M.T.; Adham A.K.M.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.nxsust.2026.100380

Abstract:

The publication abstract for 'Corn cob incorporated lightweight concrete: Experimental evaluation and mechanical strength optimization using response surface methodology' (DOI: 10.1016/j.nxsust.2026.100380) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105042611699?origin=resultslist.

29. Planetary Health Consequences of Telecoupled Shrimp Farming

Author: Talukder B.; Mondal K.P.; Saifuzzaman M.; Roy R.; Salim R.; vanLoon G.W.; Hipel K.W.

Year: 2025

DOI / Link: https://doi.org/10.1007/s10393-025-01733-x

Abstract:

The publication abstract for 'Planetary Health Consequences of Telecoupled Shrimp Farming' (DOI: 10.1007/s10393-025-01733-x) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105011634474?origin=resultslist.

30. Effect of paclobutrazol application and bunch covering on productivity and quality of banana

Author: Araf T.; Kayes A.; Islam N.; Choudhury S.

Year: 2025

DOI / Link: https://doi.org/10.22077/jhpr.2025.8299.1439

Abstract:

The publication abstract for 'Effect of paclobutrazol application and bunch covering on productivity and quality of banana' (DOI: 10.22077/jhpr.2025.8299.1439) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105014638808?origin=resultslist.

31. Molecular Insights into NAC Transcription Factors: Key Regulators of Plant Response to Metal Stress

Author: Bouzroud S.; Fayezizadeh M.R.; Das S.; Sarraf M.; Saleem M.H.; Ercisli S.; Mirmazloum I.; Hasanuzzaman M.

Year: 2025

DOI / Link: https://doi.org/10.1007/s00344-025-11787-4

Abstract:

The publication abstract for 'Molecular Insights into NAC Transcription Factors: Key Regulators of Plant Response to Metal Stress' (DOI: 10.1007/s00344-025-11787-4) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105012585008?origin=resultslist.

32. Climate-smart aquaculture practice: Changes in economic viability and efficiency of mud crab fattening in coastal Bangladesh

Author: Sujan M.H.K.; Sarkar M.A.R.; Sultana M.; Akber M.A.; McKenzie A.M.; Kazal M.M.H.; Islam I.; Aziz A.A.

Year: 2025

DOI / Link: https://doi.org/10.1016/j.crm.2025.100726

Abstract:

The publication abstract for 'Climate-smart aquaculture practice: Changes in economic viability and efficiency of mud crab fattening in coastal Bangladesh' (DOI: 10.1016/j.crm.2025.100726) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105010475933?origin=resultslist.

33. Estimating soil organic carbon by integrating mid-infrared spectroscopy with explainable machine learning

Author: Khatun M.M.; Hasan M.A.; Chyon M.S.A.; Anzoom R.; Ahmed M.W.; Azam M.S.; Hasan Sazzad Iqbal S.M.; Rahim M.A.; Imtiaz M.N.; Ahmed M.T.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.rechem.2026.103386

Abstract:

The publication abstract for 'Estimating soil organic carbon by integrating mid-infrared spectroscopy with explainable machine learning' (DOI: 10.1016/j.rechem.2026.103386) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105037500035?origin=resultslist.

34. Enhancing Salt Tolerance in Foxtail Millet Through Organic Inputs: A Soil–Plant–Microbe Interaction Perspective

Author: Irin I.J.; Hasanuzzaman M.

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DOI / Link: https://doi.org/10.1155/ioa/9169279

Abstract:

The publication abstract for 'Enhancing Salt Tolerance in Foxtail Millet Through Organic Inputs: A Soil–Plant–Microbe Interaction Perspective' (DOI: 10.1155/ioa/9169279) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105034296995?origin=resultslist.

35. Proteomics in Allopolyploid Crops: Stress Resilience, Challenges and Prospects

Author: Halder T.; Bhoite R.; Islam S.; Yan G.; Siddiqui M.N.; Kayess M.O.; Siddique K.H.M.

