

## Ghulam Haider

Associate Professor

Atta-Ur-Rahman School of Applied Biosciences

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## About

Dr. Ghulam Haider is working as Associate Professor in the Atta-Ur-Rahman School of Applied Biosciences. Dr. Ghulam Haider has a PhD in Plant Ecology. Dr. Ghulam Haider has published 48 research articles & conference papers having a citation count of 1730, carried out 7 projects and filed 0 intellectual property.

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## Qualifications

<b>PhD in Plant Ecology</b> Justus Liebig Universität Gießen , Germany	2012 - 2016
<b>MS in Agronomy</b> University of Agriculture Faisalabad , Pakistan	2006 - 2008
<b>BS in Agriculture)</b> BZU, Multan , Pakistan	2004 - 2006

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## Experience

<b>Associate Professor</b> Atta-Ur-Rahman School of Applied Biosciences	2024- Present
<b>Associate Professor</b> Atta-Ur-Rahman School of Applied Biosciences	2022 - 2024
<b>Assistant Professor</b> Atta-Ur-Rahman School of Applied Biosciences	2020 - 2022
<b>Assistant Professor</b> MNS University of Agriculture Multan , MNS University of Agriculture Multan, Old Shujabad Road, Multan	2018 - 2020
<b>Researcher</b> Hochschule Geisenheim University, Geisenheim Germany , Geisenheim, Germany	2018 - 2018
<b>Assistant Professor</b> MNS University of Agriculture Multan , MNS University of Agriculture Multan, Old Shujabad Road, Multan	2017 - 2018

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## Awards

<b>GGL Appreciation Award</b> Received appreciation award for being member of organizing committee of 7th GGL Conference 2014 at Justu-Liebig University Giessen Germany	2014
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## Professional Memberships

<b>IBI</b>	Since 2015
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Research Projects

National Projects

<b>Establishment of Phage Therapy Center at NUST</b> <b>Funding Agency:</b> NUST <b>Amount:</b> PKR 1,000,000.00 <b>Status:</b> Approved_inprocess	2024
<b>Studying barriers and devising strategies for the adoption of sustainable residue management technologies for climate resilience in Pakistan.</b> <b>Funding Agency:</b> ZHAW Leading House South Asia and Iran <b>Amount:</b> PKR 11,195,478.00 <b>Status:</b> Approved_inprocess	2024
<b>Sustainable Crop Residue Management for Climate Resilience in Pakistan</b> <b>Funding Agency:</b> Climate Intervention Environmental Impact Fund (CIEIF), USA <b>Amount:</b> PKR 12,040,000.00 <b>Status:</b> Approved_inprocess	2024
<b>Assessing Pakistan’s GHG emissions and scaling up globally accepted CO2 removal strategies via C-sink trading: Academic capacity building for a climate-resilient agriculture for Pakistan</b> <b>Funding Agency:</b> DAAD Germany <b>Amount:</b> PKR 24,686,010.00 <b>Status:</b> Approved_inprocess	2023
<b>CROP RESIDUE TO REVENUE AT THE FARM (R2R)</b> <b>Funding Agency:</b> The swiss global network for education, research and innovation <b>Amount:</b> PKR 1,105,000.00 <b>Status:</b> Completed	2022
<b>Elucidating the effects of organic amendment and nitrogen sources on flavonoids and nitrogen fixation in Arachis hypogaea.</b> <b>Funding Agency:</b> HEC <b>Amount:</b> PKR 11,260,000.00 <b>Status:</b> Approved_inprocess	2022
<b>Carbon fertilizers for reducing greenhouse gas emission and improving food security</b> <b>Funding Agency:</b> DAAD <b>Amount:</b> PKR 7,565,701.00 <b>Status:</b> Completed	2020

