

Abhishek R Singh

Research Institute of Biology

Applied Ecology and Environmental Research Laboratory (AEER- Lab)
Researcher

 37444940620

 sinxabishik@ysu.am



Language skills

English 

Work experience

Institution	Research Institute of Biology
Period of time	2024 till now
Rank/degree	Researcher

Institution	Research Institute of Biology
Period of time	2023 - 2024
Rank/degree	Junior Researcher

Publications

Article
Fluid-specific detection of environmental pollutant moxifloxacin hydrochloride utilizing a rare-earth niobate decorated functionalized carbon nanofiber sensor platform
Shen-ming Chen, Mariya Antony John Felix, Chandini Ragumoorthy, Tse-Wei Chen, G. Kiruthiga, Abhishek Singh, Karen Ghazaryan, Amal M. Al-Mohaimeed, Mohamed S Elshikh
Environmental Research 2025 120349

Article
Biogenic nanoparticles for managing salinity stress-related crop and environmental risks: realistic applications and challenges
Abhishek Singh, Shreni Agrawal, Vishnu D. Rajput, Tatiana Minkina, Christopher Rensing, Mohamed S. Elshikh, Yufei Zhao, Athanasios Alexiou, Marios Papadakis, Karen Ghazaryan
Discover Sustainability 2025 1-44

Article
Addressing Abiotic Stresses and Advancing SDGs by Biochar for Sustainable Agriculture and Environmental Restoration
Abhishek Singh, Ragini Sharma, Sakshi Singh, Rupesh Kumar Singh, Athanasios Alexiou, João Ricardo Sousa, Hassan El-Ramady, Marina Burachevskaya, Vishnu D. Rajput, Karen Ghazaryan
Egyptian Journal of Soil Science 2025 463-489

Article
Nanoparticle-Enhanced Strategies for Abiotic Stress Tolerance in Plants

Abhishek Singh, Shreni Agrawal, Richa Das, Vishnu D Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Hassan Ragab El-Ramady, Abdel Rahman Mohammad Al Tawaha, Karen Ghazaryan
Plant Stress Tolerance: Molecular Mechanisms and Breeding Strategies 2025 441-464

Article

Nanobiotechnology Approaches for Enhancing Crop Resilience to Salinity Stress

Abhishek Singh, Shreni Agrawal, Shivangee Solanki, Vishnu D. Rajput, Tatiana Minkina,

Saglara Mandzhieva, Mohamed S. Elshikh, Hassan Ragab El-Ramady,

Abdel Rahman Mohammad Al Tawaha, Karen Ghazaryan

Plant Stress Tolerance: Molecular Mechanisms and Breeding Strategies 2025 465-502

Article

Prediction of mass loss in different organic materials under field mediterranean conditions: Influence of the initial chemical quality

João Ricardo Sousa, Abhishek Singh, Karen Ghazaryan, Rupesh Kumar Singh, Vishnu D. Rahput,

Henrique Trindade, J. Coutinho

Journal of Ecological Engineering 2025 181-194

Article

Sol-gel synthesis, characterizations of efficient Y³⁺ doped ZnO nanoparticles for photocatalytic dye degradation and energy storage applications

Abhishek Singh, Muhammad Ramzan, Sajawal ur Rehman Khan, Islem Abid, Faisal Saud Binhuday,

Muhammad Abdul Majid, Abdul Rehman, Asad ur Rehman Khan

Journal of Sol-Gel Science and Technology 2025 180-196

Article

Emerging remediation approaches for mining contaminated soils by heavy metals: recent updates and future perspective

Priyadarshani Rajput, Abhishek Singh, Saglara Mandzhieva, Karen Ghazaryan, Tatiana Minkina,

Vishnu D. Rajput

Environmental Geochemistry and Health 2025 1-49

Article

Temporal patterns and influences of monthly, seasonal and annual temperatures on methane emissions in Greece, Armenia and Russia over two decades

Abhishek Singh, Anil Kumar Singh, Sapna Rawat, Vishnu D. Rajput, Karen Ghazaryan, Vicky Anand,

Tatiana Minkina, Athanasios Alexiou, Mohamed S. Elshikh, João Ricardo Sousa, Henrique Trindade,

Rupesh Kumar Singh, Arunava Pradhan

Science of the Total Environment 2025 1-20

Article

Correlation, Path-Coefficient, and Economic Heterosis Studies in CMS-Based Cabbage Hybrids over Different Environments