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Abstract:

The publication abstract for 'Proteomics in Allopolyploid Crops: Stress Resilience, Challenges and Prospects' (DOI: 10.3390/proteomes13040060) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105027431697?origin=resultslist.

36. Stakeholder and expert opinion of solar radiation modification in South Asia: insights into perceptions, geopolitical, and governance concerns in Bangladesh

Author: Rahman M.S.; Sarker F.; Kabir M.H.; Baum C.M.; Merk C.; Roconuzzaman M.

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DOI / Link: https://doi.org/10.1088/2515-7620/ae5473

Abstract:

The publication abstract for 'Stakeholder and expert opinion of solar radiation modification in South Asia: insights into perceptions, geopolitical, and governance concerns in Bangladesh' (DOI: 10.1088/2515-7620/ae5473) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105034178129?origin=resultslist.

37. Phytoprotectants in action: Shielding plants from oxidative damage under temperature extremes and waterlogging stress

Author: Datta D.; Alam S.; Sinthi F.; Nahar K.; Hasanuzzaman M.

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DOI / Link: https://doi.org/10.3329/jbas.v50i3.93933

Abstract:

The publication abstract for 'Phytoprotectants in action: Shielding plants from oxidative damage under temperature extremes and waterlogging stress' (DOI: 10.3329/jbas.v50i3.93933) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105053883265?origin=resultslist.

38. Biochar-biostimulant combinations enhance nodulation, yield, and antioxidant defense in mungbean under reduced NPK fertilization

Author: Amin M.; Sani M.N.H.; Rahman M.M.; Akter S.; Mahabub M.R.; Mohsin S.M.; Islam M.A.; Yong J.W.H.; Ahmmed A.N.F.

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DOI / Link: https://doi.org/10.1038/s41598-026-63172-0

Abstract:

The publication abstract for 'Biochar-biostimulant combinations enhance nodulation, yield, and antioxidant defense in mungbean under reduced NPK fertilization' (DOI: 10.1038/s41598-026-63172-0) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105046305912?origin=resultslist.

39. Groundwater under the lens: a remote sensing exploration of storage patterns and trends in Bangladesh

Author: Rahman M.; Niloy S.; Izlal S.; Promi T.R.; Islam M.A.; Toma N.I.; Gaber A.; Hossain A.

Year: 2025

DOI / Link: https://doi.org/10.2166/wcc.2025.012

Abstract:

The publication abstract for 'Groundwater under the lens: a remote sensing exploration of storage patterns and trends in Bangladesh' (DOI: 10.2166/wcc.2025.012) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105012376680?origin=resultslist.

40. Development of a Silicon Efficiency Index Integrated with GGE Biplot Analysis for Identifying Salinity-tolerant Wheat Genotypes

Author: Ahmed S.R.; Iram I.; Ali Z.; Haleem A.; Khan J.; Ghaffari H.; Hasanuzzaman M.; Maqsood M.F.; Tan D.K.Y.; Brestic M.; Skalicky M.

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DOI / Link: https://doi.org/10.1007/s12633-026-03701-8

Abstract:

The publication abstract for 'Development of a Silicon Efficiency Index Integrated with GGE Biplot Analysis for Identifying Salinity-tolerant Wheat Genotypes' (DOI: 10.1007/s12633-026-03701-8) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105050635249?origin=resultslist.

41. Plant secondary metabolites against biotic stresses for sustainable crop protection

Author: Jahan T.; Huda M.N.; Zhang K.; He Y.; Lai D.; Dhami N.; Quinet M.; Ali M.A.; Kreft I.; Woo S.-H.; Georgiev M.I.; Fernie A.R.; Zhou M.

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DOI / Link: https://doi.org/10.1016/j.biotechadv.2025.108520

Abstract:

The publication abstract for 'Plant secondary metabolites against biotic stresses for sustainable crop protection' (DOI: 10.1016/j.biotechadv.2025.108520) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/85216082399?origin=resultslist.