International Projects

Research Articles

<b>Three-year remediation evaluation for arsenic and cadmium co-contaminated acidic and alkaline paddy fields: Insights on availability, bioaccumulation, health risk, and cost</b> <i>Jian Liu Jun Meng Zhangtao Li Linling Xu Xiangxue Xu Ye Wu Ghulam Haider Dong Yang Shengdao Shan</i> <i>Journal of Environmental Chemical Engineering</i> , Volume:13, Issue:2, Article Number 116054 <b>Impact Factor:</b> 7.200   <b>Quartile:</b> 1 <b>DOI:</b> <a href="https://doi.org/10.1016/j.jece.2025.116054">https://doi.org/10.1016/j.jece.2025.116054</a>	2025
<b>Biochar and PGPR: A Winning Combination for Peanut Growth and Nodulation under Dry Spell</b> <i>Tashfeen Alam Fatima Bibi Hunaiza Fatima Faiza munir Alvina Gul Ghulam Haider Muhammad Jahanzaib Rabia Amir</i> <i>Journal of Soil Science and Plant Nutrition</i> , Pages: 16 <b>Impact Factor:</b> 3.4   <b>Quartile:</b> 1   <b>Citations:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.1007/s42729-024-02067-3">https://doi.org/10.1007/s42729-024-02067-3</a>	2024
<b>Unravelling the influence of microplastics with/without additives on radish (Raphanus sativus) and microbiota in two agricultural soils differing in pH</b> <i>Jun Meng Chengmei Diao Zhonghua Cui Zhangtao Li Jiayi Zhao Haibo Zhang Minjun Hu Jun Xu Yugen Jiang Ghulam Haider Dong Yang Shengdao Shan Huaihai Chen</i> <i>Journal of Hazardous Materials</i> , Volume 478, Article Number 135535 <b>Impact Factor:</b> 12.200   <b>Quartile:</b> 1   <b>Citations:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.1016/j.jhazmat.2024.135535">https://doi.org/10.1016/j.jhazmat.2024.135535</a>	2024