Shipra Singh Parmar, Ramesh Kumar, Amit Vikram, Rajesh Kumar Dogra, Meenu Gupta, Abhishek Singh,

Karen Ghazaryan, Rupesh Kumar Singh, João Ricardo Sousa

Horticulturae MDPI 2025 1-15

Article

Impact of Nanofertilizers for the Mitigation of Multiple Environmental Stresses

Abhishek Singh, Sapna Rawat, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina,
Abdel Rahman Mohammad Al Tawaha, Ashi Varshney
Nanofertilizers for Sustainable Agroecosystems 2024 431-454

Article

Green Synthesis of Nanofertilizers and Their Application for Crop Production

Abhishek Singh, Ragini Sharma, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina,

Abdel Rahman Mohammad Al Tawaha, Ashi Varshney

Nanofertilizers for Sustainable Agroecosystems 2024 205-231

Article

Impact of Salinity Stress and Zinc Oxide Nanoparticles on Macro and Micronutrient

Assimilation: Unraveling the Link between Environmental Factors and Nutrient Uptake

Abhishek Singh, Rakesh Singh Sengar, Vishnu D. Rajput, Uday Pratap Shahi, Abdul Latief Al-Ghzawi,

Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Al Tawaha, Omar Mahmoud Al Zoubi,

Talaat Habeeb

Journal of Ecological Engineering 2024 1-9

Article

Advancing Agricultural Resilience in Ararat Plain, Armenia: Utilizing Biogenic Nanoparticles and Biochar under Saline Environments to Optimize Food Security and Foster European Trade

Abhishek Singh, Gohar Margaryan, Anna Harutyunyan, Hasmik S. Movsesyan, Hrant Khachatryan,

Vishnu D. Rajput, Tatiana Minkina, Athanasios Alexiou, Dimitrios Petropoulos, Athanasios Kriemadis,

Hassan El-Ramady, Karen Ghazaryan

Egyptian Journal of Soil Science 2024 459-483

Article

Zinc Oxide Nanoparticles Influence on Plant Tolerance to Salinity Stress: Insights into Physiological, Biochemical, and Molecular Responses

Abhishek Singh, Vishnu D. Rajput, Shivani Lalotra, Shreni Agrawal, Karen Ghazaryan, Jagpreet Singh,

Tatiana Minkina, Priyadarshani Rajput, Saglara Mandzhieva, Athanasios Alexiou

Environmental Geochemistry and Health 2024 148

Article

Effects of environmental metal and metalloid pollutants on plants and human health: exploring nano-remediation approach

Priyadarshani Rajput, Abhishek Singh, Shreni Agrawal, Karen Ghazaryan, Vishnu D. Rajput,

Hasmik Movsesyan, Saglara Mandzhieva, Tatiana Minkina, Athanasios Alexiou

Stress Biology 2024 1-25

Article

Nanotechnology applications for enhanced crop growth and yield. Chapter 4

Sapna Rawat, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana M. Minkina,

Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput

Sustainable Agriculture: Nanotechnology and Biotechnology for Crop Production and Protection 2024
53-68

Article

Nanobiotechnology combined approaches for sustainable agriculture. Chapter 1

Vishnu D. Rajput, Abhishek Singh, Shivani Lalotra, Karen Ghazaryan, Hasmik S. Movsesyan, Tatiana Minkina, Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology and Biotechnology for Crop Production and Protection 2024
1-16

Article

Impact of nano-enzyme and nanomics for sustainable agriculture: Current status and future prospective

Shivangi Singh, Omkar Singh, Sakshi Singh, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Vaishali Singh, Athanasios Alexiou, Abdel Rahman Mohammad Said Al-Tawaha, Aleksandr Yesayan, Armine David Chakhmakhchyan, Hassan El-Ramady
Harnessing NanoOmics and Nanozymes for Sustainable Agriculture 2024 1-18

Article

Nano-omics-based abiotic and biotic stresses management

Priyanka Upadhyay, Sonia Navvuru, Praveen Kumar Yadav, Shivani Lalotra, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Karen Ghazaryan
Harnessing NanoOmics and Nanozymes for Sustainable Agriculture 2024 348-371

Article

Detoxification of Biomedical Waste

Abhishek Singh, Neha Chakrawarti, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Said Al-Tawaha, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal
Microbial Applications for Environmental Sustainability 2024 137-149

Article

Microbial Enzymes for Eco-Friendly Recycling of Wastepaper by Deinking

Sapna Rawat, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Said Al-Tawaha, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal
Microbial Applications for Environmental Sustainability 2024 165-176