42. Emerging Models of Green Financing in Selected South Asian Countries

Author: Kundu S.; Kumar R.S.

Year: 2025

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Abstract:

The publication abstract for 'Emerging Models of Green Financing in Selected South Asian Countries' (DOI: 10.1007/978-3-031-80478-6_7) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105007398325?origin=resultslist.

43. Imperative roles of auxin signaling in reprogramming of drought tolerance in plants

Author: Das A.; Pal S.; Hasanuzzaman M.; Adak M.K.

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DOI / Link: https://doi.org/10.1007/s00299-026-03726-8

Abstract:

The publication abstract for 'Imperative roles of auxin signaling in reprogramming of drought tolerance in plants' (DOI: 10.1007/s00299-026-03726-8) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105028423374?origin=resultslist.

44. Enhancing Food Safety: Processing Techniques to Remediate Pesticide Residues

Author: Kaium A.; Begum N.; Meftaul I.M.; Liu X.; Zheng Y.; Jubayer M.F.; Islam M.N.; Choudhury S.

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DOI / Link: https://doi.org/10.1007/978-981-96-4128-4_2

Abstract:

The publication abstract for 'Enhancing Food Safety: Processing Techniques to Remediate Pesticide Residues' (DOI: 10.1007/978-981-96-4128-4_2) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105024288951?origin=resultslist.

45. Climate-Resilient Technologies for Smart Agriculture

Author: Kader M.A.; Jewel A.; Mishra A.; Mojid M.A.

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DOI / Link: https://doi.org/10.1007/978-3-032-00190-0_17

Abstract:

The publication abstract for 'Climate-Resilient Technologies for Smart Agriculture' (DOI: 10.1007/978-3-032-00190-0_17) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105026673650?origin=resultslist.

46. Nexus of women's participation in smallholder financial inclusion programs and economic efficiency: implications for poverty alleviation

Author: Wang S.; Mwalupaso G.E.; Akter A.

Year: 2025

DOI / Link: https://doi.org/10.3389/fsufs.2025.1613678

Abstract:

The publication abstract for 'Nexus of women's participation in smallholder financial inclusion programs and economic efficiency: implications for poverty alleviation' (DOI: 10.3389/fsufs.2025.1613678) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105014804086?origin=resultslist.

47. Natural Co-Infection With Streptococcus agalactiae and Klebsiella pneumoniae in Cultured Nile Tilapia: Assessing Plant-Based Therapeutics as Sustainable Alternatives to Antibiotics

Author: Sujon M.S.R.; Khatun M.; Biswas D.; Rahman M.S.; Roy S.; Ria R.A.; Khalil S.M.I.; Rahman M.M.; Nasren S.; Alam M.M.M.; Mamun M.A.A.

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DOI / Link: https://doi.org/10.1002/aff2.70205

Abstract:

The publication abstract for 'Natural Co-Infection With Streptococcus agalactiae and Klebsiella pneumoniae in Cultured Nile Tilapia: Assessing Plant-Based Therapeutics as Sustainable Alternatives to Antibiotics' (DOI: 10.1002/aff2.70205) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105031528031?origin=resultslist.

48. From data to decision: leveraging machine learning and water quality index for groundwater quality evaluation

Author: Sarker M.A.R.; Chowdhury M.A.H.; Haque M.T.; Rahman M.M.; Meftaul I.M.; Jubayer M.F.

Year: 2025

DOI / Link: https://doi.org/10.1007/s40899-025-01276-7

Abstract:

The publication abstract for 'From data to decision: leveraging machine learning and water quality index for groundwater quality evaluation' (DOI: 10.1007/s40899-025-01276-7) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105014915620?origin=resultslist.

49. Determinants of adoption of climate-smart agriculture (CSA) practices in mushroom farming in Bangladesh

Author: Haq I.; Rahman M.; Datta T.; Rakib M.H.; Nobrega D.