<b>Biodegradable maleic–itaconic polymer-coated phosphatic fertilizer improved phosphorous recovery in calcareous soil</b> <i>Mairaj Khalid Muhammad Bilal Khan Niazi Ghulam Haider Zaib Jahan Munir Zia Rafiq Ahmad Asim Hayat Tariq Shah</i> <i>Journal of Plant Nutrition and Soil Science</i> , Volume 187, Issue 3, Pages 415-425 <b>Impact Factor:</b> 2.600   <b>Quartile:</b> 1 <b>DOI:</b> <a href="https://doi.org/10.1002/jpln.202300197">https://doi.org/10.1002/jpln.202300197</a>	2024
<b>Mycorrhizosphere bacteria inhibit greenhouse gas emissions from microplastics contaminated soil by regulating soil enzyme activities and microbial community structure</b> <i>Zeeshan Khan Ghulam Haider Fazal Adnan Zeshan Muhammad Faraz Bhatti Tariq Shah Parvaiz Ahmad</i> <i>Journal of Environmental Management</i> , Volume 356, Article Number 120673 <b>Impact Factor:</b> 8.700   <b>Quartile:</b> 1   <b>Citations:</b> 8 <b>DOI:</b> <a href="https://doi.org/10.1016/j.jenvman.2024.120673">https://doi.org/10.1016/j.jenvman.2024.120673</a>	2024
<b>Metal-tolerant morganella morganii isolates can potentially mediate nickel stress tolerance in Arabidopsis by upregulating antioxidative enzyme activities</b> <i>Tahir Naqqash Aeman Aziz Muhammad Babar Muhammad Shahid Muhammad Sajid Radicetti Emanuele Abdel-Rhman Z. Gaafar Mohamed S. Hodhod Ghulam Haider</i> <i>Plant Signalling and Behavior</i> , Volume:19, Issue:1, Article Number e2318513 (12 pages) <b>Impact Factor:</b> 2.800   <b>Quartile:</b> 2   <b>Citations:</b> 3 <b>DOI:</b> <a href="https://doi.org/10.1080/15592324.2024.2318513">https://doi.org/10.1080/15592324.2024.2318513</a>	2024
<b>Acidified manure and nitrogen-enriched biochar showed short-term agronomic benefits on cotton–wheat cropping systems under alkaline arid field conditions</b> <i>Suleman Haider Shah Muhammad Baqir Hussain Ghulam Haider Tanveer Ul Haq Zahir Ahmad Zahir Subhan Danish Bilal Ahamad Paray Claudia Kammann</i> <i>Scientific Reports</i> , Volume 13, Article Number 22504 <b>Impact Factor:</b> 4.6   <b>Quartile:</b> 2   <b>Citations:</b> 9 <b>DOI:</b> <a href="https://doi.org/10.1038/s41598-023-48996-4">https://doi.org/10.1038/s41598-023-48996-4</a>	2023
<b>How Does Sustainable Management Practices Affect Weed Flora and Tuber Yield of Potato Crop in Mediterranean Environment?</b> <i>Emanuele Radicetti Khan Amanullah Verdiana Petroselli Mariam Atait Mohamed Allam Adil Mihoub Aftab Jamal Alireza Taab Ghulam Haider Morad Mirzaei Roberto Mancinelli</i> <i>Gesunde Pflanzen</i> , Pages 1-10 <b>Impact Factor:</b> 3.1   <b>Quartile:</b> 1 <b>DOI:</b> <a href="https://doi.org/10.1007/s10343-023-00953-x">https://doi.org/10.1007/s10343-023-00953-x</a>	2023
<b>Microplastics drive microbial assembly, their interactions, and metagenomic functions in two soils with distinct pH and heavy metal availability</b> <i>Jun Meng Wenjin Li Chengmei Diao Zhanqiao Li Jiayi Zhao Ghulam Haider Haibo Zhang Jun Xu Minjun Hu Shengdao Shan Huaihai Chen</i> <i>Journal of Hazardous Materials</i> , Volume:458, Article Number:131973 <b>Impact Factor:</b> 13.6   <b>Quartile:</b> 1   <b>Citations:</b> 44 <b>DOI:</b> <a href="https://doi.org/10.1016/j.jhazmat.2023.131973">10.1016/j.jhazmat.2023.131973</a>	2023
<b>Heavy metal-resistant rhizobacteria fosters to alleviate the cadmium toxicity in Arabidopsis by upregulating the plant physiological responses</b> <i>Tahir Naqqash Aeman Aziz Madiha Gohar Jallat Khan Shahbaz Ali Emanuele Radicetti Muhammad Babar Manzer H. Siddiqui Ghulam Haider</i> <i>International Journal of Phytoremediation</i> , Pages 1-12 <b>Impact Factor:</b> 3.7   <b>Quartile:</b> 2   <b>Citations:</b> 7 <b>DOI:</b> <a href="https://doi.org/10.1080/15226514.2023.2253923">DOI: 10.1080/15226514.2023.2253923</a>	2023
<b>Biochar alleviated the toxic effects of PVC microplastic in a soil-plant system by upregulating soil enzyme activities and microbial abundance</b> <i>Attia Rubab Khalid Tariq Shah Muhammad Asad Ahmad Ali Eisha Samee Fazal Adnan Muhammad Faraz Bhatti Sven Marhan Claudia I. Kammann Ghulam Haider</i> <i>Environmental Pollution</i> , Volume 332, Article Number 121810 <b>Impact Factor:</b> 8.9   <b>Quartile:</b> 1   <b>Citations:</b> 55 <b>DOI:</b> <a href="https://doi.org/10.1016/j.envpol.2023.121810">https://doi.org/10.1016/j.envpol.2023.121810</a>	2023
<b>Microplastics alter soil enzyme activities and microbial community structure without negatively affecting plant growth in an agroecosystem</b> <i>Tariq Shah Ahmad Ali Ghulam Haider Muhammad Asad Fazal Munsif</i> <i>Chemosphere</i> , Volume 322, Article Number 138188 <b>Impact Factor:</b> 8.943   <b>Quartile:</b> 1   <b>Citations:</b> 78 <b>DOI:</b> <a href="https://doi.org/10.1016/j.chemosphere.2023.138188">https://doi.org/10.1016/j.chemosphere.2023.138188</a>	2023