Article

Microbial Manganese Peroxidase: Ligninolytic Enzymes for Bioremediation

Abhishek Singh, Ragini Sharma, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Said Al-Tawaha, Shreni Agrawal, Ashi Varshney, Abdel Razzaq Al-Tawaha, Arun Karnwal
Microbial Applications for Environmental Sustainability 2024 189-199

Article

Nanoparticles in revolutionizing crop production and agriculture to address salinity stress challenges for a sustainable future

Abhishek Singh, Shreni Agrawal, Vishnu D. Rajput, Karen Ghazaryan, Aleksandr Yesayan, Tatiana Minkina, Yufei Zhao, Dimitrios Petropoulos, Athanasios Kriemadis, Marios Papadakis, Athanasios Alexiou
Discover Applied Sciences 2024 317

Article

Carbon Nanodot-Microbe-Plant Nexus in Agroecosystem and Antimicrobial Applications

Prokisch József, Duyen H. H. Nguyen, Arjun Muthu, Aya Ferroudj, Abhishek Singh, Shreni Agrawal, Vishnu D. Rajput, Karen Ghazaryan, Hassan El-Ramady, Mahendra Rai
Nanomaterials 2024 1-37

Article

Nanoparticles Mediated Salt Stress Resilience: A Holistic Exploration of Physiological, Biochemical, and Nano-omics Approaches

Abhishek Singh, Vishnu D. Rajput, Shreni Agrawal, Karen Ghazaryan, Tatiana Minkina, Abdel Rahman Mohammad Al Tawaha, Avnish Chauhan, Saglara S. Mandzhieva, Rupesh Kumar Singh, Marios Papadakis, Athanasios Alexiou

Reviews of Environmental Contamination and Toxicology 2024 1-50

Article

Green Remediation Harnessing Plant-Based Strategies for Removal of Emerging Soil Contaminants

Karen Ghazaryan, Aman Verma, Sapna Rawat, Amrit Warshini, Priyadarshani Rajput, Tatiana Minkina, Mohamed S. Elshikh, Hrant Khachatryan, Rupesh Kumar Singh, Athanasios Alexiou, Abhishek Singh
Nanotechnology Applications and Innovations for Improved Soil Health 2024 57-71

Article

Nanoparticle-mediated approaches in agriculture addressing abiotic stress from soil to plant cells

Vishnu D. Rajput, Abhishek Singh, Bhavana Tomar, Tatiana Minkina, Hasmik S. Movsesyan, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Karen Ghazaryan
Nanotechnology Applications and Innovations for Improved Soil Health 2024 72-89

Article

In-depth Exploration of Nanoparticles for Enhanced Nutrient Use Efficiency and Abiotic Stresses Management: Present Insights and Future Horizons

Abhishek Singh, Aishwarya Sharma, Omkar Singh, Vishnu D. Rajput, Hasmik S. Movsesyan, Tatiana Minkina, Athanasios Alexiou, Marios Papadakis, Rupesh Kumar Singh, Sakshi Singh, João Ricardo Sousa, Hassan Ragab El-Ramady, Faisal Zulfiqar, Rahul Kumar, Abdullah Ahmed Al-Ghamdi, Karen Ghazaryan
Plant Stress 2024 1-24

Article

Addressing hidden hunger via improving soil health and crop nutrients through nanofortification

Aishwarya Sharma, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Hassan Ragab El-Ramady, Karen Ghazaryan
Nanotechnology Applications and Innovations for Improved Soil Health 2024 90-108

Article

Emerging technologies for sustainable soil management and precision farming

Abhishek Singh, Bhavana Tomar, Gohar Margaryan, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady, Anil Kumar Singh, Omkar Singh, Karen Ghazaryan
Nanotechnology Applications and Innovations for Improved Soil Health 2024 210-235

Article

Unveiling nanomaterial-induced toxicity: Navigating challenges to modern cultivation and soil management practices

Aman Verma, Abhishek Singh, Sapna Rawat, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady,

Karen Ghazaryan

Nanotechnology Applications and Innovations for Improved Soil Health 2024 236-253

Article

Revolutionizing agricultural sustainability and food security and management to achieve sdgs goals via nanotechnology

Aishwarya Sharma, Abhishek Singh, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady,

Karen Ghazaryan

Nanotechnology Applications and Innovations for Improved Soil Health 2024 276-288

Article

Crop Biofortification Innovative Solutions for Micronutrient Deficiency

Aishwarya Sharma, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Hassan Ragab El-Ramady, Karen Ghazaryan