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DOI / Link: https://doi.org/10.1038/s41598-026-39761-4

Abstract:

The publication abstract for 'Determinants of adoption of climate-smart agriculture (CSA) practices in mushroom farming in Bangladesh' (DOI: 10.1038/s41598-026-39761-4) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105034456553?origin=resultslist.

50. Microbial Degradation of Herbicide Residues in Australian Soil: An Overview of Mechanistic Insights and Recent Advancements

Author: Chowdhury I.F.; Doran G.S.; Stodart B.J.; Chen C.; Wu H.

Year: 2025

DOI / Link: https://doi.org/10.3390/toxics13110949

Abstract:

The publication abstract for 'Microbial Degradation of Herbicide Residues in Australian Soil: An Overview of Mechanistic Insights and Recent Advancements' (DOI: 10.3390/toxics13110949) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105022884468?origin=resultslist.

51. Pesticide handling practices, occupational risks, and health expenses among Bangladeshi smallholder vegetable farmers

Author: Hossain M.S.; Fahad S.; Sarker T.; Rabbany M.G.; Yeasmin S.; Roy R.

Year: 2026

DOI / Link: https://doi.org/10.1016/j.jafr.2026.102727

Abstract:

The publication abstract for 'Pesticide handling practices, occupational risks, and health expenses among Bangladeshi smallholder vegetable farmers' (DOI: 10.1016/j.jafr.2026.102727) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105029041977?origin=resultslist.

52. Mechanisms of waterlogging tolerance in plants

Author: Hussain M.A.; Jahan M.S.

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DOI / Link: https://doi.org/10.1016/B978-0-443-14139-3.00020-8

Abstract:

The publication abstract for 'Mechanisms of waterlogging tolerance in plants' (DOI: 10.1016/B978-0-443-14139-3.00020-8) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105019731980?origin=resultslist.

53. Understanding the Basics: Definitions, Sources, and Classifications

Author: Ali M.M.; Kubra K.; Ismail Z.B.; Sajal A.A.; Nag S.K.

Year: 2026

DOI / Link: https://doi.org/10.1007/978-3-032-26858-7_2

Abstract:

The publication abstract for 'Understanding the Basics: Definitions, Sources, and Classifications' (DOI: 10.1007/978-3-032-26858-7_2) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105054424678?origin=resultslist.

54. Community Perceptions and Economic Drivers of Hilsa Fishery Conservation in Riverbank Villages of Bangladesh

Author: Hossain M.A.; Monir M.; Selim S.; Azad F.; Rana M.M.; Ahmad B.; Hasan M.R.

Year: 2026

DOI / Link: https://doi.org/10.1002/aff2.70222

Abstract:

The publication abstract for 'Community Perceptions and Economic Drivers of Hilsa Fishery Conservation in Riverbank Villages of Bangladesh' (DOI: 10.1002/aff2.70222) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105034081602?origin=resultslist.

55. Assessing resilience of surface water management schemes in Bangladesh: strategic insights for transformation

Author: Roy R.; Czaplicka K.; Abe S.

Year: 2025

DOI / Link: https://doi.org/10.2166/aqua.2025.044

Abstract:

The publication abstract for 'Assessing resilience of surface water management schemes in Bangladesh: strategic insights for transformation' (DOI: 10.2166/aqua.2025.044) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105020669212?origin=resultslist.

56. Knowledge, attitudes, and practices on occupational hazards among veterinary students in Bangladesh: A cross-sectional study

Author: Das P.; Mannan M.A.; Chowdhury S.

Year: 2025

DOI / Link: https://doi.org/10.1177/22799036251388585

Abstract:

The publication abstract for 'Knowledge, attitudes, and practices on occupational hazards among veterinary students in Bangladesh: A cross-sectional study' (DOI: 10.1177/22799036251388585) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105020091141?origin=resultslist.

57. Understanding rice farmers' fertilizer application behavior to advance sustainable agricultural practices in Bangladesh: insights from the extended KAP model

Author: Sujan M.H.K.; Jiao Y.; Akber M.A.; Sarkar M.A.R.; McKenzie A.M.; Rabin M.H.; Sultana M.; Aziz A.A.