<b>Strigolactone-Mediated Oxidative Stress Alleviation in Brassica rapa Through Upregulating Antioxidant System Under Water Deficit Conditions</b> <i>Ahmad Ali Tariq Shah Ghulam Haider Masood Iqbal Awan Madiha Gohar Fazal Munsif Ijaz Ahmad</i> <i>Journal of Plant Growth Regulation</i> , Pages 1-13 <b>Impact Factor:</b> 4.640   <b>Quartile:</b> 1   <b>Citations:</b> 13 <b>DOI:</b> <a href="https://doi.org/10.1007/s00344-023-10925-0">https://doi.org/10.1007/s00344-023-10925-0</a>	2023
<b>Development and testing of zinc sulfate and zinc oxide nanoparticle coatings over urea fertilizer to improve N and Zn use efficiency</b> <i>Bilal Beig Muhammad Bilal Khan Niazi Zaib Jahan Ghulam Haider Munir Zia Ghulam Abbas Shah Zahid Iqbal Asim Hayat</i> <i>Frontiers in Plant Science</i> , Volume 13, Article Number 1058219 <b>Impact Factor:</b> 6.627   <b>Quartile:</b> 1   <b>Citations:</b> 26 <b>DOI:</b> <a href="https://doi.org/10.3389/fpls.2022.1058219">10.3389/fpls.2022.1058219</a>	2023
<b>Different feedstocks of biochar affected the bioavailability and uptake of heavy metals by wheat (Triticum aestivum L.) plants grown in metal contaminated soil</b> <i>Muhammad Ahmar Amin Ghulam Haider Muhammad Rizwan H. Kate Schofield Muhammad Farooq Qayyum Muhammad Zia-ur-Rehman Shafaqat Ali</i> <i>Environmental Research</i> , Volume 217, Article Number 114845 <b>Impact Factor:</b> 8.431   <b>Quartile:</b> 1   <b>Citations:</b> 33 <b>DOI:</b> <a href="https://doi.org/10.1016/j.envres.2022.114845">https://doi.org/10.1016/j.envres.2022.114845</a>	2023
<b>Biochar Amendment in Combination with Endophytic Bacteria Stimulates Photosynthetic Activity and Antioxidant Enzymes to Improve Soybean Yield Under Drought Stress</b> <i>Fahim Nawaz Rashid Rafeeq Sadia Majeed Muhammad Shoaib Ismail Muhammad Ahsan Khawaja Shafique Ahmad Ahsan Akram Ghulam Haider</i> <i>Journal of Soil Science and Plant Nutrition</i> , Pages 1-15 <b>Impact Factor:</b> 3.600   <b>Quartile:</b> 2   <b>Citations:</b> 39 <b>DOI:</b> <a href="https://doi.org/10.1007/s42729-022-01079-1">https://doi.org/10.1007/s42729-022-01079-1</a>	2022
<b>Genome wide identification and characterization of nodulation related genes in Arachis hypogaea</b> <i>Kiran Khurshid Anum Akram Ahmad Ali Faiza Munir Alvina Gul Ghulam Haider Zuhra Qayyum Rabia Amir</i> <i>PLOS ONE</i> , Volume 17, Issue 9, Article Number e0273768 <b>Impact Factor:</b> 3.752   <b>Quartile:</b> 2   <b>Citations:</b> 2 <b>DOI:</b> <a href="https://doi.org/10.1371/journal.pone.0273768">https://doi.org/10.1371/journal.pone.0273768</a>	2022
<b>Lead-Resistant Morganella morganii Rhizobacteria Reduced Lead Toxicity in Arabidopsis thaliana by Improving Growth, Physiology, and Antioxidant Activities</b> <i>Tahir Naqqash Aeman Aziz Muhammad Babar Syed Bilal Hussain Ghulam Haider Muhammad Shahid Muthar Mansoor Qaisrani Muhammad Arshad</i> <i>Muhammad Kashif Hanif Roberto Mancinelli Emanuele Radicetti</i> <i>Agriculture</i> , Volume 12(8), Article Number 1155 <b>Impact Factor:</b> 3.408   <b>Quartile:</b> 1   <b>Citations:</b> 10 <b>DOI:</b> <a href="https://doi.org/10.3390/agriculture12081155">https://doi.org/10.3390/agriculture12081155</a>	2022
<b>Nano-fertilizers: A sustainable technology for improving crop nutrition and food security</b> <i>Ali MuradJakhari Irfan Aziz Abdul Rasheed Kaleri Maria Hasnain Ghulam Haider Jiahua Ma Zainul Abideen</i> <i>NanoImpact</i> , Volume 27, Article Number 100411 <b>Impact Factor:</b> 6.038   <b>Quartile:</b> 2   <b>Citations:</b> 167 <b>DOI:</b> <a href="https://doi.org/10.1016/j.impact.2022.100411">https://doi.org/10.1016/j.impact.2022.100411</a>	2022
<b>Identification and Expression Analysis of Stilbene Synthase Genes in Arachis hypogaea in Response to Methyl Jasmonate and Salicylic Acid Induction</b> <i>Zuhra Qayyum Fatima Noureen Maryam Khan Marrium Khan Ghulam Haider Faiza Munir Alvina Gul Rabia Amir</i> <i>Plants</i> , Volume 11, Issue 13, Article Number 1776 <b>Impact Factor:</b> 4.658   <b>Quartile:</b> 1   <b>Citations:</b> 10 <b>DOI:</b> <a href="https://doi.org/10.3390/plants11131776">https://doi.org/10.3390/plants11131776</a>	2022
<b>Co-pyrolysis of sewage sludge and metal-free/metal-loaded polyvinyl chloride (PVC) microplastics improved biochar properties and reduced environmental risk of heavy metals</b> <i>Wenjin Li Jun Meng Yule Zhang Ghulam Haider Tida Ge Haibo Zhang Yijun Yu Shengdao Shan Zhangtao Li</i> <i>Environmental Pollution</i> , Volume 302, Article Number 119092 <b>Impact Factor:</b> 8.9   <b>Quartile:</b> 1   <b>Citations:</b> 40 <b>DOI:</b> <a href="https://doi.org/10.1016/j.envpol.2022.119092">https://doi.org/10.1016/j.envpol.2022.119092</a>	2022
<b>Physiological response of mango transplants to phytohormones under salinity stress</b> <i>Moustafa A.A.Muhammed Abdel Kareem S.H.Mohamed Muhammad FarooqQayyum Ghulam Haider Hassan A.M.Ali</i> <i>Scientia Horticulturae</i> , Volume 296, Article Number 110918	2022