Nanotechnology Applications and Innovations for Improved Soil Health 2024 289-304

Article

Revolutionizing sustainable agriculture with nano-priming technology: A leap towards resilient and high-yield crops

Divya Pandey, Abhishek Singh, Nare Darbinyan, Armine David Chakhmakhchyan, Shipra Singh Parmar,

Karen Ghazaryan

Nanotechnology Applications and Innovations for Improved Soil Health 2024 305-315

Article

Implementing sustainable nano-bioremediation for emerging pollutants: An environmentally friendly remediation strategy

Karen Ghazaryan, Aman Verma, Sapna Rawat, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady, Abhishek Singh

Nanotechnology Applications and Innovations for Improved Soil Health 2024 316-332

Article

Utilizing nanotechnology in agriculture: A balancing approach between environmental health and risks

Abhishek Singh, Bhavana Tomar, Anna Harutyunyan, Priyadarshani Rajput, Tatiana Minkina, Saglara Mandzhieva, Mohamed S. Elshikh, Shen-Ming Chena, Rupesh Kumar Singh, Hassan Ragab El-Ramady, Karen Ghazaryan

Nanotechnology Applications and Innovations for Improved Soil Health 2024 380-399

Article

Additive-Mediated Phytoextraction of Copper-Contaminated Soils Using Medicago lupulina L.

Hasmik Vardumyan, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Hassan Ragab El-Ramady,

Article

Carbon Sequestration through Organic Amendments, Clay Mineralogy and Agronomic Practices: A Review

Shivangi Omkar Singh, Uday Pratap Shahi, Omkar Singh, Praveen Kumar Singh, Abhishek Singh, Vishnu D. Rajput, Tatiana Minkina, Hassan El-Ramady, Karen Ghazaryan

Egyptian Journal of Soil Science 2024 581-598

Article

Enhancing Crop Production: Unveiling the Role of Nanofertilizers in Sustainable Agriculture and Precision Nutrient Management

Karen Ghazaryan, Divya Pandey, Sakshi Singh, Vahagn Varagyan, Athanasios Alexiou, Dimitrios Petropoulos, Athanasios Kriemadis, Vishnu D. Rajput, Tatiana Minkina, Rupesh Kumar Singh, João Ricardo Sousa, Sandeep Kumar, Hassan El-Ramady, Omkar Singh, Abhishek Singh

Egyptian Journal of Soil Science 2024 981 – 1007

Article

Earthworms As An Emerging Biotechnological Intervention in the Mitigation of Microplastics

Aishwarya Sharma, Shailja Kumar, Abhishek Singh, Ragini Sharma, Vishnu D. Rajput, Hasmik S. Movsesyan, Tatiana Minkina, Rupesh Kumar Singh, Hassan El-Ramady, Karen Ghazaryan

Egyptian Journal of Soil Science 2024 1219-1238

Article

Nanotechnology Products in Agriculture and Environmental Protection: Advances and Challenges

Abhishek Singh, Sapna Rawat, Vishnu D. Rajput, Tatiana Minkina, Saglara Mandzhieva, Arevik Sh. Eloyan, Rupesh Kumar Singh, Omkar Singh, Hassan El-Ramady, Karen Ghazaryan

Egyptian Journal of Soil Science 2024 1355-1378

Article

Unveiling the salinity tolerance potential of Armenian Dandur (*Portulaca oleracea* L.) genotypes: Enhancing sustainable agriculture and food security

Gohar Margaryan, Abhishek Singh, Hrant Khachatryan, Vishnu D Rajput, Tatiana Minkina, Dimitrios Petropoulos, Athanasios Kriemadis, Athanasios Alexiou, Mohamed S. Elshikh, Abd El-Zaher M.A. Mustafa, Karen Ghazaryan

Journal of King Saud University - Science 2024 103332

Article

Nanotechnology in the soil system: An ecological approach towards sustainable management

Hassan El-Ramady, J'ozsef Prokisch, Daniella S'ari, Abhishek Singh, Karen Ghazaryan, Vishnu D. Rajput, Eric C. Brevik

Applied Soil Ecology 2024 1-22

Article

Eco-Friendly Solutions: Integrating Wild Vegetables for Sustainable Agriculture Food Security and Human Health

Shipra Singh Parmar, Impa H.R., Ramesh Kumar, Abhishek Singh, Aleksandr Yesayan, Vishnu D Rajput,

Article

Impact nano- and micro- form of CdO on barley growth and oxidative stress response