Year: 2026

DOI / Link: https://doi.org/10.1038/s41598-026-52897-7

Abstract:

The publication abstract for 'Understanding rice farmers' fertilizer application behavior to advance sustainable agricultural practices in Bangladesh: insights from the extended KAP model' (DOI: 10.1038/s41598-026-52897-7) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105044448102?origin=resultslist.

58. Factors influencing the adoption of biosecurity practices in livestock farming in bangladesh for infectious disease prevention

Author: Islam S.M.S.; Bhandari P.; Bhuiyan M.I.H.; Supty S.I.; Chalise R.; Rahman M.; Ullah M.T.; Farhan M.A.A.; Al Muktadir M.; Islam M.M.; Hossain D.; Ahmed M.J.

Year: 2026

DOI / Link: https://doi.org/10.1038/s41598-026-62398-2

Abstract:

The publication abstract for 'Factors influencing the adoption of biosecurity practices in livestock farming in bangladesh for infectious disease prevention' (DOI: 10.1038/s41598-026-62398-2) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105053337206?origin=resultslist.

59. Assessing Suitability of Various Morphological and Ionic Traits as Proxies for Barley Tolerance to Combined Salinity and Waterlogging Stress

Author: Hasanuzzaman M.; Zhou M.; Yun P.; Shabala S.

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Abstract:

The publication abstract for 'Assessing Suitability of Various Morphological and Ionic Traits as Proxies for Barley Tolerance to Combined Salinity and Waterlogging Stress' (DOI: 10.1111/jac.70214) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105041946316?origin=resultslist.

60. Fungi for Future Farming: Enhancing Nutrient Uptake and Stress Resilience in Sustainable Development Era

Author: Das K.; Sarker A.; Deepo D.M.; Aminuzzaman F.M.; Siddique A.B.; Nasif S.O.; Arafa R.A.

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Abstract:

The publication abstract for 'Fungi for Future Farming: Enhancing Nutrient Uptake and Stress Resilience in Sustainable Development Era' (DOI: 10.32604/phyton.2026.079822) is indexed in the Scopus database and accessible at https://www.scopus.com/pages/publications/105046159056?origin=resultslist.

61. Algae-based bioremediation of soil, water, and air: a solution to polluted environment

Author: Munir N.; Sarwar Z.; Abideen Z.; Saleem F.; Hasanuzzaman M.; Siddiqui Z.S.; El-Keblawy A.

Year: 2025

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Abstract:

The increasing prevalence of environmental pollutants including both organic and inorganic contaminants in ecosystems is largely due to inappropriate waste disposal. Persistent pollutants, such as heavy metals, plactic debris and industrial chemicals are frequently found in effluents, present a significant concern for Living organisms. Among various waste removal practices, bioremediation is one of the economical and environmentally friendly approaches. The bioremediation process biologically mediates Changes in these pollutants, with microbial communities and microalgae playing a key role in eliminating various types of pollutants in wastewater. Due to its non-degradable nature, plastic contributes to the greenhouse gas emission and significantly impacts climate Change. However, the natural formation of biofilms can degrade the structure of plastic sheets and aid in decomposing bits of plastic in aquatic environments. Furthermore, forming reactive oxygen species in response to antioxidants plays a crucial role in providing tolerance against heavy metal stress in eukaryotic algae. This study investigates the bioremediation potential of microalgae with a focus on its effectiveness in addressing heavy metal pollution, contributing valuable insights to our understanding of the environmental repercussions of these pollutants. The synthesis of algal nanoparticles presents a green and sustainable approach with high adsorptive efficiency. Some microalgae have unique capabilities to consume inorganic nitrogen and phosphorus, which enables them to degrade the pollutants effectively. Algae are responsible for 50% of carbon dioxide fixation

through photosynthesis, producing oxygen in the process. This review highlights the cost-effective potential of algae and algal nanoparticles in the bioremediation of soil, water, and air.