**Impact Factor:** 3.463 | **Quartile:** 1 | **Citations:** 17  
**DOI:** <https://doi.org/10.1016/j.scienta.2022.110918>

**The impact of biochar on the activities of soil nutrients acquisition enzymes is potentially controlled by the pyrolysis temperature: A meta-analysis**

2022

*Xiaolin Liao Hojeong Kang Ghulam Haider Weifeng Wang Saadatullah Malghani*  
*Geoderma* , Volume 411, Article Number 115692

**Impact Factor:** 6.114 | **Quartile:** 1 | **Citations:** 58  
**DOI:** <https://doi.org/10.1016/j.geoderma.2021.115692>

**Biochar and slow-releasing nitrogen fertilizers improved growth, nitrogen use, yield, and fiber quality of cotton under arid climatic conditions**

2021

*Sobia Manzoor Muhammad Habib-ur-Rahman Ghulam Haider Iqra Ghafoor Saeed Ahmad Muhammad Afzal Fahim Nawaz Rashid Iqbal Mubashra Yasin*  
*Tanveer-ul-Haq Suhan Danish Abdul Ghaffar*  
*Environmental Science and Pollution Research* , Pages 1-14

**Impact Factor:** 5.190 | **Quartile:** 2 | **Citations:** 36  
**DOI:** <https://doi.org/10.1007/s11356-021-16576-6>

**TRAP transporter TakP; A key player in the resistance against selenite-induced oxidative stress in *Rhodobacter sphaeroides***

2021

*Fazal Adnan Amna Jalil Tahir Ahmed Afra Rahman Nawal Dawood Ghulam Haider Muhammad Faisal Siddiqui Leon Rostock Sebastian Guenther Katharina Schaufler*  
*Microbiological Research* , Volume 252, Article Number 126828

**Impact Factor:** 5.415 | **Quartile:** 1 | **Citations:** 4  
**DOI:** <https://doi.org/10.1016/j.micres.2021.126828>

**Chemical and Biological Enhancement Effects of Biochar on Wheat Growth and Yield Under Arid Field Conditions**

2021

*Zarmeena Khan Muhammad Habib ur Rahman Ghulam Haider Rabia Amir Rao Muhammad Ikram Shakeel Ahmad Hannah Kate Schofield Bilal Riaz Rashid Iqbal Shah Fahad Rahul Datta Alaa Baazeem Ayman EL Sabagh Subhan Danish*  
*Sustainability* , Volume 13(11), Article Number 5890  
**Impact Factor:** 3.889 | **Quartile:** 2 | **Citations:** 45  
**DOI:** <https://doi.org/10.3390/su13115890>