Kirill Azarin, Alexander Usatov, Tatiana Minkina, Ilya Alliluev, Nadezhda Duplii, Saglara Mandzhieva, Abhishek Singh, Vishnu D. Rajput, Sandeep Kumar, Marwa A. Fakhr, Mohamed S. Elshikh, M. Ajmal Ali, Karen Ghazaryan
Journal of King Saud University - Science 2024 103493

Article

Bioremediation of heavy metals contaminated soils using nanotechnology

Amin Fathi, Seyede Roghie Ghadirnezhad Shiade, Ghasem Parmoon, Yasser Yaghoubian, Hemmatollah Pirdashti, Vishnu D. Rajput, Abhishek Singh, Karen Ghazaryan, Tatiana Minkina
Bio-organic Amendments for Heavy Metal Remediation: Water, Soil and Plant Approaches and Technologies
2024 611-628

Article

Climate change and drought: challenges for agriculture in arid environments

Samar Shawaqfeh, Abdel Rahman Mohammad Al Tawaha, Hikmet Gunal, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Ekaterina Kozuharova, Rizwan Rashid
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024 3-13

Article

Agricultural water scarcity: an emerging threat to global water security

Rahul Kanaoujiya, Olivia Saha Roy, Amit Jaiswal, Sani Kumar Singh, Abdel Rahman Mohammad Al Tawaha, Shekhar Srivastava, Abdel Razzaq Al-Tawaha, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Devarajan Thangadurai
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024 15-22

Article

Optimizing irrigation scheduling: strategies for sustainable water management in agriculture

Riham Fouzi Zahalan, Abdel Rahman Mohammad Al Tawaha, Hikmet Gunal, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Samar Shawaqfeh, Amjad M. Husaini, Ekaterina Kozuharova, Rizwan Rashid
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024 49-59

Article

Soil fertility in arid lands: strategies for sustainable management and fertilization

Hikmet Gunal, Mesut Budak, Elif Gunal, Mirac Kilic, Abdel Rahman Mohammad Al Tawaha, Abdel Razzaq Al-Tawaha, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, AmjadM. Husaini, Tauseef A. Bhat, Rahul Kanaoujiya,

Article

Impacts of climate change and drought stress on plant metabolome

Shah Khalid, Abdel Rahman Mohammad Al Tawaha, Nadia, Hikmet Gunal, Abdel Razzaq Al-Tawaha, Amanullah, Marwa Adel Qotb, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Samar Shawaqfeh, Amjad M. Husaini, Rizwan Rashid
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024
105-113

Article

Biofertilizers: a sustainable solution for enhancing soil fertility and crop productivity

Abdel Rahman Mohammad Al Tawaha, Arun Karnwal, Siddhartha Pati, Abdel Razzaq Al-Tawaha, Atul Kumar Upadhyay, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Rizwan Rashid
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024
209-217

Article

Resilience in the face of drought: strategies for optimizing plant resilience and enhancing nutrient transfer

Abdel Rahman Mohammad Al Tawaha, Abdel Razzaq Al-Tawaha, Marwa Adel Qotb, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Ekaterina Kozuharova, Rizwan Rashid
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024
221-236

Article

Drought resilience in agriculture: mechanisms and adaptation strategies in a changing climate

Abdel Rahman Mohammad Al Tawaha, Ibrahim Alrawashdeh, Doaa Abu-Darwish, Abdel Razzaq Al-Tawaha, Alla Aleksanyan, Arun Karnwal, Nataliia Nesterova, Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Tatiana Minkina, Iftikhar Ali, Amjad M. Husaini, Tauseef A. Bhat, Ekaterina Kozuharova, Rizwan Rashid, Marwa Adel Qotb, Abeer Jubily
Sustainable Agriculture under Drought Stress: Integrated Soil, Water and Nutrient Management 2024
489-498

Article

Revolutionizing Crop Production: Nanoscale Wonders-Current Applications, Advances, and Future Frontiers

Abhishek Singh, Vishnu D. Rajput, Ashi Varshney, Ragini Sharma, Karen Ghazaryan, Tatiana Minkina, Athanasios Alexiou, Hassan El-Ramady
Egyptian Journal of Soil Science 2024 221-258

Article

In-vitro Digestibility Organic Materials: Relation with Field Mass Loss Litter Bag Method

João Ricardo Sousa, Abhishek Singh, Karen Ghazaryan, Rupesh Kumar Singh, Henrique Trindade,