**Effect of Application of Biochar, Poultry and Farmyard Manures in Combination with Synthetic Fertilizers on Soil Fertility and Cotton Productivity under Arid Environment**

2021

*Saeed Ahmad Abdul Ghaffar Muhammad Habib Ur Rahman Ijaz Hussain Rashid Iqbal Ghulam Haider Mahmood Alam Khan Rao Muhammad Ikram Hammad Hussnain Muhammad Shafqat Bashir*  
*Communications in Soil Science and Plant Analysis* , Pages 1-15  
**Impact Factor:** 1.580 | **Quartile:** 3 | **Citations:** 30  
**DOI:** [10.1080/00103624.2021.1908324](https://doi.org/10.1080/00103624.2021.1908324)

**Effect of alkaline and chemically engineered biochar on soil properties and phosphorus bioavailability in maize**

2021

*Muhammad Farooq Qayyum Ghulam Haider Maria Iqbal Sajida Hameed Niaz Ahmad Muhammad Zia ur Rehman Abdul Majeed Muhammad Rizwan Shafaqat Ali*  
*Chemosphere* , Volume 266, Article Number 128980  
**Impact Factor:** 8.943 | **Quartile:** 1 | **Citations:** 35  
**DOI:** <https://doi.org/10.1016/j.chemosphere.2020.128980>

**The Sewage Sludge Biochar and Its Composts Influence the Phosphate Sorption in an Alkaline–Calcareous Soil**

2021

*Rabia Abdur Rehman Muhammad Farooq Qayyum Ghulam Haider Kate Schofield Muhammad Abid Muhammad Rizwan Shafaqat Ali*  
*Sustainability* , Volume 13(4), Article Number 1779  
**Impact Factor:** 3.889 | **Quartile:** 2 | **Citations:** 5  
**DOI:** <https://doi.org/10.3390/su13041779>

**Straw-based biochar mediated potassium availability and increased growth and yield of cotton (*Gossypium hirsutum* L.)**

2020

*Muhammad Farooq Qayyum Ghulam Haider Abdel Kareem S.H. Mohamed Muhammad Rizwan Mohamed A. El-Sheikh Mohammed Nasser Alyemeni Shafaqat Ali Muhammad Ali Raza*  
*Journal of Saudi Chemical Society* , Volume 24, Issue 12, Pages 963-973  
**Impact Factor:** 3.932 | **Quartile:** 2 | **Citations:** 31  
**DOI:** <https://doi.org/10.1016/j.jscs.2020.10.004>

**Mineral nitrogen captured in field-aged biochar is plant-available**

2020

*Ghulam Haider Stephen Joseph Diedrich Steffens Christoph Müller Sarasadat Taherymoosavi David Mitchell Claudia I. Kammann*  
*Scientific Reports* , Volume 10, Article Number 13816

**Impact Factor:** 4.380 | **Quartile:** 1 | **Citations:** 52

**DOI:** <https://doi.org/10.1038/s41598-020-70586-x>

**Different nitrogen and biochar sources' application in an alkaline calcareous soil improved the maize yield and soil nitrogen retention**

2019

*Muhammad Farooq Qayyum Mehak Ameer Abdullah Muhammad Rizwan Ghulam Haider Muhammad Arif Ali Muhammad Zafar-ul-Hye Muhammad Abid*  
*Arabian Journal of Geosciences*, Volume 12, Article Number 664

**Impact Factor:** 1.327 | **Quartile:** 4 | **Citations:** 16

**DOI:** <https://doi.org/10.1007/s12517-019-4846-6>

**Biochar reduced nitrate leaching and improved soil moisture content without yield improvements in a four-year field study**

2017

*Ghulam Haider Diedrich Steffens Gerald Moser Christoph Müllera Claudia I. Kammann*  
*Agriculture, Ecosystems and Environment* , Volume 237, Pages 80-94

**Impact Factor:** 3.541 | **Quartile:** 1 | **Citations:** 286

**DOI:** <http://dx.doi.org/10.1016/j.agee.2016.12.019>

**Standard Extraction Methods May Underestimate Nitrate Stocks Captured by Field-Aged Biochar**

2016

*Ghulam Haider Diedrich Steffens Christoph Müller Claudia I. Kammann*  
*Journal of Environmental Quality* , Volume 45, Pages 1196–1204

**Impact Factor:** 2.344 | **Quartile:** 2 | **Citations:** 101

**DOI:** [10.2134/jeq2015.10.0529](https://doi.org/10.2134/jeq2015.10.0529)

**Biochar but not humic acid product amendment affected maize yields via improving plant-soil moisture relations**

2015

*Ghulam Haider Hans-Werner Koyro Farooqe Azam Diedrich Steffens Christoph Müller Claudia Kammann*  
*Plant and Soil* , Volume 395, Pages 141–157

**Impact Factor:** 2.969 | **Quartile:** 1 | **Citations:** 173

**DOI:** <https://doi.org/10.1007/s11104-014-2294-3>

**Performance and Nitrogen Use of Wheat Cultivars in Response to Application of Allelopathic Crop Residues and 3, 4-dimethylpyrazole Phosphate**

2015

*Ghulam Haider Zahid Ata Cheema Muhammad Farooq Abdul Wahid*  
*International Journal of Agriculture and Biology*, Volume 17(2), Pages 261-270

**Impact Factor:** 0.758 | **Quartile:** 2

**DOI:** <http://www.fspublishers.org>

**Weed management in wheat through combination of allelopathic water extract with reduced doses of herbicides**

2010

*Abdul Razzaq Zahid Ata Cheema Khawar Jabran Muhammad Farooq Abdul Khaliq Ghulam Haider Shahzad M.A. Basra*  
*Pakistan Journal of Weed Science Research*, Volume 16 (3), Pages 247-256

**Impact Factor:** N/A

**DOI:** <https://doi.org/10.28941/pjwsr.v16i3>

Book Chapters

**CRISPR-Cas9-mediated genome editing in fungi: Current scenario and future implications in agriculture, health, and industry.**

Noor Ul Ain Malik Attia Rubab Khalid Alvina Gul Faiza Munir Ghulam Haider Muhammad Faraz Bhatti

In: *Targeted Genome Engineering via CRISPR/Cas9 in Plants*, 1st Edition, Chapter 3, Pages 35-62

Citations: 2

DOI: doi.org/10.1016/B978-0-443- 26614-0.00022-9

**Cereal Responses to Nutrients and Avenues for Improving Nutrient Use Efficiency**

Ghulam Haider Muhammad Ansar Farooq Tariq Shah Saadatullah Malghani Masood Iqbal Awan Habib-ur-Rehman Athar Abdul Ghaffar Attia Rubab Khalid

In: *Book on Cereal Crops: Genetic Resources and Breeding Techniques*, 1st Edition, Chapter 5, Pages:31

Citations: 3

DOI: 10.1201/9781003250845-5

**Phytohormones, plant growth and development**

Noor Ul Ain Malik Oushna Fajer Laiba Amin Attiya Rubab Khalid Nabia Khan Muhammad Faraz Bhatti Faiza Munir Ghulam Haider Rabia Amir Alvina Gul

In: *Phytohormones and Stress Responsive Secondary Metabolites*, Chapter 14, Page:175-186

Citations: 3

DOI: 10.1016/B978-0-323-91883-1.00014-0

**Mulching Effects on Soil Greenhouse Gas Emission in Agricultural Systems**

Xiaolin Liao Saadatullah Malghani Ghulam Haider Ahmad Ali

In: *Book on Mulching in Agroecosystems*, Chapter 16, Pages 251-287

Citations: 1

DOI: 10.1007/978-981-19-6410-7\_16

**Mitigation and actions toward nitrogen losses in Pakistan**

Muhammad Sanaullah Ahmad Mujtaba Ghulam Haider Hafeez ur Rehman Fathia Mubeen

In: *Book on Nitrogen Assessment Pakistan as a Case-Study*, 1st Edition, Chapter 8, Pages 149-175

Citations: 5

DOI: https://doi.org/10.1016/B978-0-12-824417-3.00001-0

**Climate Resilient Cotton Production System: A Case Study in Pakistan**

Muhammad Habib ur Rahman Ishfaq Ahmad Abdul Ghaffar Ghulam Haider Ashfaq Ahmad Burhan Ahmad Muhammad Tariq Wajid Naseem Ghulam Rasool Shah Fahad Shakeel Ahmad Gerrit Hoogenboom

In: *Book on Cotton Production and Uses*, Chapter 22, Pages 447-484

Citations: 20

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