Article

Soil Pollution: An Agricultural and Environmental Problem with Nanotechnological Remediation Opportunities and Challenges

Karen Ghazaryan, Shreni Agrawal, Gohar Margaryan, Anna Harutyunyan, Priyadarshani Rajput, Hasmik Movsesyan, Vishnu D. Rajput, Rupesh Kumar Singh, Tatiana Minkina, Mohamed S. Elshikh, Mona S. Alwahibi, Athanasios Alexiou, Marios Papadakis, João Ricardo Sousa, Abhishek Singh
Discover Sustainability 2024 1-33

Article

Nanotechnology-based genome editing: Empowering sustainable agriculture for enhanced food security

Abhishek Singh, Vishnu D. Rajput, Karen Ghazaryan, Aishwarya Sharma, Tatiana M. Minkina, Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 173-190

Article

Revolutionizing agriculture: Harnessing phytonanotechnology for sustainable food security

Abhishek Singh, Vishnu D Rajput, Karen Ghazaryan, Shivani Lalotra, Tatiana M. Minkina, Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 1-25

Article

Nanotechnology and biotechnology: Transforming agriculture for food security and sustainability

Vishnu D Rajput, Abhishek Singh, Karen Ghazaryan, Hasmik S Movsesyan, Tatiana M. Minkina, Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 213-232

Article

Mushrooms in food security and environmental management: Sustainable solutions for a changing world

Karen Ghazaryan, Abhishek Singh, Vishnu D Rajput, Ashi Varshney, Tatiana M. Minkina, Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 233-248

Article

Environmental implications of nanomaterial-plant interactions: Navigating the benefits and concerns

Abhishek Singh, Vishnu D. Rajput, Aishwarya Sharma, Karen Ghazaryan, Hasmik S. Movsesyan, Tatiana M. Minkina, Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 511-534

Article

Harvesting nanotech: Responsible policies for integrating nanotechnology in agriculture and health

Sapna Rawat, Abhishek Singh, Vishnu D Rajput, Karen Ghazaryan, Hasmik S Movsesyan,

Tatiana M. Minkina, Abdel Rahman Mohammad Al-Tawaha, Athanasios T. Alexiou, Priyadarshani Rajput
Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 495-509

Article

Unlocking sustainable agriculture: The crucial role of plant genetic engineering

Shivani Lalotra, Tiya Mukherjee, Abhishek Singh, Praveen Kumar Yadav, Priyanka Upadhyay,

Karen Ghazaryan, Vishnu D Rajput

Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 143-172

Article

Enhancing crop food security in the Ararat Plain region of Armenia: harnessing arid soil resources and biogenic nanoparticles for salinity-resilient cultivation

Abhishek Singh, Karen Ghazaryan, Gohar Margaryan, Hrant Khachatryan, Vishnu D Rajput,

Tatiana M. Minkina

Sustainable Agriculture: Nanotechnology, Biotechnology, Management and Food Security 2024 49-71

Article

Role of Methanogens and Geoinformatics in Climate Change: An Overview

Ragini Sharma, Abhishek Singh, Vishnu D. Rajput, Tatiana M. Minkina, Santosh K. Gupta,

Karen Ghazaryan

Geoinformatics: An Emerging Approach for Sustainable Crop Production and Food Security 2024 203-327

Article

Study of tolerance and phytodesalination potential of wheat, oat, emmer, and barley for sustainable saline agriculture

GHAZARYAN, K.A., HARUTYUNYAN, A.S., KHACHATRYAN, H.E., SINGH, A., MINKINA, T.M., RAJPUT, V.D.,

MOVSESYAN, H.S.

Applied Ecology and Environmental Research 2023 4853-4882

Article

Small Tech, Big Impact: Agri-nanotechnology Journey to Optimize Crop Protection and Production for Sustainable Agriculture

Արհիշէկ Սիւնի, Vishnu D Rajput, Ashi Varshney, Կարեն Ղազարյան, Tatiana Minkina

Plant Stress 2023 1-26

Article

Green Nanofertilizers: the Need for Modern Agriculture, Intelligent, and Environmentally-Friendly Approaches

Abdel Rahman Mohammad Al Tawaha, Abhishek Singh, Vishnu D. Rajput, Ashi Varshney, Shreni Agrawal,

Karen Ghazaryan, Tatiana Minkina, Omar Mahmoud Al Zoubi, Talaat Habeeb, Lysenko Dionis,

Hanan Aref Hasan, Samar Shawaqfeh

Ecological Engineering and Environmental Technology 2023 1-21
